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FPSC - COMMISSION CLERK

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February 4, 2026

Via Electronic Filing

Florida Public Service Commission
Office of Commission Clerk
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Application for Transfer - CSWR-Florida Utility Operating Company, LLC; and Forest Utilities, Inc.

Dear Commission Clerk:

Attached please find an Application for Transfer of Facilities and Certificate filed by CSWR-Florida Utility Operating Company, LLC relating to Forest Utilities, Inc. A filing fee in the amount of $1,500.00, as well as a Request for Confidential Classification as to Exhibit D (financial statements), and a Request for Confidential Classification as to Exhibit H (engineering report), will be separately hand delivered to the Office of Commission Clerk.

Sincerely,

/s/ Thomas A. Crabb

Thomas A. Crabb
Susan F. Clark
Attorneys for Applicant
CSWR-Florida Utility Operating Company, LLC

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for transfer of facilities of Forest Utilities, Inc. and Wastewater Certificate No. 300-S to CSWR-Florida Utility Operating Company, LLC, in Lee County.
_____/

Docket No.:_____

APPLICATION FOR TRANSFER OF FACILITIES AND CERTIFICATE FROM A REGULATED UTILITY TO ANOTHER REGULATED UTILITY

CSWR-Florida Utility Operating Company, LLC ("CSWR-Florida"), pursuant to Section 367.071, Florida Statutes, and Rule 25-30.037(2), Florida Administrative Code, applies for transfer of the wastewater facilities of Forest Utilities, Inc. and Wastewater Certificate No. 300-S in Lee County.

FILING FEE

Pursuant to Rule 25-30.020(2)(c), F.A.C., the filing fee of $1,500.00 will be submitted concurrently with the filing of this application.

PART I. APPLICANT INFORMATION

A. Contact Information for Utility/Seller

Utility Name:	Forest Utilities, Inc.
Street/Mailing Address:	6000 Forest Blvd. Fort Myers, FL 33908-4318
Phone Number:	(239) 481-5333
Fax Number:	N/A
FEIN:	59-2083407
Email address:	forestu@aol.com
Website address:	none
Water Certificate No.:	none
Wastewater Certificate No.:	300-S

B. Contact Information for Seller's Authorized Representative

Name:	Charles Mann, Pavese Law Firm
Mailing Address:	1833 Hendry Street Fort Myers, FL 33901
Phone Number:	(239) 336-6242
Fax Number:	(239) 336-6223
Email address:	charlesmann@paveselaw.com

C. Contact Information for Buyer/Applicant

Buyer's Name:	CSWR-Florida Utility Operating Company, LLC
Office Street Address:	1630 Des Peres Road, Suite 140 St. Louis, MO 63131
Phone Number:	(314) 736-4672
Fax Number:	(314) 736-4743
FEIN:	38-4180174
Email address:	regulatory@cswrgroup.com
New Utility Name:	CSWR-Florida Utility Operating Company, LLC

The Buyer as defined in the purchase agreement is "Central States Water Resources, Inc., a Missouri corporation, or its assigns." Prior to closing, Central States Water Resources, Inc., or its affiliate, will assign all rights and interests to CSWR-Florida.

D. Contact Information for Buyer's Authorized Representatives

Name:	Susan F. Clark, Esq. Thomas A. Crabb, Esq.
Mailing Address:	Radey Law Firm 301 South Bronough Street, Suite 200 Tallahassee, FL 32301
Phone Number:	(850) 425-6654
Fax Number:	(850) 425-6694
Email addresses:	sclark@radeylaw.com tcrabb@radeylaw.com sturner@radeylaw.com dgueltzow@radeylaw.com

E. Contact Information for Person in Possession of Seller's Books and Records

Name:	Doris Swor
Mailing Address:	6000 Forest Blvd. Fort Myers, FL 33919
Phone Number:	(239) 810-4175
Fax Number:	N/A
Email address:	dorisswor@icloud.com

If the Public Service Commission audits the books and records of the Utility/Seller as part of this docket, then the primary point of contact for the audit should be the Seller's authorized representative, Charles Mann. Applicant requests that Buyer's authorized representative, Tom Crabb (tcrabb@radeylaw.com; sturner@radeylaw.com), be copied on all audit correspondence, document and data requests, etc. from the Commission relating to the audit.

F. Buyer's Business Organization

CSWR-Florida is a Florida limited liability company created on March 31, 2021, document number L21000150005. CSWR-Florida is not doing business under a fictitious name. Attached as **Exhibit A** are CSWR-Florida's Articles of Organization and supporting documents from the Florida Department of State, Division of Corporations.

CSWR-Florida is wholly owned by CSWR-Florida Utility Holding Company, LLC, a Florida limited liability company whose principal address is 1630 Des Peres Road, Suite 140, St. Louis, MO 63131.

PART II. TRANSFER OF CERTIFICATE

A. Description of Sale Agreement

Attached as **Exhibit B** is a copy of the executed Purchase and Sale Agreement dated October 15, 2023, the Amendment to Purchase and Sale Agreement dated January 15, 2025, and the Agreement Between Parties dated January 15, 2025 (collectively the "Agreement"). This is an "assets only" transaction. CSWR-Florida is only acquiring assets the Seller uses to provide wastewater service (i.e., the Property described in Section 1.01 of the Agreement).

As specified in the Agreement, "…the Closing shall be the earlier of (i) March 16, 2026 or (ii) thirty (30) days following the approval by the PSC in a form satisfactory to Buyer…." (See Section 4.01(a) of the Amendment to Purchase and Sale Agreement.) All conditions that must be satisfied before closing are specified in Article II of the Agreement.

The purchase price for the Seller's assets is located in Section 1.02 of the Agreement. The purchase price, less any earnest money, shall be payable in cash at closing by wired funds and shall be paid on the Closing Date as defined in Section 4.01 of the Agreement.

CSWR-Florida is not acquiring any non-regulated assets or operations of the Seller and is not assuming any of Seller's liabilities or obligations. The transaction is limited to the acquisition of assets used to provide regulated utility service. As the list of assets being purchased, attached as **Exhibit C** is the Wastewater Utility Plant Accounts page from the Seller's 2024 Annual Report to the Commission and an asset list relating to lift stations, manholes, gravity sewers and force mains.

In addition, Section 1.01 of the Agreement, and its Exhibits A and B, generally describe the property to be acquired, including land, improvements, and rights of way, tools, devices, equipment, furniture, fixtures, machinery, supplies, and other material tangible items; however, the dollar values of those items are not individually identified.

The purchase price will be paid in cash at closing. There is no other consideration between the parties, including salaries, retainer fees, stock, stock options, or assumption of any Seller's obligations.

Under the terms of the Agreement, CSWR-Florida is not acquiring or assuming responsibility for pre-closing obligations of the Seller, including Seller's obligations related to customer deposits. Prior to closing, it would be Seller's responsibility to return any such deposits in accordance with Florida Commission rules and Seller's approved tariffs. Prior to closing, CSWR-Florida will review all leases and developer agreements and will assume or renegotiate those agreements on a case-by-case basis. Any customers or developers who paid advances to the Seller prior to closing will be given full credit for those payments after closing.

Upon closing, CSWR-Florida will fulfill the commitments, obligations, and representations of the Seller with regard to utility matters.

CSWR-Florida has obtained or will attempt to obtain the books and records of the Seller, including all supporting documentation for rate base additions since the last time rate base was established. The books and records of CSWR-Florida will be maintained using the NARUC Uniform System of Accounts.

CSWR-Florida will comply with the requirements of Rule 25-30.110(1)(b) and (c), F.A.C., regarding maintenance of utility records at another location.

B. Financial Ability

CSWR-Florida was created for the purpose of acquiring and operating water and wastewater systems in Florida as a public utility. The Consolidated Financial Statements of CSWR, LLC and Subsidiaries, including CSWR-Florida, for the years ended December 31, 2024 and 2023 are attached in redacted form as **Exhibit D**. An unredacted version of **Exhibit D**, along with a Request for Confidential Classification for the same, will be separately filed.

Attached as **Exhibit E** is the CSWR organization chart showing CSWR-Florida and its affiliates. No partner or affiliated company has provided debt financing to CSWR, LLC ("CSWR").

To fund the acquisition proposed in this application, CSWR will invest sufficient equity in CSWR-Florida to (a) pay the purchase price and all costs related to the acquisition of assets currently owned by the Seller; (b) fund necessary capital improvements; and (c) provide working capital to sustain operations until fully compensatory rates are implemented and CSWR-Florida becomes self-sufficient.

C. Technical Ability

1. Experience In The Water And Wastewater Industry

CSWR-Florida is part of an affiliated group of holding and utility operating companies currently providing water and wastewater services to customers in Florida, Missouri, Arkansas, Kentucky, Texas, Louisiana, Tennessee, Mississippi, Arizona, South Carolina, and North Carolina. The affiliate group includes CSWR, which employs personnel with managerial and operational expertise necessary to provide essential services to its utility affiliates. The services

CSWR provides include, but are not limited to, executive management, administrative, legal, accounting, finance, engineering, accounts payable, billing, and risk management. CSWR also invests equity capital used to acquire utility assets and systems (such as those for which authority is sought by this application), make required capital improvements, and provide working capital necessary to operate those systems until they become self-sufficient.

Since their formation, CSWR and its affiliates have invested more than $785 million to acquire and operate water and wastewater systems in Florida, Missouri, Arkansas, Kentucky, Louisiana, Texas, Mississippi, Tennessee, North Carolina, South Carolina, and Arizona. Combined, these systems currently serve approximately 190,000 water and 257,500 wastewater customers. In each of those jurisdictions, state utility regulators have determined CSWR and its affiliates have the financial strength and the managerial and operational experience and expertise necessary to acquire, improve, own, and operate water and wastewater systems in a manner that serves the public interest. CSWR's operating company affiliates have also filed or soon will file additional acquisition applications in Florida, Missouri, Kentucky, Louisiana, Texas, Mississippi, Arizona, and Tennessee.

CSWR's business plan is to purchase and recapitalize water and wastewater systems and to operate those systems as investor-owned regulated utilities. Many of the systems acquired are not providing safe and reliable service and are out of compliance with state utility commission rules and with federal and state environmental or public health laws. Many of the systems also lack the federal and/or state permits required to lawfully operate. Finally, many of the acquired systems have not increased rates for a decade or more and therefore lack the financial resources necessary to build, maintain, and make replacements to the systems.

If this application is approved, CSWR-Florida would hire one or more unaffiliated operations and maintenance firms (preferably local) that have knowledgeable and experienced personnel and that hold all Florida licenses necessary to manage daily operations of the system. The CSWR affiliates including CSWR-Florida use a highly experienced outside firm for customer service operations. All management, financial reporting, underground utility safety and location services, Commission regulatory reporting, environmental regulatory reporting and management, operations oversight, utility asset planning, engineering planning, ongoing utility maintenance, utility record keeping, and final customer dispute management would be performed by personnel at CSWR's corporate office. CSWR personnel also monitor the activities of its contractors to make sure the systems are being operated and maintained properly and customer needs are being met.

Brief biographies of CSWR's key executive and operational leaders are attached as **Exhibit F**. Additional information regarding CSWR and its affiliates can be found on CSWR's website: https://www.centralstateswaterresources.com.

2. Continued Operation Of The Utilities

CSWR-Florida plans to use one or more appropriately qualified and licensed contract operators to handle day-to-day inspections, checks, sampling, reporting, and meter reading if applicable. The contract operator also would be responsible for necessary system repairs, as well

as extraordinary issues that arise from time to time, to ensure proper facility operations. All contractor activities would be tracked by a computerized maintenance system. In addition, a computerized plant monitoring system would integrate repair and system operations data into a single information management platform that includes all systems operated by CSWR-Florida's affiliates. Contractors providing day-to-day operations and maintenance services are selected through a competitive bidding process.

CSWR-Florida will use a contractor for customer service. The contractor's staff would field and process customer bill and service inquiries, address customer requests for payment plans, and route any customer service complaints and inquiries to the service contractor.

By using this contractor, CSWR-Florida has access to proprietary systems developed to meet the needs of the affiliate group and its customers. CSWR-Florida also benefits from economies of scale available from a systemwide customer service vendor.

As needed, CSWR-Florida would implement operational changes to improve and enhance customer service. In addition, upon acquisition, customers would have access to a 24-hour phone line to report any utility service issues. Those calls would then be transferred into the computerized maintenance management system and converted into work orders, which creates a historical record of all reported service issues. The work order also would ensure contracted customer service personnel can commence work required to address customer service issues quickly and efficiently. CSWR-Florida would ensure customers served by the system have access to customer service representatives during normal business hours to talk about any customer concerns. Additionally, CSWR-Florida has established a utility-specific webpage, social media accounts, and dedicated email address to keep customers informed about their utility service. Finally, CSWR-Florida offers online bill paying options to customers including e-checks and debit and credit cards.

D. Territory Description, Public Interest, and Facilities

1. Territory Description

Attached as **Exhibit G** is a copy of the legal description of the proposed service area in Lee County, Florida - the same territory currently served by the Seller.

2. Public Interest

Approving the proposed transfer of the wastewater system is in the public interest. CSWR-Florida has demonstrated to the Commission that it has the managerial and operational expertise and experience necessary to own and operate many water and wastewater systems. CSWR-Florida has also demonstrated that it has access to the capital necessary to repair and upgrade systems to ensure they comply with all health and environmental regulations and provide safe and reliable service to customers. To date, CSWR-Florida has acquired the water and/or wastewater systems of ten (10) Florida utilities with the approval of the Commission and one (1) Florida utility with the approval of the Citrus County Board of County Commissioners (the former Rolling Oaks water and wastewater systems, when they were non-jurisdictional). In all these cases, the regulator found

CSWR-Florida had the financial and technical ability to acquire and operate the systems in the public interest.

The mission of CSWR and its affiliated utilities remains to bring safe, reliable, and environmentally responsible water resources to every community in the United States. As it works to accomplish that objective, the group is transforming how water utilities work by using technology and innovation to quickly assess and invest in reliable infrastructure that meets or exceeds stringent state and federal safety standards, ensuring all communities have access to safe, clean, and reliable water resources while protecting essential natural resources.

3. Condition Of The System

CSWR-Florida's engineering analysis of the system ("Facility Report-Forest Utilities Wastewater Treatment Plant," prepared by Kimley-Horn) is attached in redacted form as **Exhibit H**. An unredacted version of **Exhibit H**, along with a Request for Confidential Classification for the same, will be separately filed. This engineering assessment identifies components of the system that need repair or improvement and provides a breakdown of the potential costs of those improvements. In addition, the report provides a brief compliance review narrative.

Pursuant to Rule 25-30.037(2)(q), F.A.C., the system needs repairs and improvements, including those identified in **Exhibit H**, for which CSWR-Florida will be responsible. No governmental authorities are presently requiring repairs or improvements to the system.

4. Right To Continued Long-Term Use Of Land

Attached as **Exhibit I** is an unrecorded draft deed. CSWR-Florida commits to filing the executed and recorded deed with the Commission within sixty (60) days after closing. See Sections 2.02, 3.01(c), and 4.01(b)(ii) of the Agreement for additional information relating to title transfer.

5. Current Permits

Attached as **Exhibit J** is the Seller's current domestic wastewater facility permit from the Florida Department of Environmental Protection ("DEP"). The Seller does not have a permit with a water management district since it is a wastewater-only utility.

The DEP advises that it cannot process a transfer application for this permit until after title closing of the real estate, which cannot occur until after the Commission approves the acquisition. Accordingly, CSWR-Florida commits to filing with the Commission a copy of the DEP transfer application within sixty (60) days of closing.

6. Most Recent DEP and/or County Health Department Reports

Attached as **Exhibit K** is a copy of the most recent DEP compliance inspection report. There are no secondary water quality standards reports since Forest Utilities is a wastewater only utility.

7. Correspondence with the DEP, County Health Department, and Water Management District

Correspondence and reports submitted to DEP by Forest Utilities are available at the below link. Attached as **Exhibit L** are copies of the most recent correspondence with the DEP. There is no correspondence with the County Health Department or water management district within the past five years.

DEP - Regarding wastewater system (DEP Facility ID # FLA014478):
https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/FLA014478/facility!search

8. Customer Complaints

The Seller advises it has not received any customer complaints regarding DEP secondary water quality standards during the past five years.

E. Proposed Tariff

Attached as **Exhibit M** is the Seller's current tariff sheets containing the Seller's current rates. CSWR-Florida has a pending rate case (Docket No. 20250052-WS) by which it seeks consolidated statewide rates for all the Florida water and/or wastewater systems it has acquired. Upon acquisition of the Forest Utilities system, CSWR-Florida requests that the Seller's current rates be continued until such time as the Commission has approved statewide consolidated rates for CSWR-Florida or until the Commission approves revised rates for the Forest Utilities system.

F. Accounting Information

1. Proposed Net Book Value; Acquisition Adjustment; Rate Base

Net Book Value

The best information currently available regarding the Net Book Value ("NBV") of the assets that CSWR-Florida proposes to acquire is Forest Utilities' 2024 Annual Report. As shown on pages F-1(a) and F-2(b) of that report (attached as **Exhibit N**), as of December 31, 2024, the NBV of Forest Utilities' wastewater system was $1,585,340 (Total Net Utility Plant less Total Net C.I.A.C.). Based on the experience of CSWR operating company affiliates, annual reports and the books and records of selling utilities may not capture all investment that can be categorized as utility plant under the Uniform System of Accounts. Therefore, CSWR-Florida will not be able to definitively determine NBV until a thorough post-closing review of relevant plant and accounting records is completed.

After filing this transfer application, CSWR-Florida intends to file a petition to request that the Commission establish a rate base value for the Forest Utilities wastewater system using the alternative procedure provided by Section 367.0811, Florida Statutes.

Acquisition Adjustment

Pursuant to Rule 25-30.0371, F.A.C., within three (3) years after the Commission issues an order approving the transfer of the wastewater certificate of authorization, CSWR-Florida may petition for a positive acquisition adjustment for the difference between the purchase price and the net book value of the assets. As such, CSWR-Florida is not requesting a positive acquisition adjustment as part of this transfer docket.

Rate Base

It is unknown to CSWR-Florida whether the Commission has established a rate base for Forest Utilities or when it last had a rate case. In 2023, Forest Utilities initiated a rate case (Docket No. 20230066-SU) and received approval for a test year but ultimately decided not to proceed. In the test year request letter, Forest Utilities said it had not previously had a file and suspend rate case (Document No. 03010-2023). From a review of its prior closed dockets available online, in 1995 Forest Utilities was ordered to make a revenue neutral rate restructuring. (Docket No. 941270-SU, Order No. PSC-95-0967-FOF-SU.) In 2002, an allowance for funds used during construction (AFUDC) rate was authorized along with increased service availability charges. (Docket Nos. 20011682-SU, 20011683-SU, Order No. PSC-02-1239-PAA-SU.) In 2014, Forest Utilities was granted rates for reuse water service for irrigation at Forest Country Club. (Docket No. 130276-SU, Order No. PSC-14-0134-PAA-SU.) From the Seller's current tariff (**Exhibit M**), it appears rates were last changed effective June 11, 2024 from a price index adjustment.

2. Federal Income Tax Returns

CSWR-Florida has requested from the Seller its federal income tax returns going back to its last rate case and has to date received the last five years of the Seller's tax returns.

3. Regulatory Assessment Fees, Fines, or Refunds

Any outstanding regulatory assessment fees, fines, or refunds must be fully satisfied by the Seller prior to closing. No such outstanding assessment fees, fines, or refunds are known to the Applicant. CSWR-Florida will become responsible for paying the regulatory assessment fees and filing the annual report upon closing. The Seller remains responsible for the regulatory assessment fees and annual report until closing.

4. Economies of Scale

Prior to this Application, the Commission approved ten other utilities for transfer to CSWR-Florida: 20210093-WS (Aquarina Utilities, Inc.); 20210095-WU (Sunshine Utilities of Central Florida, Inc.); 20210133-SU (North Peninsula Utilities Corporation); 20220019-WU (Neighborhood Utilities, Inc.); 20220061-SU (BFF Corp.); 20220062-WS (C.F.A.T. H2O, Inc.); 20220063-WS (Tradewinds Utilities, Inc.); 20220064-WS (Tymber Creek Utilities, Inc.); 20220149-WS (Sebring Ridge Utilities, Inc.); and 20230033-SU (TKCB, Inc.). Customers currently served by the Seller's utility would benefit from the technical and operational advantages

of becoming part of the group of utilities affiliated with Central States Water Resources, as discussed above.

Across the affiliate group, Central States currently serves approximately 190,000 water and 257,500 wastewater customers in 11 states. As the costs of the centralized technical and operational resources of CSWR are spread over more customers, more economies of scale will be achieved.

G. Noticing Requirements

Attached as **Exhibit O** is CSWR-Florida's proposed notice of application. As soon as the notice is approved by staff, CSWR-Florida will send the notice to all applicable customers and governmental entities, and will then file affidavits of noticing and publication as required.

[remainder of page intentionally left blank; signature page to follow]

PART III. SIGNATURE

APPLICATION SUBMITTED BY:



Josiah Cox, President, on behalf of
CSWR-Florida Utility Operating Company, LLC

1/30/2026

Date

EXHIBIT A

Sunbiz.org DIVISION of CORPORATIONS an official State of Florida website

Detail by Entity Name

Florida Limited Liability Company
CSWR-FLORIDA UTILITY OPERATING COMPANY, LLC

Filing Information

Document Number	L21000150005
FEI/EIN Number	38-4180174
Date Filed	03/31/2021
Effective Date	03/31/2021
State	FL
Status	ACTIVE
Last Event	LC AMENDMENT
Event Date Filed	07/11/2022
Event Effective Date	NONE

Principal Address

1630 DES PERES RD.
SUITE 140
ST. LOUIS, MO 63131

Changed: 09/20/2022

Mailing Address

13421 Manchester Road, Suite 103
St. Louis, MO 63131

Changed: 01/25/2023

Registered Agent Name & Address

C T CORPORATION SYSTEMS
1200 S PINE ISLAND ROAD
PLANTATION, FL 33324

Authorized Person(s) Detail

Name & Address

Title MGR

CENTRAL STATES WATER RESOURCES, INC.
1630 DES PERES RD., SUITE 140
ST. LOUIS, MO 63131

Annual Reports

Report Year	Filed Date
2024	02/13/2024
2025	02/14/2025
2026	02/02/2026

Document Images

02/02/2026 -- ANNUAL REPORT	View image in PDF format
02/14/2025 -- ANNUAL REPORT	View image in PDF format
02/13/2024 -- ANNUAL REPORT	View image in PDF format
01/25/2023 -- ANNUAL REPORT	View image in PDF format
07/11/2022 -- LC Amendment	View image in PDF format
02/03/2022 -- ANNUAL REPORT	View image in PDF format
03/31/2021 -- Florida Limited Liability	View image in PDF format

Electronic Articles of Organization
For
Florida Limited Liability Company

L21000150005
FILED 8:00 AM
March 31, 2021
Sec. Of State
jsdennis

Article I

The name of the Limited Liability Company is:

CSWR-FLORIDA UTILITY OPERATING COMPANY, LLC

Article II

The street address of the principal office of the Limited Liability Company is:

1650 DES PERES RD.
SUITE 303
ST. LOUIS, MO. US 63131

The mailing address of the Limited Liability Company is:

1650 DES PERES RD.
SUITE 303
ST. LOUIS, MO. US 63131

Article III

The name and Florida street address of the registered agent is:

C T CORPORATION SYSTEMS
1200 S PINE ISLAND ROAD
PLANTATION, FL. 33324

Having been named as registered agent and to accept service of process for the above stated limited liability company at the place designated in this certificate, I hereby accept the appointment as registered agent and agree to act in this capacity. I further agree to comply with the provisions of all statutes relating to the proper and complete performance of my duties, and I am familiar with and accept the obligations of my position as registered agent.

Registered Agent Signature: ROSE SONG

L21000150005
FILED 8:00 AM
March 31, 2021
Sec. Of State
jsdennis

Article IV

The name and address of person(s) authorized to manage LLC:

Title: MGR
CSWR-FLORIDA UTILITY HOLDING COMPANY, LLC
1650 DES PERES RD., SUITE 303
ST. LOUIS, MO. 63131 US

Article V

The effective date for this Limited Liability Company shall be:

03/31/2021

Signature of member or an authorized representative

Electronic Signature: MADISON A WELDE

I am the member or authorized representative submitting these Articles of Organization and affirm that the facts stated herein are true. I am aware that false information submitted in a document to the Department of State constitutes a third degree felony as provided for in s.817.155, F.S. I understand the requirement to file an annual report between January 1st and May 1st in the calendar year following formation of the LLC and every year thereafter to maintain "active" status.

L21000150005

(Requestor's Name)

(Address)

(Address)

(City/State/Zip/Phone #)

☐ PICK-UP ☐ WAIT ☐ MAIL

(Business Entity Name)

(Document Number)

Certified Copies _____ Certificates of Status _____

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Office Use Only

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2022 JUL 11 PM 6:33
SECRETARY OF STATE
TALLAHASSEE, FLORIDA

OCT 5 2022
S. PRATHER

ARTICLES OF AMENDMENT
TO
ARTICLES OF ORGANIZATION
OF

CSWR-Florida Utility Operating Company, LLC

(Name of the Limited Liability Company as it now appears on our records.)
(A Florida Limited Liability Company)

The Articles of Organization for this Limited Liability Company were filed on 3/31/2021 and assigned Florida document number L21000150005.

This amendment is submitted to amend the following:

A. If amending name, enter the new name of the limited liability company here:

The new name must be distinguishable and contain the words "Limited Liability Company," the designation "LLC" or the abbreviation "L.L.C."

Enter new principal offices address, if applicable:
(Principal office address MUST BE A STREET ADDRESS)

11630 Des Peres Rd.
Suite 140
St. Louis, MO 63131

Enter new mailing address, if applicable:
(Mailing address MAY BE A POST OFFICE BOX)

B. If amending the registered agent and/or registered office address on our records, enter the name of the new registered agent and/or the new registered office address here:

Name of New Registered Agent: _____

New Registered Office Address: _____
Enter Florida street address

_____. **Florida** _____
City *Zip Code*

New Registered Agent's Signature, if changing Registered Agent:

I hereby accept the appointment as registered agent and agree to act in this capacity. I further agree to comply with the provisions of all statutes relative to the proper and complete performance of my duties, and I am familiar with and accept the obligations of my position as registered agent as provided for in Chapter 605, F.S. Or, if this document is being filed to merely reflect a change in the registered office address, I hereby confirm that the limited liability company has been notified in writing of this change.

_____
If Changing Registered Agent, Signature of New Registered Agent

FILED
2022 JUL 11 PM 6:33
TALLAHASSEE, FLORIDA

If amending Authorized Person(s) authorized to manage, enter the title, name, and address of each person being added or removed from our records:

MGR = Manager
AMBR = Authorized Member

Title	Name	Address	Type of Action
_____	_____	_____	☐ Add
		_____	☐ Remove
		_____	☐ Change
_____	_____	_____	☐ Add
		_____	☐ Remove
		_____	☐ Change
_____	_____	_____	☐ Add
		_____	☐ Remove
		_____	☐ Change
_____	_____	_____	☐ Add
		_____	☐ Remove
		_____	☐ Change
_____	_____	_____	☐ Add
		_____	☐ Remove
		_____	☐ Change
_____	_____	_____	☐ Add
		_____	☐ Remove

D. If amending any other information, enter change(s) here: *(Attach additional sheets, if necessary.)*

E. Effective date, if other than the date of filing: _____ (optional)

(If an effective date is listed, the date must be specific and cannot be prior to date of filing or more than 90 days after filing.) Pursuant to 605.0207 (3)(b)

Note: If the date inserted in this block does not meet the applicable statutory filing requirements, this date will not be listed as the document's effective date on the Department of State's records.

If the record specifies a delayed effective date, but not an effective time, at 12:01 a.m. on the earlier of: (b) The 90th day after the record is filed.

Dated July 5, 2022.

Signature of a member or authorized representative of a member

Josiah Cox, President

Typed or printed name of signee

2022 JUL 11 PM 6:33

TALLAHASSEE, FLORIDA

EXHIBIT B

PURCHASE AND SALE AGREEMENT

THIS PURCHASE AND SALE AGREEMENT (*"Agreement"*) is made as of the __15___ day of October, 2023 by and between CENTRAL STATES WATER RESOURCES, INC., a Missouri corporation, or its assigns (*"Buyer"*), and FOREST UTILITIES, INC., a Florida corporation qualified and registered to transact business in the State of Florida (*"Seller"*), collectively ("*Parties*").

ARTICLE I
ACQUISITION OF THE PROPERTY

Section 1.01 The Property. Subject to the terms and provisions of this Agreement, Seller agrees to sell to Buyer, and Buyer agrees to purchase from Seller, all of the following described property (the *"Property"*):

(a) All immovable property, including all right, title and interest therein, described in **EXHIBIT A**, to be attached hereto prior to the conclusion of the Feasibility Period (as hereafter defined) and made a part hereof, including but not limited to any mineral and other subsurface rights, together with all buildings and improvements located thereon, and all appurtenant rights relating thereto, including, but not limited to, warranties and guaranties, access easements and other easements and rights relating thereto, access to utilities, rights of way and similar rights located on or within or relating to any of the foregoing (collectively, the "*Immovable Property*"). The Immovable Property shall not include that certain property described in **EXHIBIT A-1** which property has been subdivided and will be deeded by Seller to The Forest Country Club for its pickleball courts (the "*Excluded Property*").

(b) All movable property and intangible property used in connection with the ownership and/or operation of the Immovable Property, including, but not limited to, all such property described in **EXHIBIT B**, to be attached hereto prior to the conclusion of the Feasibility Period (as hereafter defined) and made a part hereof, however expressly excluding any and all cash, cash equivalents and banking deposits in existence prior to the Closing, any and all accounts receivable accrued prior to the Closing, and any customer deposits held by Seller (collectively, the "*Movable Property*");

(c) All of Seller's right, title, and interest in and to the area that the System (as defined below) services (the "*Service Area*"), as determined by Buyer and set forth in **EXHIBIT C,** to be attached hereto prior to the Closing (as hereinafter defined) and made a part hereof, including but not limited to, all real property interests such as easements, rights of way, permits and leases related to the System, and including any and all sewer facilities, equipment, lines, plants, pipes, manholes, meters, lift or pump stations and appurtenances; and

(d) All property or rights of whatever nature and kind that Seller owns which in any way is used or is useful in the operation of a sewer utility system located in Lee County, Florida (the "*System"*).

Section 1.02 Purchase Price.

(a) The purchase price (the *"Purchase Price"*) for the Property shall be **Nine Million and 00/100 Dollars ($9,000,000.00)**, together with any capital or repair improvement reimbursements, as set forth in Section 1.05 below. The reasonable allocation of the Purchase Price between the categories in Sections 1.01(a) and 1.01(b) of the Property shall be set forth in **EXHIBIT D** prior to the Closing.

(b) The Purchase Price less any Earnest Money shall be payable in cash at Closing by wired funds and shall be paid by Buyer to Seller (to the account notified by Seller to Buyer prior to the Closing Date) on the Closing Date as defined in Section 4.01.

Section 1.03 Earnest Money. Within five (5) business days after the Effective Date (as defined below), Buyer shall deposit with a title company of its choice (the *"Title Company"*) the sum of **Two Hundred Fifty Thousand and 00/100 Dollars ($250,000.00)** as the earnest money under this Agreement (the "*Earnest Money*"). The Earnest Money shall be non-refundable to Buyer upon expiration of the Feasibility Period, except in the event of a Seller Default or as otherwise expressly provided herein.

Section 1.04 Independent Consideration. A portion of the Earnest Money in the amount of One Hundred and No/100 Dollars ($100.00) (the "*Independent Consideration*") will be distributed to Seller upon any termination of this Agreement as full payment and independent consideration for Seller's execution of this Agreement, for the right of Buyer to review the Property as set out in Article II herein and for the right of Buyer to purchase the Property upon the terms set forth herein which are granted by Seller and fully vested to Buyer at the time of the deposit of the Earnest Money with the Title Company. The Independent Consideration shall be, under all circumstances, nonrefundable to Buyer and shall be applicable to the Purchase Price.

Section 1.05 Capital Improvements. The Parties agree that, between the Effective Date and Closing, certain capital repairs or other improvements may be required to be made to the Property. Seller agrees to provide fifteen (15) days written notice of any proposed capital repair or improvement that is in excess of $10,000.00 for Buyer's review and approval, and in the event of an emergency repair, Seller shall only be required to provide three (3) days notice. Such written notice shall reference this Section 1.05 of the Agreement and shall comply with the notice provisions of Section 7.02 herein. If Buyer does not provide any written response to Seller's notices above, Buyer shall be deemed to have approved of the capital repair or improvement. All approved capital repairs or improvements shall be reimbursed to Seller at Closing. Further, it is the intent of this Agreement that any capital repairs or improvements required by any agency or to ensure that any of the Property complies with all applicable laws and regulations be made. The Parties agree to reasonably cooperate to determine the scope, timing and cost of any such required repairs. However, if the Parties cannot agree on a capital repair or improvement, and the Seller insists on such repair being made at the cost of Buyer, then in such event, Buyer may elect to terminate the Agreement and receive a return of the Deposit. This Section 1.05 shall not apply to ordinary maintenance costs and expenses.

ARTICLE II
SURVEY AND TITLE REVIEW

Section 2.01 Survey. Buyer shall have the right, for its own benefit, to procure one or more ALTA surveys of the Immovable Property, subject to Section 2.03 (the *"Survey"*). The Survey shall be current, staked, and shall be made on-the-ground and signed, sealed, and certified in favor of Buyer by a duly licensed surveyor selected or approved by Buyer and receipt of the Survey by Buyer prior to Closing, subject to Section 2.03, is a condition to Closing. The cost of the Survey shall be borne by the Buyer. Further, Buyer acknowledges that there currently exists certain encroachments for improvements belonging to the Forest Country Club. During the Feasibility Period, the parties will identify the encroachments and agree upon the property interests (e.g. easement, fee simple, etc.) to convey to the Forest Country Club, it being the intent of Seller to not require the Forest Country Club to move any such encroaching improvements.

Section 2.02 Title Insurance. The Buyer shall, within fifteen (15) days after the Effective Date, order and must receive prior to the Closing, subject to Section 2.03, as a condition to Closing, a commitment for title insurance and complete, legible copies of all exception documents (the "*Title Commitment*") issued by the Title Company covering the Immovable Property, binding the Title Company to issue to Buyer at Closing an owner's policy of title insurance paid for by Buyer (the "*Title Policy*") on the standard form of policy in the amount specified by Buyer insuring good, merchantable, and insurable fee simple title to the Immovable Property in Buyer, free and clear of all restrictions, easements, encumbrances, mortgages, liens, claims and other matters except any Permitted Exceptions as defined in Section 2.03.

Section 2.03 Buyer's Review. Buyer shall have until the expiration of the Feasibility Period to examine the Title Commitment and the Survey, and to deliver to Seller in writing Buyer's objections to any items contained or set forth in the Title Commitment or the Survey (the "*Unacceptable Exceptions*"). If Seller is unable or unwilling to eliminate and remove all of the Unacceptable Exceptions, then within fifteen (15) days after receipt of Buyer's written notice, Seller shall notify Buyer in writing of its inability or unwillingness to remove the Unacceptable Exceptions (and such notice shall set forth which Unacceptable Exceptions that Seller is unable or unwilling to remove) and Buyer may terminate this Agreement by giving written notice of such election delivered to Seller. If Buyer so terminates this Agreement, the Earnest Money shall be promptly returned to Buyer, after which neither Party shall have any further rights, duties or obligations hereunder, except as expressly provided in this Agreement to the contrary. If Buyer does not so terminate this Agreement after receiving Seller's written notice, then the Unacceptable Exceptions together with other exceptions not objected to by Buyer shall become Permitted Exceptions (the "*Permitted Exceptions*").

Section 2.04 Feasibility Period.

(a) Seller shall allow Buyer and its agents, employees, contractors, and consultants access to the Property to conduct soil and engineering tests, inspections of equipment, personal property, lines and other components of the System and to conduct any other tests Buyer deems necessary or appropriate in its sole and absolute discretion to determine the feasibility of the Property for Buyer's intended use (the "*Feasibility Study*"), for a period of **one-twenty (120) days** after the Effective Date (the "*Feasibility Period*"). Buyer shall bear all costs and expenses of its investigation and restore the Property to its condition prior to such investigation, ordinary wear and tear excepted.

(b) If Buyer finds the Property unacceptable for any reason or no reason, then Buyer, in its sole and absolute discretion, may terminate this Agreement by written notice to Seller on or before the expiration of the Feasibility Period. If Buyer so terminates this Agreement, the Title Company shall, upon demand by Buyer, promptly return the Earnest Money to Buyer and thereafter neither Party shall have any further rights, duties or obligations to the other hereunder.

(c) Seller shall deliver to Buyer within twenty (20) business days after the Effective Date of this Agreement, the most recent title commitments, title policies, surveys, environmental site assessments, preliminary plats and site plans, any cross access and easement documents in connection with the Property, any development agreements affecting the Property, lease agreements affecting the Property, any customer lists for the System and any other documents Buyer may reasonably request related to the Property and/or the System that are in Seller's possession or control.

Section 2.05 Other Termination Rights. In addition to any other rights and remedies set out herein (including but not limited to the termination rights in Sections 2.03, 2.04, 3.02(b) and 5.02), the Buyer shall have the right to terminate this Agreement as set out below:

(a) At any time up to and including the Closing Date if, despite Buyer's diligent efforts, the regulatory bodies required to approve the sale of the System and the Property to the Buyer have not fully and unconditionally approved the sale upon the terms set out herein. Buyer may terminate this Agreement if, despite Buyer's diligent efforts, the necessary regulatory approvals are not, or will not, be fully and unconditionally granted to Buyer in a form satisfactory to Buyer (in its sole and absolute discretion) prior to the Closing by giving written notification of such termination to Seller, and upon such termination the Seller shall be entitled to receive **One Hundred Twenty Five Thousand and 00/100 Dollars ($125,000.00)** of the Earnest Money and Buyer shall receive **One Hundred Twenty Five Thousand and 00/100 Dollars ($125,000.00)** of the Earnest Money.

(b) In the event that, prior to the Closing, all or any material portion of the Property is taken, condemned, expropriated, or made the subject of any eminent domain proceedings, or any of the foregoing is threatened (interchangeably, a "*Taking*"), Buyer may elect to either move to Closing and receive any Taking proceeds, plus an assignment of Seller's right, title, and interest thereto and claim therefor, as full satisfaction for the Taking, or Buyer may terminate this Agreement, and upon such termination the Buyer shall receive a prompt return of the Earnest Money. Buyer shall notify Seller as to which option it elects within five (5) days prior to the Closing. If Buyer does not receive written notice of a Taking more than five (5) days prior to the Closing, the Closing Date shall be postponed to a date that is not less than five (5) days after Buyer's receipt of written notice of a Taking.

Section 2.06. Effect of Termination. Subject to Article V, upon the termination of this Agreement, the Title Company shall pay the Earnest Money to the appropriate party in accordance with the terms and conditions of this Agreement, and upon such payment being made the Parties shall have no further liability hereunder (except with respect to liabilities of Seller accruing prior to such termination and those obligations hereunder which survive the termination of this Agreement).

ARTICLE III
REPRESENTATIONS, WARRANTIES AND COVENANTS

Section 3.01 Representations, Warranties and Covenants of Seller. Seller hereby represents and warrants to Buyer that the facts recited below are true, complete and accurate as of the date hereof and, to Seller's

Knowledge will continue to be true, complete and accurate at Closing, unless Seller provides written notice to Buyer setting forth a modification to the same.

(a) Seller is a corporation duly formed and in good standing under the laws of the State of Florida, is qualified to conduct business in the State of Florida and has the requisite power and authority to enter into and to perform the terms of this Agreement without obtaining any further consents or approvals from, or the taking of any other actions with respect to, any third parties, except for approvals from the Public Services Commission. To Seller's Knowledge, Seller is not subject to any law, order, decree, restriction or agreement that prohibits or would be violated by this Agreement or the consummation of the transactions contemplated hereby. The execution and delivery of this Agreement and the consummation of the transaction contemplated hereby have been duly authorized by all requisite action of Seller. This Agreement constitutes, and each document and instrument contemplated hereby to be created and delivered by Seller, when executed and delivered, shall constitute the legal, valid, and binding obligation by Seller, enforceable against Seller in accordance with its respective terms (subject to bankruptcy, reorganization and other similar laws affecting the enforcement of creditors' rights generally).

(b) Neither the execution, delivery and performance of this Agreement, nor the consummation of the transactions contemplated hereby is in violation of any other agreement executed by Seller, is prohibited by, or requires Seller to obtain any consent, authorization, approval or registration under any law, statute, rule, regulation, judgment, order, writ, injunction or decree which is binding upon Seller, other than any regulatory approvals disclosed in writing to Buyer.

(c) Seller has and will have at Closing good, merchantable, and insurable title, in fee simple, to the Property, free and clear of all mortgages, liens, claims, or other encumbrances (except those required by the Title Company in the Title Commitment to be fully satisfied with the Purchase Price at the Closing) and except for the Permitted Exceptions.

(d) To Seller's Knowledge there are no pending or threatened condemnation, liens, claims, other encumbrances, special assessments, or similar proceedings or charges affecting the Property or Seller by any governmental authority.

(e) Seller is not a foreign corporation, foreign partnership, foreign trust, or foreign estate, or non-resident alien for purposes of US income taxation, pursuant to Section 1445 of the Internal Revenue Code.

(f) Seller has not: (i) filed any voluntary or had involuntarily filed against it in any court or with any governmental body pursuant to any statute either of the United States or of any State, a petition in bankruptcy or insolvency or seeking to effect any plan or other arrangement with creditors, or seeking the appointment of a receiver; (ii) had a receiver, conservator or liquidating agent or similar person appointed for all or a substantial portion of its assets; (iii) suffered the attachment or other judicial seizure of all, or substantially all of its assets; (iv) given notice to any person or governmental body of insolvency; or (v) made an assignment for the benefit of its creditors or taken any other similar action for the protection or benefit of its creditors. Seller is not insolvent and will not be rendered insolvent by the performance of its obligations under this Agreement.

(g) There are no leases affecting any portion of the Property except such leases disclosed to Buyer in writing by Seller and there are no options, rights of first refusal or contracts granting any rights to acquire any right, title or interest in any portion of the Property, except as listed in the Title Commitment, if any. However, Buyer acknowledges that Seller shall be entitled to negotiate and execute "back up" contracts for the sale of the Property in the event Buyer does not consummate the transactions contemplated by this Agreement. However, any such "back up" contracts shall be subordinate to this Agreement so long as Buyer is not in default of this Agreement.

(h) Seller has not received any notice of any violation of any ordinance, regulation, law or statute of any government agency or instrumentality pertaining to the Property and/or the System or any portion thereof which has not been complied with in all respects.

(i) There is no action, suit, proceeding or claim affecting Seller, the Property and/or the System, relating to or arising out of any lease, option or contract affecting the Property or the System, or the ownership, operation, use

or occupancy of the Property or the System, pending or being prosecuted in any court or by or before any agency or other governmental instrumentality nor, to Seller's Knowledge, has any such action, suit, proceeding or claim been threatened or asserted. There is no proceeding pending or presently being prosecuted in connection with the assessed valuation or taxes or other impositions payable in respect of any portion of the Property.

(j) No work has been performed or is in progress at, and no materials have been furnished to, the Property which might give rise to mechanic's, materialman's or other liens against the Property.

(k) To Seller's Knowledge, there are no pending or contemplated zoning changes, variances, special zoning exceptions, conditions or agreements affecting, or potentially affecting the Property or any part thereof.

(l) Except as has been disclosed to Buyer in writing by Seller, to Seller's Knowledge the Property complies with all applicable laws of all governmental or quasi-governmental authorities having jurisdiction over, against or affecting the Property. Seller has not received written notice of any, and there are no violations of any laws, similar rules and regulations relating and/or applicable to the ownership, use and operation of the Property as it is now operated, and/or other licenses or permits, which remain uncured, except that Seller hereby discloses its knowledge of that certain Warning Letter from the Florida Department of Environmental Protection ("FDEP"), dated March 21, 2021, as well as various monitoring reports and self-reported events as shown on FDEP's permitting database, as set forth on attached Exhibit "E".

(m) To Seller's Knowledge, no representation or warranty made by Seller in this Agreement, in any Exhibit attached hereto, or in any letter or certificate furnished to Buyer pursuant to the terms hereof, each of which is incorporated herein by reference and made a part hereof, contains any untrue statement of a fact or omits to state a fact necessary to make the statements contained herein or therein not misleading.

(n) Environmental Matters.

(i) Except as disclosed on the attached **EXHIBIT E**, attached hereto, and as may be supplemented at least thirty (30) days prior to the conclusion of the Feasibility Period and made a part hereof, to Seller's Knowledge, the Property is currently and has been in compliance with all Environmental Laws (as defined below) and Seller has not received any: (i) Environmental Notice (as defined below) or Environmental Claim (as defined below); or (ii) written request for information pursuant to Environmental Law, which, in each case, either remains pending or unresolved, or is the source of ongoing obligations or requirements as of the Closing.

(ii) To Seller's Knowledge, there has been no Release of Hazardous Materials (as defined below) in contravention of Environmental Law with respect to the Property or any real property currently or formerly owned, leased or operated by Seller in connection with the System, and Seller has not received an Environmental Notice that any of the Property or real property currently or formerly owned, leased or operated by Seller in connection with the System (including soils, groundwater, surface water, buildings and other structure located thereon) has been contaminated with any Hazardous Material which could reasonably be expected to result in an Environmental Claim against, or a violation of Environmental Law or term of any Environmental Permit by, Seller.

(iii) To Seller's Knowledge, no underground storage tanks are located on the Immovable Property and no construction debris has been buried on or under the Immovable Property.

(iv) **EXHIBIT G**, to be attached hereto at least thirty (30) days prior to the conclusion of the Feasibility Period and made a part hereof, contains a complete and accurate list of all off-site Hazardous Materials treatment, storage, or disposal facilities or locations used by Seller and, to the best of Seller's Knowledge, any predecessors in connection with the System or the Property as to which Seller may retain liability, and none of these facilities or locations has been placed or proposed for placement on the National Priorities List (or CERCLIS) under CERCLA, or any similar state list, and Seller has not received any Environmental Notice regarding potential liabilities with respect to such off-site Hazardous Materials treatment, storage, or disposal facilities or locations used by Seller.

(v) Seller has not retained or assumed, by contract or operation of Law, any liabilities or obligations of third parties under Environmental Law.

(vi) Seller has provided or otherwise made available to Buyer, within thirty (30) days of the Effective Date, and listed in **EXHIBIT H**, to be attached hereto within thirty (30) days of the Effective Date and made a part hereof: (i) any and all environmental reports, studies, audits, records, sampling data, site assessments, risk assessments, economic models and other similar documents with respect to the Property or any real property currently or formerly owned, leased or operated by Seller in connection with the System which are in the possession or control of Seller related to compliance with Environmental Laws, Environmental Claims or an Environmental Notice or the Release of Hazardous Materials; and (ii) any and all material documents concerning planned or anticipated capital expenditures required to reduce, offset, limit or otherwise control pollution and/or emissions, manage waste or otherwise ensure compliance with current or future Environmental Laws (including, without limitation, costs of remediation, pollution control equipment and operational changes).

(vii) Seller is not aware of nor reasonably anticipates, as of the Closing, any condition, event or circumstance concerning the Release or regulation of Hazardous Materials beyond the normal and ordinary Release of Hazardous Materials related to the operation of the System that might, after the Closing, prevent, impede or materially increase the costs associated with the ownership, lease, operation, performance or use of the System and Property as currently carried out.

Section 3.02 Covenants of Buyer and Seller.

(a) Seller will own, operate, use and manage the System and the Property only in the ordinary course of business consistent with past practice, including but not limited to the service of additional properties, and in any event will ensure that, any provisions of this Agreement to the contrary notwithstanding, (i) the physical and environmental condition of the Property is the same at the time of the Closing as it is as of the Effective Date, only ordinary wear and tear as to the physical condition excepted, and (ii) Seller's title to the Immovable Property and the survey condition of the Immovable Property is the same at the time of the Closing as it is as of the Effective Date, only improvements to the title condition or survey condition performed or undertaken by Seller to address Unacceptable Exceptions excepted.

(b) Seller shall maintain current hazard insurance in force on the Property until the Closing Date. The risk of loss to the Property shall not pass to Buyer unless and until delivery of possession of the Property is delivered to Buyer. If an event of casualty occurs to the Property prior to Closing, the Buyer may elect to either move to Closing and accept any insurance proceeds and deductible, plus an assignment of all of Seller's right, title, and interest in and to any and all insurance claims, as full satisfaction for the damage to the Property or the Buyer may terminate this Agreement. Buyer shall notify Seller as to which option it elects within five (5) days prior to the Closing, but if Buyer does not receive written notice of such casualty more than five (5) days prior to the Closing, the Closing Date shall be postponed to a date that is not less than five (5) days after Buyer's receipt of written notice of such casualty.

(c) Seller agrees that from the Effective Date until either the termination of this Agreement or until after the Closing that Seller will not file any notices, requests, compliance documents, pleadings, or any other documents with any governmental or quasi-governmental authority that has jurisdiction over Seller in the operation, regulation or oversight of the System or any other endeavors of Seller (whether related to the System or not) without first providing at least ten (10) days prior notice to the Buyer for review and comment on such filing. In addition, Seller agrees to comply with all reasonable requests to participate in and to reply with requests from either Buyer or any governmental or quasi-governmental authority that has jurisdiction over Seller in the operation, regulation or oversight of the System or any other endeavors of Seller (whether related to the System or not) in order to facilitate approval from such authorities to transfer the System to Buyer.

(d) Buyer shall provide discharged effluent to the Forest Country Club at no cost following the Closing, consistent with the practices of the System, the availability of effluent, and feasibility of providing such effluent.

Section 3.03. Certain Definitions.

The following definitions apply in this Agreement:

(a) "*CERCLA*" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. §§ 9601 et seq.

(b) "*Environmental Claim*" means any action, governmental order, lien, fine, penalty, or, as to each, any settlement or judgment arising therefrom, by or from any person alleging liability of whatever kind or nature (including liability or responsibility for the costs of enforcement proceedings, investigations, cleanup, governmental response, removal or remediation, natural resources damages, property damages, personal injuries, medical monitoring, penalties, contribution, indemnification and injunctive relief) arising out of, based on or resulting from: (a) the presence, Release (as defined below) of, or exposure to, any Hazardous Materials; or (b) any actual or alleged non-compliance with any Environmental Law or term or condition of any Environmental Permit.

(c) "*Environmental Notice*" means any applicable law, and any governmental order or binding agreement with any governmental authority: (a) relating to pollution (or the cleanup thereof) or the protection of natural resources, endangered or threatened species, human health or safety, or the environment (including ambient air, soil, surface water or groundwater, or subsurface strata); or (b) concerning the presence of, exposure to, or the management, manufacture, use, containment, storage, recycling, reclamation, reuse, treatment, generation, discharge, transportation, processing, production, disposal or remediation of any Hazardous Materials.

(d) "*Environmental Laws*" means any written directive, notice of violation or infraction, or notice respecting any Environmental Claim relating to actual or alleged non-compliance with any Environmental Law or any term or condition of any Environmental Permit. The term "Environmental Laws" includes, without limitation, the following (including their implementing regulations and any state analogs): the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. §§ 9601 et seq.; the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. §§ 6901 et seq.; the Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act of 1977, 33 U.S.C. §§ 1251 et seq.; the Toxic Substances Control Act of 1976, as amended, 15 U.S.C. §§ 2601 et seq.; the Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. §§ 11001 et seq.; the Clean Air Act of 1966, as amended by the Clean Air Act Amendments of 1990, 42 U.S.C. §§ 7401 et seq.; and the Occupational Safety and Health Act of 1970, as amended, 29 U.S.C. §§ 651 et seq.

(e) "*Environmental Permits*" means any permit, letter, clearance, consent, waiver, closure, exemption, decision or other action required under or issued, granted, given, authorized by or made pursuant to Environmental Law.

(f) "*Hazardous Materials*" means: (a) any material, substance, chemical, waste, product, derivative, compound, mixture, solid, liquid, mineral or gas, in each case, whether naturally occurring or manmade, that is hazardous, acutely hazardous, toxic, or words of similar import or regulatory effect under Environmental Laws; and (b) any petroleum or petroleum-derived products, radon, radioactive materials or wastes, asbestos in any form, lead or lead-containing materials, urea formaldehyde foam insulation and polychlorinated biphenyls.

(g) "*Knowledge*" or "*Seller's Knowledge*" means the actual knowledge of Doris Swor, without any independent inquiry.

(h) "*Release*" means any actual or threatened release, spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, abandonment, disposing or allowing to escape or migrate into or through the environment (including, without limitation, ambient air (indoor or outdoor), surface water, groundwater, land surface or subsurface strata or within any building, structure, facility or fixture).

(i) "*Representatives*" in relation to a person means such person's managers, shareholders, members, officers, directors, employees, successors, and permitted assigns.

Section 3.04 Indemnification. From and after the Closing, Seller shall defend, hold harmless and indemnify the Buyer and/or Buyer's Representatives (as defined above) (collectively, "*Indemnified Party*") from and against any and all losses, damages, diminutions in value, liabilities, deficiencies, claims, actions, judgements, settlements, interest, awards, penalties, fines, costs, or expenses of any kind, including professional fees and attorneys' fees, that are suffered or incurred by the Indemnified Party or to which the Indemnified Party may otherwise become subject to at any time (collectively, "*Losses*") arising out of or as a result of: (i) any material inaccuracy in or material breach of any representation, warranty and/or covenant made by Seller in this Agreement; (ii) any material breach or non-fulfillment of any covenant, agreement or obligation to be performed by Seller pursuant to this Agreement; (iii) any actual or alleged liability of Seller and/or Seller's Representatives, or any actual or alleged liability of Buyer that derives from any such liability of Seller and/or Seller's Representatives, whether such liability arises before or after the Closing; and (d) any claim by a third party based upon, resulting from or arising out of (A) the business, operations, properties, assets or obligations of Seller conducted, existing or arising on or prior to the Closing, except as otherwise disclosed to, or discovered by, Buyer during the Feasibility Period; (B) any inaccuracy in or breach of any representation or warranty made by Seller in this Agreement, or any breach or non-fulfillment of any covenant, agreement or obligation to be performed by Seller pursuant to this Agreement; (C) any negligent or more culpable act or omission of Seller or its Representatives (including any reckless or willful misconduct) in connection with the performance of its obligations under this Agreement; or (D) any failure by Seller or its Representatives to comply with any applicable federal, state or local laws, regulations or codes in the performance of its obligations under this Agreement. Notwithstanding anything to the contrary in this Agreement, Seller is not obligated to indemnify, hold harmless, or defend Indemnified Party against any claim (whether direct or indirect) if such claim or corresponding Losses arise out of or result from Indemnified Party's negligence or more culpable act or omission (including recklessness or willful misconduct).

Section 3.05 Representations, Warranties and Covenants of Buyer.

Buyer hereby represents and warrants to Seller that the facts recited below are true, complete and accurate as of the date hereof and will continue to be true, complete and accurate at the Closing:

(a) Buyer is a corporation duly formed and in good standing under the laws of the State of Missouri, is qualified to conduct business in the State of Missouri and has the requisite power and authority to enter into and to perform the terms of this Agreement without obtaining any further consents or approvals from, or the taking of any other actions with respect to, any third parties. Buyer is not subject to any law, order, decree, restriction or agreement that prohibits or would be violated by this Agreement or the consummation of the transactions contemplated hereby. The execution and delivery of this Agreement and the consummation of the transaction contemplated hereby have been duly authorized by all requisite action of Buyer. This Agreement constitutes, and each document and instrument contemplated hereby to be created and delivered by Buyer, when executed and delivered, shall constitute the legal, valid, and binding obligation by Buyer, enforceable against Buyer in accordance with its respective terms (subject to bankruptcy, reorganization and other similar laws affecting the enforcement of creditors' rights generally).

(b) Neither the execution, delivery and performance of this Agreement, nor the consummation of the transactions contemplated hereby is in violation of any other agreement executed by Buyer, is prohibited by, or requires Buyer to obtain any consent, authorization, approval or registration under any law, statute, rule, regulation, judgment, order, writ, injunction or decree which is binding upon Buyer, other than any regulatory approvals disclosed in writing to Seller.

ARTICLE IV
CLOSING

Section 4.01 Closing.

(a) Subject to the terms and conditions of this Agreement, the Closing of the purchase and sale of the Property pursuant to this Agreement (the *"Closing"*) shall take place at the Title Company thirty (30) days after the later of the expiration of the Feasibility Period and the approval by any regulatory bodies in a form satisfactory to Buyer as set forth in more detail in Section 2.05(a), or (i) such earlier date as is elected by Buyer by giving not less than three (3) days prior notice to Seller, or (ii) such later date as agreed in writing by Seller and Buyer (the *"Closing*

Date"). However, in no event shall Closing occur more than eight (8) months following the expiration of this Agreement, except that Buyer may extend Closing up to eight (8) times for an additional thirty (30) days for each extension with prior written notice to Seller. In such event, for the first four (4) extensions available, Buyer shall deposit to Escrow Agent an additional Twenty-Five Thousand and No/100 Dollars ($25,000.00) deposit for each extension (collectively the "First Extension Deposits"), which First Extension Deposits shall be non-refundable, except in the event of a Seller Default, but shall be credited against the Purchase Price at the Closing. If Buyer continues to elect to extend closing for any of the additional four (4) times, Buyer shall deposit to Escrow Agent an additional Thirty Thousand and No/100 Dollars ($30,000.00) deposit for each such extension (collectively the "Second Extension Deposits"), which Second Extension Deposits shall be non-refundable, except in the event of a Seller Default, and which shall not be credited against the Purchase Price at Closing. For clarity, the First Extension Deposits and Second Extension Deposits shall be considered fully earned by Seller when made and shall not be refundable in the event of a Buyer termination, including but not limited to termination under Section 2.05 above, and are only refundable in the event of a Seller Default.

(b) At the Closing, Seller shall deliver to Buyer the following:

(i) A certificate of good standing for Seller plus the requisite duly executed corporate approvals for the sale;

(ii) A general warranty deed in executed form, conveying good, merchantable, and insurable title in fee simple to all of the Immovable Property, free and clear of any and all mortgages, liens, encumbrances, claims, conditions, easements, assessments, and restrictions, except for the Permitted Exceptions, if any;

(iii) A duly executed bill of sale, conveying all of the Movable Property described in **EXHIBIT B**, free and clear of any and all mortgages, liens, claims, restrictions, and encumbrances;

(iv) A duly executed termination of lease, terminating any existing lease agreements encumbering or relating to the Property;

(v) A duly executed assignment of any interest in any other Property used and/or useful in the operation of the System that is owned by Seller;

(vi) Such other instruments and documents that are customarily executed by a seller of immovable property in the county in which the Property is located, including, but not limited to, resolutions or unanimous written consents of the Board of Directors of Seller, and if required the shareholders of Seller, to authorize the sale of the Property to Buyer pursuant to this Agreement;

(vii) Tax statements for calendar year of the Closing;

(viii) Possession of the Property;

(ix) If requested by Buyer, and to the extent assignable, duly executed, conveyances and assignments to Buyer of any and all consents, authorizations, variances, waivers, licenses, permits, and approvals from any federal, state, county, municipal, or other governmental or quasi-governmental agency, department, board, commission, bureau, or other entity or instrumentality relating to the Property, including, without limitation, those relating to environmental, foundation, use, utilities, building, fire, traffic, and zoning heretofore or hereafter held by or granted to Seller (collectively, the "*Approvals*"). No additional consideration shall be due by Buyer for the Approvals, it being understood and agreed by Seller that the Purchase Price covers the Property, the Approvals, and the Claims (as hereinafter defined); and

(x) If requested by Buyer, duly executed assignments to Buyer, with full substitution and subrogation, of any and all claims, actions, rights, causes of action, rights of action, and warranties, whether arising in contract, tort, or otherwise, including, but not limited to, environmental claims, actions, rights, causes of action, rights of action, and warranties, that Seller has or may have against any and all persons and

entities as a result of any apparent or non-apparent damage to, destruction of, or diminution in value of the Property, or any part thereof, occurring prior to the Closing (collectively, the "*Claims*"). No additional consideration shall be due by Buyer for the Claims, it being understood and agreed by Seller that the Purchase Price covers the Property, the Approvals, and the Claims.

(c) At the Closing, Buyer shall deliver to Seller the following:

(i) The Purchase Price; and

(ii) Such other instruments and documents that are customarily executed by a buyer of immovable property in the county in which the Property is located.

Section 4.02 Closing Costs and Prorations. Buyer and Seller hereby covenant and agree that:

(a) Seller shall pay the costs of any roll back taxes, and Seller's attorneys' fees and expenses. Seller shall also pay all fees, costs, and expenses for title curative work and any other work that Seller agrees to perform or undertake in order to address any Unacceptable Exceptions and/or to otherwise enable Seller to sell and deliver to Buyer good, merchantable, and insurable fee simple title to the Property as required by this Agreement.

(b) Buyer shall pay all title fees charged by the Title Company, recording fees, and Buyer's attorneys' fees.

(c) All ad valorem real estate taxes and assessments levied or assessed against the Property shall be prorated according to the calendar year as of the Closing Date, based on the most recent tax bill and assessments levied for the same.

ARTICLE V
DEFAULTS AND REMEDIES

Section 5.01 Buyer's Default and Seller's Remedies.

(a) Buyer's Default. Buyer shall be in default under this Agreement if and only if any and all conditions to be satisfied under the terms of this Agreement prior to the Closing have been satisfied (or duly waived) and Buyer fails or refuses to perform Buyer's obligations at the Closing for any reason other than a default by Seller. For the avoidance of doubt, a termination under Section 2.04 will not constitute an event of default by Buyer.

(b) Seller's Remedies. If Buyer is in default under this Agreement, the sole and exclusive remedy of Seller, shall be receipt of the Earnest Money. Buyer and Seller agree that in such case the Earnest Money shall be liquidated or stipulated damages under Florida law for a breach or default by Buyer under this Agreement and/or any other actions or claims that could arise out of or are related to this Agreement because of the difficulty, inconvenience, and uncertainty of ascertaining actual damages for such default. Therefore, in no event shall Buyer be liable for or Seller be entitled to any actual damages or any other type of damages or remedy under any action or claim that could arise out of or that could any way relate to this Agreement other than the right to receive the stipulated amount of the Earnest Money as full satisfaction of Seller's claims.

Section 5.02 Seller's Defaults and Buyer's Remedies.

(a) Seller's Defaults. Seller shall be in default under this Agreement on the occurrence of any of one or more of the following events:

(i) Any material breach of a representation or warranty made by Seller in this Agreement or failure of any such representation or warranty to be true, accurate and complete; or

(ii) Any breach or non-fulfillment of any covenant, agreement or obligation to be performed by Seller pursuant to this Agreement.

(b) Buyer's Remedies. If Seller defaults under this Agreement (whether before or after the Closing or before termination or after termination in relation to provision that survive termination) Buyer may:

(i) If such default is identified prior to the Closing, terminate this Agreement by written notice to Seller and Title Company, in which event the Title Company shall promptly refund the Earnest Money to Buyer; or

(ii) Enforce specific performance of this Agreement against Seller, except that any action for specific performance shall be filed within six (6) months of Buyer's notice of Seller's default;

Section 5.03 Attorneys' Fees. If either party defaults under this Agreement, and the non-defaulting party employs an attorney to enforce the terms hereof, such non-defaulting party shall be entitled to reasonable attorneys' fees and costs from the defaulting party.

Section 5.04 Survival. The provisions of this Section 5 and of Article III, Article VI, Article VII shall survive the termination of this Agreement. The provisions of Article III shall survive the Closing for a period of five (5) years, except that the representations and warranties in Sections 3.01(a), (b), and (c), and Section 3.04 shall survive indefinitely. All other provisions of this Agreement shall survive Closing unless otherwise expressly stated.

ARTICLE VI
COMMISSIONS

Section 6.01 Commission. No commissions are due and/or owing for the procurement of this Agreement to any third parties. Seller shall defend, indemnify, and hold harmless Buyer from and against any and all claims by any person or entity for brokerage fees, brokerage commissions, finder's or other fees, which shall include, but shall not be limited to, any and all court costs, attorneys' fees and other costs and expenses relating thereto, alleged to be due to any broker and/or agent with whom Seller has dealt in connection with this Agreement or the sale of the Property to Buyer, and Buyer shall defend, indemnify, and hold harmless Seller from and against any and all claims by any person or entity for brokerage fees, brokerage commissions, finder's or other fees, which shall include, but shall not be limited to, any and all court costs, attorneys' fees and other costs and expenses relating thereto, alleged to be due to any broker and/or agent with whom Buyer has dealt in connection with this Agreement or the purchase of the Property by Buyer.

ARTICLE VII
MISCELLANEOUS PROVISIONS

Section 7.01 Effective Date of Agreement. The term "Effective Date" as used herein shall mean the date this Agreement has been fully executed by Seller and Buyer, as indicated by their signatures below, and a signed copy thereof is delivered to and acknowledged by the Title Company.

Section 7.02 Notices. All notices, demands and requests which may be given or which are required to be given by either party to the other, and any exercise of a right of termination provided by this Agreement, shall be in writing and shall be deemed effective when sent to the address or telecopy number of the party to receive such notice set forth below if effected by telecopy, e-mail or other electronic transmission, hand delivery, by Federal Express or other reputable courier service, or when deposited in any post office or mail receptacle regularly maintained by the United States Government, certified or registered mail, return receipt requested, postage prepaid, addressed as follows:

If to Buyer:	Josiah M. Cox, President Central States Water Resources, Inc. 1630 Des Peres Road, Suite 140 St. Louis, MO 63131
with a copy to:	James A. Beckemeier Beckemeier LeMoine Law 13421 Manchester Rd., Suite 103 Saint Louis, Missouri 63131 Phone: (314) 965-2277 Facsimile: (314) 965-0127 E-mail: jim@bl-stl.com
If to Seller:	Doris Swor, President Forest Utilities, Inc. 6000Forest Boulevard Fort Myers, FL 33919 Phone: (239) 810-4175 Facsimile:_____ E-Mail: dorrees3@gmail.com
with a copy to:	Charles Mann Pavese Law Firm Phone: (239) 336-6242 Facsimile: (239) 336-6223 E-Mail: charlesmann@paveselaw.com

Section 7.03 Governing Law. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF FLORIDA AND ALL PROCEEDINGS OR OBLIGATIONS HEREUNDER SHALL BE MADE AND ARE PERFORMABLE IN LEE COUNTY, FLORIDA.

Section 7.04 Successors and Assigns. This Agreement shall apply to, inure to the benefit of and be binding upon and enforceable against the Parties hereto and their respective heirs, administrators, successors and assigns. Buyer shall have the right to assign this Agreement to another entity or affiliate by providing written notice to Seller of such assignment. However, Seller shall not have the right to assign this Agreement without the written consent of the Buyer.

Section 7.05 Counterparts and Amendments. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, and all of which shall constitute but one and the same instrument. This Agreement may only be amended by a written document signed by each of the Parties hereto, which document shall make specific reference to this Agreement.

Section 7.06 Time. Time is of the essence in the performance of each term, condition, and covenant contained in this Agreement. No extension of time for performance of any obligation or act shall be deemed an extension of time for performance of any other obligation or act. If any date for performance of any term, condition or provision hereof shall fall on a Saturday, Sunday or legal holiday, then the time of such performance shall be extended to the next business day.

Section 7.07 Severability. This Agreement is intended to be performed in accordance with, and only to the extent permitted by, all applicable laws, ordinances, rules and regulations. If any provision of this Agreement or the application thereof to any person or circumstance shall, for any reason and to any extent, be invalid or unenforceable, the remainder of this Agreement and the application of such provision to other persons or circumstances shall not be affected thereby but shall be enforced to the greatest extent permitted by law.

Section 7.08 Entire Agreement. Buyer and Seller each acknowledges and agrees that at all times each have intended that none of the preliminary negotiations concerning this Agreement would be binding on any party. This Agreement and the Exhibits attached hereto prior to the Closing Date contain all the covenants, conditions, agreements and understandings between the Parties and shall supersede all prior covenants, conditions, agreements, letters of intent, term sheets, and understandings between Seller and Buyer with respect to the purchase and sale of the Property and all other matters contained in this Agreement.

Section 7.09 Final Exhibits. The legal description of the Immovable Property contained in the Survey shall be substituted for the legal description of the Immovable Property used in **EXHIBIT A** as of the date hereof without the necessity of the Parties executing any additional amendments to this Agreement. **EXHIBIT C** shall be included as part of this Agreement when, and in the form, notified to Seller by Buyer in writing. **EXHIBIT D** shall be included as part of this Agreement if and when it is in the form, agreed by Seller and Buyer in writing prior to Closing. With regard to **EXHIBITS E**, **F**, and **G**, in the event Seller fails to provide a list of all relevant information for the respective Exhibit at least thirty (30) days prior to the end of the Feasibility Period, Buyer will assume there is no such relevant information and the respective Exhibit will be marked "None."

Section 7.10 Buyer Exchange. Seller and Buyer agree to cooperate should the other elect to purchase the Property or other real property as part of a like-kind exchange under IRC section 1031. Any contemplated exchange shall not impose upon the cooperating party any additional liability or financial obligation, and Buyer or Seller, as appropriate agrees to hold the other harmless from any liability that might arise from such exchange. This Agreement is not subject to or contingent upon either party's ability to acquire a suitable exchange property or effectuate an exchange. In the event any exchange contemplated by Buyer or Seller should fail to occur, for whatever reason, the sale of the Property shall nonetheless be consummated as provided herein.

Section 7.11 Rollback Taxes, Standby Fees and Special Assessments. If this sale results in the assessment after Closing of additional taxes, standby fees or special assessments for periods of Seller's ownership (including taxes assessed as a result of a change in ownership or usage), the additional taxes, fees or assessments plus any penalties and interest shall be paid by Seller to Buyer within fifteen (15) days of receipt by Buyer of a statement for such taxes, fees or assessments.

Section 7.12 Ambiguities Not to Be Construed against Party Who Drafted Agreement. The rule of construction that ambiguities in a document will be construed against the party who drafted it will not be applied in interpreting this Agreement.

Section 7.13 No Special Relationship. The Parties' relationship is an ordinary commercial relationship of seller and buyer, and they do not intend to create and have not created the relationship of principal and agent, partnership, joint venture, or any other special relationship.

Section 7.14 Confidentiality. The Parties will keep confidential this Agreement, this transaction, and all information learned in the course of this transaction, except to the extent disclosure is required by law or court order or to enable third parties to advise or assist Buyer to investigate the Property or either party to close this transaction.

Section 7.15 Business Day. As used in this Agreement, the term "business day" means Monday through Friday of each week, except for days on which banks in Lee County, Florida are closed for business. If the final date of any period which is set out in any section of this Agreement falls upon a day which is not a business day, then, and in such event, the time of such period will be extended to the next business day.

Section 7.16 Further Assurances. From the date hereof, Seller and Buyer each agrees to do such things, perform such acts and make, execute, acknowledge and deliver such documents as may be reasonably necessary and customary to complete the transactions contemplated by this Agreement. In particular, Seller and Buyer each agrees to do such things as may be reasonably necessary with respect to the transfer of the Property.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed under proper authority and effective and binding as of the date first set above.

BUYER:

CENTRAL STATES WATER RESOURCES, INC.,
a Missouri corporation

By: _____
Josiah M. Cox, President

SELLER:

FOREST UTILITIES, INC.,
a Florida corporation

Doris Swor
By Doris Swor (Oct 12, 2023 18:49 EDT) _____
Doris Swor, President

RECEIPT OF EARNEST MONEY

The undersigned Title Company hereby acknowledges its receipt of an executed copy of this Agreement and, the Earnest Money provided herein and, further, agrees to comply with and be bound by the terms and provisions of this Agreement, without demand, including, without limitation, those terms relating to the disposition of the Earnest Money.

_____
Name of Title Company

By: _____

Name: _____

Title: _____

Date: _____

EXHIBIT A

Description of the Immovable Property

(The legal description(s) of the Land, Improvements thereon, Easements, & Rights of Way shall be determined by survey and title commitments, which shall be inserted prior to the Closing).

[TO BE INSERTED PRIOR TO CONCLUSION OF THE FEASIBILITY PERIOD]

The following described lots, tracts or parcels of land, lying, being and situate in the County of Lee State of Florida:

All interests in land used or useful in operation of the Sewer System that services the area set forth on **EXHIBIT C**, including but not limited to easements, rights of way and permits, and including the real property described in a title commitment (such detail for said commitment to be substituted by Title Company when the commitment is issued as Commitment File No. [FILE NUMBER], issued by [TITLE COMPANY], as agent for [UNDERWRITER].

Upon receipt of a detailed description associated with the survey or surveys obtained by Buyer pursuant to Section 2.01 hereof, or any update thereto, the Title Company shall update the Commitment to modify the legal description of the Property to reference the description of the Property set forth in description (the "*New Legal Description*"). Seller and Buyer agree that the New Legal Description shall be the description of the Property contained in the transfer documents (as each are defined herein) delivered by Seller to Buyer at Closing and any other closing documents executed by the parties in connection with the Closing. Because Seller and Buyer desire this Agreement to provide for the right of enforcement, Seller and Buyer agree that: (i) they are experienced in transactions of this nature, (ii) they are familiar with the location of the Property, (iii) each party waives any and all claims of an insufficient legal description, including, but not limited to, any and all claims under the Statute of Frauds, and (iv) upon receipt of the New Legal Description, this Agreement shall be amended to substitute the New Legal Description of the Property for the description of the Property set forth in this Exhibit " A" to the Agreement.

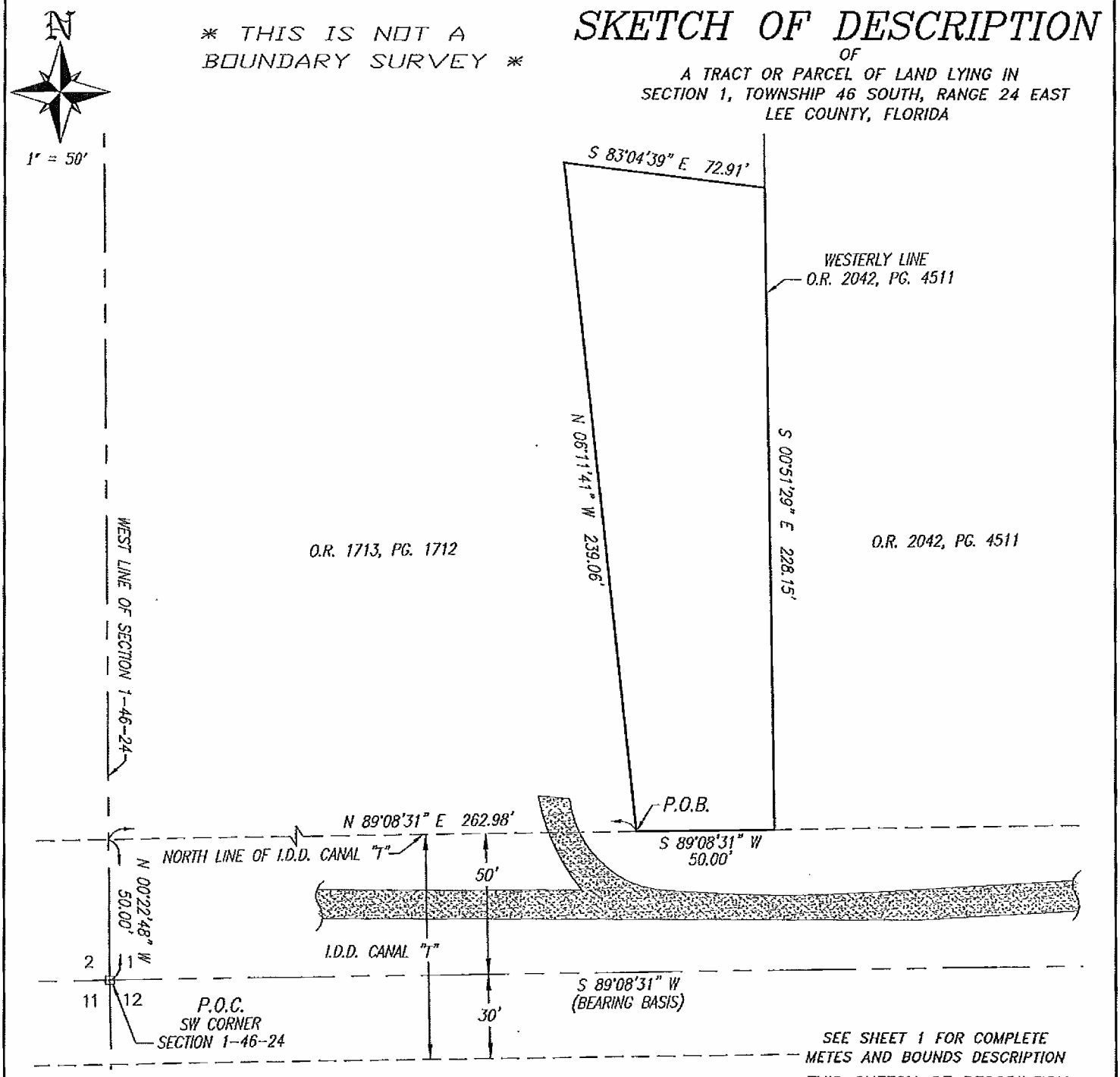
EXHIBIT "A-1"

SKETCH OF DESCRIPTION

OF

A TRACT OR PARCEL OF LAND LYING IN
SECTION 1, TOWNSHIP 46 SOUTH, RANGE 24 EAST
LEE COUNTY, FLORIDA

* THIS IS NOT A BOUNDARY SURVEY *



SEE SHEET 1 FOR COMPLETE METES AND BOUNDS DESCRIPTION

THIS SKETCH OF DESCRIPTION IS NOT A BOUNDARY SURVEY

SURVEYOR'S NOTES:

ALL DISTANCES SHOWN ARE IN FEET AND DECIMALS THEREOF.

ASSUMED NORTH BASED ON THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 1, TOWNSHIP 46 SOUTH, RANGE 24 EAST AS BEARING S.89°08'31"W. AS SHOWN ON THE RECORD PLAT OF THE FOREST UNIT ONE, AS RECORDED IN PLAT BOOK 33, PAGES 85-88, PUBLIC RECORDS OF LEE COUNTY, FLORIDA.

S:\JOBS\80XX\8019\DESC\8019-BNDRY_DESC.DOC
S:\JOBS\80XX\8019\DESC\8019-BNDRY_SK.DWG

LEGEND:

PG.	INDICATES PAGE
LB	INDICATES LAND SURVEYOR
LS	INDICATES LICENSED BUSINESS
P.O.B.	INDICATES POINT OF BEGINNING
O.R.	INDICATES OFFICIAL RECORDS BOOK
P.O.C.	INDICATES POINT OF COMMENCEMENT
P.S.M.	INDICATES PROFESSIONAL SURVEYOR AND MAPPER

PREPARED 1-29-2016
SHEET 2 OF 2

A. LEE HAYNE DATE: 1-29-2016
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATION NO. 6338

- THIS SKETCH OF DESCRIPTION IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

BANKS ENGINEERING
Professional Engineers, Planners, & Land Surveyors
Serving The State Of Florida

10511 SIX MILE CYPRESS PARKWAY, SUITE 101
FT. MYERS, FLORIDA 33966
PHONE: (239)939-5490 FAX: (239)939-2523

ENGINEERING LICENSE # EB 6469
SURVEY LICENSE # LB 6590

WWW.BANKSENG.COM

SKETCH OF DESCRIPTION
THE FOREST COUNTRY CLUB
LEE COUNTY, FLORIDA

DATE	PROJECT	DRAWING	DESIGN	DRAWN	CHECKED	SCALE	SHEET	OF	FILE NO. (S-T-R)
1-29-2016	8020	BNDRY_sk		ALH	ALH	1"=50'	2	2	1-46-24

EXHIBIT B

Description of the Movable Property
(tools, devices, equipment, furniture, fixtures, machinery, supplies, and other tangible items)

[TO BE PROVIDED BY SELLER PRIOR TO CONCLUSION OF THE FEASIBILITY PERIOD]

All Property set forth herein shall be transferred to Buyer free and clear of all liens, pledges, leases, options, rights of first refusal, conditional sales agreements or any other such encumbrances.

All personal property comprising the Sewer System that services the area set forth on **EXHIBIT C**, including but not limited to, the sewer lines, pipes, lagoon(s), treatment plant(s), pump/lift station(s), tanks, meters, valves, and any other appurtenances of the Sewer System, and all machinery, equipment, supplies and other tangible items used in connection with the Sewer System.

Additional Personal Property

EXHIBIT C

Service Area Map
(area in which the System service lines, plant, pipes, manholes, meters, lift or pump stations and appurtenances, utility facilities, etc. are located)

[SERVICE AREA MAP & LEGAL DESCRIPTION TO BE INSERTED PRIOR TO CLOSING]

EXHIBIT D
[Purchase Price Allocation]

[TO BE INSERTED PRIOR TO CLOSING]

EXHIBIT E

[Environmental Non-Compliance]

[TO BE PROVIDED BY SELLER THIRTY (30) DAYS PRIOR TO CONCLUSION OF THE FEASIBILITY PERIOD; IF NOT PROVIDED DURING THIS PERIOD, ASSUMED TO BE "NONE"]

EXHIBIT "E"

File Type	Type	Profile	Facility-Site ID	Document Date	Received Date	Document Type	Inspection Type	Facility Type	Applicati	Perm	Document Subject	County	District	File Size	Version	Master	Created	Creator	PreIndex ID	Kofax Batch Name
View Doc	Docum	Discovery_Compliance	FLA014478	02-01-2016	03-04-2016	MONITORING PLANS AND REPORTS RELATED	N/A	DOMESTIC WAST			2015 ANNUAL RESIDUALS SUMMARY REPORT	LEE	SD	660 KB	1.0	Y	03-15-2016	hanson_ka		
View Doc	Docum	Discovery_Compliance	FLA014478	07-26-2016	07-26-2016	INCIDENT OR MALFUNCTION REPORTING RELATED	N/A	DOMESTIC WAST			SPILL AT THE WASTEWATER PLANT COLLECTION SY	LEE	SD	689 KB	1.0	Y	08-03-2016	beltran_m		
View Doc	Docum	Discovery_Compliance	FLA014478	01-06-2014	01-06-2014	MONITORING PLANS AND REPORTS RELATED	N/A	DOMESTIC WAST			ANNUAL REUSE REPORT	LEE	SD	5966 KB	1.0	Y	09-07-2016	beltran_m		
View Doc	Docum	Discovery_Compliance	FLA014478	09-12-2016	09-12-2016	COMPLAINT RELATED	N/A	DOMESTIC WAST			CAO & COMPLAINT FORM	LEE	SD	268 KB	1.0	Y	09-12-2016	armstrong_r		
View Doc	Docum	Discovery_Compliance	FLA014478	09-15-2016	09-15-2016	INSPECTION RELATED	COMPLAINT INSPE	DOMESTIC WAST			CORRECTIVE ACTIONS	LEE	SD	61 KB	1.0	Y	09-16-2016	pannell_n		
View Doc	Docum	Discovery_Compliance	FLA014478	09-20-2016	09-20-2016	INSPECTION RELATED	COMPLAINT INSPE	DOMESTIC WAST			CORRECTIVE ACTIONS	LEE	SD	1153 KB	1.1	Y	10-18-2016	pannell_n		
View Doc	Docum	Discovery_Compliance	FLA014478	01-09-2017	01-09-2017	MONITORING PLANS AND REPORTS RELATED	N/A	DOMESTIC WAST			ANNUAL RECLAIMED ANALYSIS REPORT 1-5-17	LEE	SD	66 KB	1.0	Y	01-10-2017	owens_c		
View Doc	Docum	Discovery_Compliance	FLA014478	03-10-2017	03-10-2017	COMPLAINT RELATED	N/A	DOMESTIC WAST			RETURN TO COMPLIANCE LETTER	LEE	SD	71 KB	1.0	Y	03-10-2017	festa_d		
View Doc	Docum	Discovery_Compliance	FLA014478	06-06-2018	06-07-2018	INCOMING CORRESPONDENCE	N/A	DOMESTIC WAST			BACKFLOW PREVENTION CERTIFICATION	LEE	SD	1491 KB	1.0	Y	06-11-2018	velazquez_a		
View Doc	Docum	Discovery_Compliance	FLA014478	06-06-2018	06-07-2018	INCOMING CORRESPONDENCE	N/A	DOMESTIC WAST			BACKFLOW PREVENTION CERTIFICATION	LEE	SD	787 KB	1.0	Y	06-11-2018	velazquez_a		
View Doc	Docum	Discovery_Compliance	FLA014478	01-12-2023	01-12-2023	INCIDENT OR MALFUNCTION REPORTING RELATED	N/A	DOMESTIC WAST			MEMO DEC 2022 SSO	LEE	SD	177 KB	1.0	Y	01-12-2023	blair_l		
View Doc	Docum	Discovery_Compliance	FLA014478	06-30-2023	06-30-2023	INCIDENT OR MALFUNCTION REPORTING RELATED	N/A	DOMESTIC WAST			SSO 7075 SPOTTED FAWN CT	LEE	SD	76 KB	1.0	Y	07-07-2023	blair_l		
View Doc	Docum	Discovery_Compliance	FLA014478	07-20-2023	07-20-2023	INCIDENT OR MALFUNCTION REPORTING RELATED	N/A	DOMESTIC WAST			MEMO JUNE 2023 SSO	LEE	SD	178 KB	1.0	Y	07-20-2023	blair_l		
View Doc	Docum	Discovery_Compliance	FLA014478	10-30-2019	10-30-2019	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			CAO & INSPECTION REPORT	LEE	SD	2683 KB	1.0	Y	10-30-2019	Turneur_C		
View Doc	Docum	Discovery_Compliance	FLA014478	10-01-2013	10-31-2013	MONITORING PLANS AND REPORTS RELATED	N/A	DOMESTIC WAST			OCT 2013 DMR	LEE	SD	1329 KB	1.0	Y	12-20-2013	fitzgerald_m		
View Doc	Docum	Discovery_Compliance	FLA014478	12-24-2014	12-30-2014	MONITORING PLANS AND REPORTS RELATED	N/A	DOMESTIC WAST			ANNUAL RECLAIMED ANALYSIS REPORT	LEE	SD	364 KB	1.0	Y	12-30-2014	fitzgerald_m		
View Doc	Docum	Discovery_Compliance	FLA014478	10-27-2015	10-27-2015	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			ICL	LEE	SD	443 KB	1.0	Y	10-27-2015	dick_r		
View Doc	Docum	Discovery_Compliance	FLA014478	09-25-2018	09-25-2018	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			CAO LETTER AND INSPECTION REPORT	LEE	SD	2086 KB	1.0	Y	09-25-2018	armstrong_r		
View Doc	Docum	Discovery_Compliance	FLA014478	10-24-2018	10-26-2018	INCOMING CORRESPONDENCE	N/A	DOMESTIC WAST			RESPONSE TO CAO LETTER	LEE	SD	1933 KB	1.0	Y	10-29-2018	owens_c		
View Doc	Docum	Discovery_Compliance	FLA014478	12-05-2019	12-05-2019	OUTGOING CORRESPONDENCE	N/A	DOMESTIC WAST			INTEROFFICE MEMORANDUM -- DEPARTMENT RES	LEE	SD	177 KB	1.0	Y	12-05-2019	popidinski_n		
View Doc	Docum	Discovery_Compliance	FLA014478	11-19-2019	11-19-2019	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			CAO RESPONSE	LEE	SD	14149 KB	1.0	Y	11-19-2019	ramirez_l		
View Doc	Docum	Discovery_Compliance	FLA014478	01-08-2020	01-08-2020	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			INTEROFFICE MEMORANDUM	LEE	SD	1259 KB	1.0	Y	01-08-2020	ramirez_l		
View Doc	Docum	Discovery_Compliance	FLA014478	01-07-2020	01-07-2020	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			CORRECTIVE ACTIONS DOCUMENTATION	LEE	SD	9153 KB	1.0	Y	01-08-2020	ramirez_l		
View Doc	Docum	Discovery_Compliance	FLA014478	12-26-2019	01-09-2020	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			EFFLUENT ANALYSIS REPORT	LEE	SD	254 KB	1.0	Y	01-10-2020	popidinski_n		
View Doc	Docum	Discovery_Compliance	FLA014478	12-20-2019	12-20-2019	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			CORERCTIVE ACTIONS UPDATE	LEE	SD	19517 KB	1.0	Y	12-23-2019	ramirez_l		
View Doc	Docum	Discovery_Compliance	FLA014478	12-05-2019	12-05-2019	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			RESPONSE TO INTEROFFICE MEMORANDUM	LEE	SD	10924 KB	1.0	Y	12-05-2019	popidinski_n		
View Doc	Docum	Discovery_Compliance	FLA014478	11-22-2019	11-22-2019	MEETING RELATED	N/A	DOMESTIC WAST			INTEROFFICE MEMORANDUM- CAO RESPONSE NO	LEE	SD	201 KB	1.0	Y	11-22-2019	ramirez_l		
View Doc	Docum	Discovery_Compliance	FLA014478	02-13-2020	02-13-2020	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			CAO RESPONSE - RE-SAMPLING	LEE	SD	232 KB	1.0	Y	02-13-2020	wachob_h		
View Doc	Docum	Discovery_Compliance	FLA014478	03-02-2020	03-02-2020	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			CAO RESPONSE & MW ATTACHMENT	LEE	SD	14886 KB	1.0	Y	03-02-2020	wachob_h		
View Doc	Docum	Discovery_Compliance	FLA014478	02-13-2020	02-13-2020	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			CAO MEETING RESPONSE	LEE	SD	1706 KB	1.0	Y	02-13-2020	wachob_h		
View Doc	Docum	Discovery_Compliance	FLA014478	03-10-2020	03-10-2020	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			CAO RESPONSE UPDATES	LEE	SD	783 KB	1.0	Y	03-20-2020	wachob_h		
View Doc	Docum	Discovery_Compliance	FLA014478	05-31-2019	04-28-2020	INCOMING CORRESPONDENCE	N/A	DOMESTIC WAST			EFFLUENT TESTING	LEE	SD	655 KB	1.0	Y	05-04-2020	beckford_k		
View Doc	Docum	Discovery_Compliance	FLA014478	06-01-2020	06-01-2020	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			CAO - REVISION UPDATE	LEE	SD	203 KB	1.0	Y	06-01-2020	wachob_h		
View Doc	Docum	Discovery_Compliance	FLA014478	07-22-2020	07-22-2020	INSPECTION RELATED	COMPLIANCE EVA	DOMESTIC WAST			CAO RESPONSE PROPOSED TIMELINE FOR GW	LEE	SD	264 KB	1.0	Y	08-05-2020	devine_n		
View Doc	Docum	Discovery_Compliance	FLA014478	12-02-2022	12-02-2022	INCIDENT OR MALFUNCTION REPORTING RELATED	N/A	DOMESTIC WAST			SSO 1700 TERRAVERDE CIR	LEE	SD	88 KB	1.0	Y	12-05-2022	blair_l		
View Doc	Docum	Discovery_Compliance	FLA014478	01-06-2023	01-06-2023	INCIDENT OR MALFUNCTION REPORTING RELATED	N/A	DOMESTIC WAST			ADDITIONAL INFO SSO 1700 TERRAVERDE	LEE	SD	252 KB	1.0	Y	01-09-2023	blair_l		

Search Criteria	
Properties	**Values**
Catalog	Wastewater
Profiles	Discovery_Compliance
Type	any
County	LEE
District	SD
Facility-Site ID	FLA014478

File Type (Click to view)	Type	Profile	Facility-Site ID	Document Date	Received Date	Document Type	Facility Type	Application Number
View Document (.pdf)	Document	Enforcement_Legal	FLA014478	03-01-2021	03-01-2021	WARNING LETTER	DOMESTIC WASTEWATER	
View Document (.pdf)	Document	Enforcement_Legal	FLA014478	04-02-2021	04-02-2021	WARNING LETTER	DOMESTIC WASTEWATER	
View Document (.pdf)	Document	Enforcement_Legal	FLA014478	04-02-2021	04-02-2021	WARNING LETTER	DOMESTIC WASTEWATER	
View Document (.pdf)	Document	Enforcement_Legal	FLA014478	04-22-2021	04-22-2021	WARNING LETTER	DOMESTIC WASTEWATER	

Permit Number	Document Subject	County	District	File Size	Version	Master	Created	Creator	PreIndex ID	Kofax Batch Name
	WL & INSPECTION REPORT	LEE	SD	4536 KB	1.0	Y	03-01-2021	rizvi_s		
	WL RESPONSE 3/1/2021 WL	LEE	SD	86671 KB	1.0	Y	04-02-2021	homic_c		
	WL RESPONSE 3/1/2021 WL (2	LEE	SD	507 KB	1.0	Y	04-02-2021	homic_c		
	WL UPDATE	LEE	SD	35774 KB	1.0	Y	05-28-2021	homic_c		

EXHIBIT F

[List of Permits and Non-Compliance with Permits]

[TO BE PROVIDED BY SELLER THIRTY (30) DAYS PRIOR TO CONCLUSION OF THE FEASIBILITY PERIOD; IF NOT PROVIDED DURING THIS PERIOD, NON-COMPLIANCE WILL BE ASSUMED TO BE "NONE"]

EXHIBIT G

[Off-site Hazardous Materials Locations]

[TO BE PROVIDED BY SELLER THIRTY (30) DAYS PRIOR TO CONCLUSION OF THE FEASIBILITY PERIOD; IF NOT PROVIDED DURING THIS PERIOD, ASSUMED TO BE "NONE"]

EXHIBIT H

[Reports, Studies, Audits, Records, Data, Site Assessment, Economic Models, etc.]

[TO BE PROVIDED BY SELLER WITHIN THIRTY (30) DAYS OF THE EFFECTIVE DATE; IF NOT PROVIDED DURING THIS PERIOD, ASSUMED TO BE "NONE"]

Agreement for Sale of Utility System (Florida) - Forest Utilities -execution version

Final Audit Report 2023-10-12

Created:	2023-10-11
By:	Alyssa Altenhofen (AlyssaAltenhofen@PaveseLaw.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAyEUxIJDBfxE74HJWTwH34VycgIChufYq

"Agreement for Sale of Utility System (Florida) - Forest Utilities - execution version" History

Document created by Alyssa Altenhofen (AlyssaAltenhofen@PaveseLaw.com)
2023-10-11 - 3:20:35 PM GMT- IP address: 67.129.9.66

Document emailed to dorrees3@gmail.com for signature
2023-10-11 - 3:21:15 PM GMT

Email viewed by dorrees3@gmail.com
2023-10-12 - 10:48:26 PM GMT- IP address: 73.255.246.98

Signer dorrees3@gmail.com entered name at signing as Doris Swor
2023-10-12 - 10:49:22 PM GMT- IP address: 73.255.246.98

Document e-signed by Doris Swor (dorrees3@gmail.com)
Signature Date: 2023-10-12 - 10:49:24 PM GMT - Time Source: server- IP address: 73.255.246.98

Agreement completed.
2023-10-12 - 10:49:24 PM GMT

Agreement for Sale of Utility System (Florida) - Forest Utilities -execution version - jc signed

Final Audit Report 2023-10-16

Created:	2023-10-15
By:	Cheryl Waites (cwaites@cswrgroup.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAAotWF2vJj4zdz-w0bzZkc1iDf6YG69sB

"Agreement for Sale of Utility System (Florida) - Forest Utilities - execution version - jc signed" History

Document created by Cheryl Waites (cwaites@cswrgroup.com)
2023-10-15 - 2:44:12 PM GMT- IP address: 68.184.8.101

Document emailed to Josiah Cox (jcox@cswrgroup.com) for signature
2023-10-15 - 2:45:23 PM GMT

Email viewed by Josiah Cox (jcox@cswrgroup.com)
2023-10-16 - 5:42:35 PM GMT- IP address: 104.47.55.254

Document e-signed by Josiah Cox (jcox@cswrgroup.com)
Signature Date: 2023-10-16 - 5:42:45 PM GMT - Time Source: server- IP address: 99.26.132.225

Agreement completed.
2023-10-16 - 5:42:45 PM GMT

AMENDMENT TO PURCHASE AND SALE AGREEMENT

THIS AMENDMENT TO PURCHASE AND SALE AGREEMENT ("Amendment") is made as of the 15 day of January, 2025 by and between CENTRAL STATES WATER RESOURCES, INC., a Missouri corporation, or its assigns ("*Buyer*"), and FOREST UTILITIES, INC., a Florida corporation qualified and registered to transact business in the State of Florida ("*Seller*"), collectively ("*Parties*").

W I T N E S S E T H:

WHEREAS, Buyer and Seller are parties to that certain Purchase and Sale Agreement with an effective date of October 15, 2023 (the "Agreement") for the purchase and sale of certain real property located in Lee County, Florida as more particularly described in the Agreement; and

WHEREAS, said Purchase and Sale Agreement is hereby reinstated and remains in full force and effect; and

WHEREAS, Buyer and Seller wish to amend the terms and conditions of the Agreement in accordance with the terms set forth herein.

NOW THEREFORE, in consideration of the sum of TEN DOLLARS ($10.00), the exchange of mutual promises, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Buyer and Seller agree as follows:

1. Recitals; Definitions. The foregoing recitals are true and correct and are incorporated herein by reference. Capitalized terms not defined herein shall have the meaning set forth in the Agreement.

2. Section 1.03 Earnest Money and Section 2.05 Other Termination Rights are hereby amended to provide that, except in the event of a Seller Default, the Earnest Deposit in the amount of Two Hundred and Fifty Thousand Dollars ($250,000.00) is non-refundable for any reason and fully earned by Seller and shall be immediately released to Seller upon the full execution of this Amendment.

3. Section 1.05 Capital Improvements shall remain in full force and effect and unchanged with this Amendment. However, Buyer acknowledges and agrees that it has been provided notice of, and approved, capital improvements in the amount of $2,496,305.00 (not all of which have been completed as of the date of this Amendment).

4. The Agreement is further amended to provide that Buyer will take commercially reasonable efforts to obtain all approvals from the Public Services Commission ("PSC") and shall provide monthly reports/updates to Seller with information and documentation as to the status of its efforts to obtain approval from PSC.

5. Section 4.01(a) Closing is hereby amended to provide the Closing shall be the earlier of (i) March 16, 2026 or (ii) thirty (30) days following the approval by the PSC in a form satisfactory to Buyer as set for in more detail in Section 2.05(a).

6. Miscellaneous. Except as modified hereby, the terms and conditions of the Agreement shall remain in full force and affect. This Amendment may be executed in counterparts,

each of which shall be deemed an original, but all of which shall constitute one and the same Amendment and facsimile and electronic transmissions and signatures shall be deemed originals.

IN WITNESS WHEREOF, the parties have executed this Amendment as of the date first above written.

SELLER:

FOREST UTILITIES, INC., a Florida corporation

By:_____
Name: Doris Swor, President

BUYER:

CENTRAL STATES WATER RESOURCES, INC.,
a Missouri corporation

By:_____
Name: Josiah M. Cox, President

AGREEMENT BETWEEN PARTIES

This Agreement Between Parties ("**Agreement**") is made and entered into this 15 day of January, ~~2024~~ 2025, by and between CENTRAL STATES WATER RESOURCES, INC., a Missouri corporation ("**Buyer**"), and FOREST UTILITIES, INC., a Florida corporation ("**Seller**"), collectively (the "**Parties**").

RECITALS

WHEREAS, Central States Water Resources, Inc. and Forest Utilities, Inc., entered into that certain Purchase and Sale Agreement dated October 15, 2023, in respect to the sale and purchase of a certain sewer system in Lee County, Florida (the "**Purchase Agreement**");

WHEREAS, by entering into this Agreement, the Parties desire to clarify language in the Purchase Agreement regarding regulatory approval;

NOW, THEREFORE, in consideration of the foregoing recitals and for other good and valuable consideration, the receipt and sufficiency of which is acknowledged, the Parties hereby agree as follows:

AGREEMENT

1. Section 2.05(a), "in a form satisfactory to Buyer," shall include a finding that the fair market value of the utility system is equal to or greater than Five Million Five Hundred Thousand and 0/100 Dollars ($5,500,000.00).

2. The undersigned hereby affirm that the actions taken and to be taken and the promises made pursuant to this Agreement are fully authorized by the respective entities and that the officer or agent executing this document is authorized to do so.

IN WITNESS WHEREOF, the Parties have duly executed this Agreement Between Parties as of the day and year first above written either simultaneously or in one or more counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same instrument.

[SIGNATURE PAGE FOLLOWS]

SELLER:

FOREST UTILITIES, INC.

By: _____
Dorris Swor, President
DORIS

BUYER:

CENTRAL STATES WATER RESOURCES, INC.

By: _____
Josiah M. Cox, President

EXHIBIT C

UTILITY NAME: **Forest Utilities, Inc.**

YEAR OF REPORT
31-Dec-24

SYSTEM NAME / COUNTY : **Forest Utilities, Inc. / Lee**

WASTEWATER UTILITY PLANT ACCOUNTS

ACCT. NO. (a)	ACCOUNT NAME (b)	PREVIOUS YEAR (c)	ADDITIONS (d)	RETIREMENTS** (e)	CURRENT YEAR (f)
351	Organization	$ -			-
352	Franchises	17,331			17,331
353	Land and Land Rights	26,822			26,822
354	Structures and Improvements	1,217,773	33,597		1,251,370
355	Power Generation Equipment	262,748			262,748
360	Collection Sewers - Force	1,935,831			1,935,831
361	Collection Sewers - Gravity	1,826,106			1,826,106
362	Special Collecting Structures	122,728			122,728
363	Services to Customers	12,628			12,628
364	Flow Measuring Devices	29,424			29,424
365	Flow Measuring Installations	-			-
366	Reuse Services				
367	Reuse Meters and Meter Installations				
370	Receiving Wells	-			-
371	Pumping Equipment	441,871	10,210		452,081
374	Reuse Distribution Reservoirs	391,052			391,052
375	Reuse Transmission and Distribution System	-			-
380	Treatment and Disposal Equipment	1,576,834			1,576,834
381	Plant Sewers	-			-
382	Outfall Sewer Lines				
389	Other Plant Miscellaneous Equipment	-			-
390	Office Furniture and Equipment	25,641			25,641
391	Transportation Equipment	199,580			199,580
392	Stores Equipment	-			-
393	Tools, Shop and Garage Equipment	-			-
394	Laboratory Equipment	23,700			23,700
395	Power Operated Equipment	35,819			35,819
396	Communication Equipment				
397	Miscellaneous Equipment				
398	Other Tangible Plant				
	Total Wastewater Plant	$ 8,145,889	$ 43,807	$ -	$ 8,189,695

LIFT STATION #1
(DEER RUN S.W.)
NUMBER OF 8" DIA. MANHOLES: 7
TOTAL LENGTH OF 8" PIPE: 1,650'
FORCE MAIN 6" DIA.
TOTAL LENGTH: 297'

LIFT STATION #2
(FOX DEN S.W.)
NUMBER OF 8" DIA. MANHOLES: 8
TOTAL LENGTH OF 8" PIPE: 1,975'
FORCE MAIN 6" DIA.
TOTAL LENGTH: 700'

LIFT STATION #3
(DEER RUN & BOBCAT DRIVE)
NUMBER OF 8" DIA. MANHOLES: 15
TOTAL LENGTH OF 8" PIPE: 3,655'
FORCE MAIN 6" DIA.
TOTAL LENGTH: 800'

LIFT STATION #4
(CLUB BOULEVARD S.W.)
NUMBER OF 8" DIA. MANHOLES: 12
TOTAL LENGTH OF 8" PIPE: 3,402'
FORCE MAIN 4" DIA.
TOTAL LENGTH: 550'

LIFT STATION #5
(FOREST BOULEVARD S.W.)
NUMBER OF 8" DIA. MANHOLES: 13
TOTAL LENGTH OF 8" PIPE: 2,029'
FORCE MAIN 4" DIA.
TOTAL LENGTH: 800'

LIFT STATION #6
(ROYAL WOODS)
NUMBER OF 8" DIA. MANHOLES: 34
TOTAL LENGTH OF 8" PIPE: 5,834'
FORCE MAIN 6" DIA.
TOTAL LENGTH: 2,465'

LIFT STATION #7
(BETWEEN BEAR CUB CT. & BOBCAT)
NUMBER OF 8" DIA. MANHOLES: 13
TOTAL LENGTH OF 8" PIPE: 4,558'
FORCE MAIN 6" DIA. PVC
TOTAL LENGTH: 1,270'
FORCE MAIN 6" DIA. DIP
TOTAL LENGTH: 125'

LIFT STATION #8
(TIMBER LAKE DRIVE @ DOVES NEST)
NUMBER OF 8" DIA. MANHOLES: 18
TOTAL LENGTH OF 8" PIPE: 4,750'
FORCE MAIN 6" DIA. PVC
TOTAL LENGTH: 980'
FORCE MAIN 6" DIA. DIP
TOTAL LENGTH: 50'

LIFT STATION #9
(TIMBER LAKE DRIVE S.W.)
NUMBER OF 8" DIA. MANHOLES: 26
TOTAL LENGTH OF 8" PIPE: 5,286'
FORCE MAIN 6" DIA. PVC
TOTAL LENGTH: 1,650'

LIFT STATION #10
(TIMBER LAKE DRIVE S.W.)
NUMBER OF 8" DIA. MANHOLES: 10
TOTAL LENGTH OF 8" PIPE: 3,066'
FORCE MAIN 4" DIA. PVC
TOTAL LENGTH: 1,725'

LIFT STATION #11
(ISLAND PARK VILLAGE)
NUMBER OF 8" DIA. MANHOLES: 20
TOTAL LENGTH OF 8" PIPE: 3,929'
FORCE MAIN 6" DIA. PVC
TOTAL LENGTH: 1,120'

LIFT STATION #12
(GULFSIDE)
NUMBER OF 8" DIA. MANHOLES: 7
TOTAL LENGTH OF 8" PIPE: 1,492'
FORCE MAIN 4" DIA. PVC
TOTAL LENGTH: 172'

LIFT STATION #13
(NEWPORT GLEN)
NUMBER OF 8" DIA. MANHOLES: 18
TOTAL LENGTH OF 8" PIPE: 2,435'
FORCE MAIN 4" DIA. PVC
TOTAL LENGTH: 588'

ASSET LIST
(LIFT STATION, MANHOLES,
GRAVITY SEWERS & FORCE MAINS)

JAMES P. ELLIOTT, P.E.
FLORIDA CERTIFICATE NUMBER 21022

DATE_____

SOURCE, INC.
ENGINEERS - PLANNERS
Engineering Business #34338
1334 LAFAYETTE STREET * CAPE CORAL, FL 33904
TELEPHONE (239)549-2345 FAX (239)549-6779

JOB NO. 170-01-22
DATE 10-31-23
EXHIBIT 1 OF –
DRAWN BY: JN
FILE NAME: 01-170

Nov. 02, 2023 - 4:10pm Joe Nuccio
X:\Projects\Current Projects\107-01-22 NWA Purdy Drive WWR\01 170-01-22 Forest Utilities Asset List.dwg

LIFT STATION #14
(ISLAND PARK WOODS)
NUMBER OF 8" DIA. MANHOLES: 22
TOTAL LENGTH OF 8" PIPE: 3,147'
FORCE MAIN 4" DIA. PVC
TOTAL LENGTH: 300'
FORCE MAIN 4" DIA. DIP
TOTAL LENGTH: 60'

LIFT STATION #15
(TIMBERWOOD VILLAGE)
NUMBER OF 8" DIA. MANHOLES: 14
TOTAL LENGTH OF 8" PIPE: 1,324'
FORCE MAIN 6" DIA. PVC
TOTAL LENGTH: 1,445'
FORCE MAIN 6" DIA. DIP
TOTAL LENGTH: 35'

LIFT STATION #16
(ISLAND PARK VILLAGE)
NUMBER OF 8" DIA. MANHOLES: 4
TOTAL LENGTH OF 8" PIPE: 834'
FORCE MAIN 4" DIA. PVC
TOTAL LENGTH: 445'

LIFT STATION #17
(TERREVERDE)
NUMBER OF 8" DIA. MANHOLES: 23
TOTAL LENGTH OF 8" PIPE: 4,053'
FORCE MAIN 6" DIA. PVC
TOTAL LENGTH: 1,120'

LIFT STATION #18
(ISLAND PARK SHOPPING CENTER)
NUMBER OF 8" DIA. MANHOLES: 9
TOTAL LENGTH OF 8" PIPE: 1,651'
FORCE MAIN 4" DIA. DIP
TOTAL LENGTH: 155'

LIFT STATION #19
(FOREST OAKS DR. & COTTONTAIL CT.)
NUMBER OF 8" DIA. MANHOLES: 12
TOTAL LENGTH OF 8" PIPE: 2,645'
FORCE MAIN 8" DIA.
TOTAL LENGTH: 1,829'

LIFT STATION #20
(FOREST OAKS DR.)
NUMBER OF 8" DIA. MANHOLES: 13
TOTAL LENGTH OF 8" PIPE: 2,970'
FORCE MAIN 8" DIA.
TOTAL LENGTH: 1,779'

LIFT STATION #21
(ISLAND PARK VILLAGE)
NUMBER OF 8" DIA. MANHOLES: 12
TOTAL LENGTH OF 8" PIPE: 2,284'
FORCE MAIN 4" DIA.
TOTAL LENGTH: 389'

LIFT STATION'S #101, 102 & 103
(JAMAICA BAY)
NUMBER OF 8" DIA. MANHOLES: 209
TOTAL LENGTH OF 8" PIPE: 48,092'
FORCE MAIN 8" DIA.
TOTAL LENGTH: 8,473'

LIFT STATION'S #39 & 105
(LAUREL OAKS S/D)
NUMBER OF 8" DIA. MANHOLES: 39
TOTAL LENGTH OF 8" PIPE: 3,163'
FORCE MAIN 8" DIA.
TOTAL LENGTH: 3,004'

LIFT STATION #25
(OLD 41 NEXT TO CULLIGAN)
NUMBER OF 8" DIA. MANHOLES: 5
TOTAL LENGTH OF 8" PIPE: 793'
FORCE MAIN 6" DIA.
TOTAL LENGTH: 533'

LIFT STATION #26
(US HWY 41 & FISH TAIL BOATS)
FORCE MAIN 6" DIA.
TOTAL LENGTH: 2,130'

LIFT STATION #27
(US HWY 41 & THE COLLISION CENTER
GALLOWAY DIRECT)
FORCE MAIN 6" DIA.
TOTAL LENGTH: 525'

ASSET LIST
(LIFT STATION, MANHOLES,
GRAVITY SEWERS & FORCE MAINS)

JAMES P. ELLIOTT, P.E.
FLORIDA CERTIFICATE NUMBER 21022

DATE_____

SOURCE, INC.
ENGINEERS - PLANNERS
Engineering Business #34338
1334 LAFAYETTE STREET * CAPE CORAL, FL 33904
TELEPHONE (239)549-2345 FAX (239)549-6779

JOB NO. 170-01-22
DATE 10-31-23
EXHIBIT 2 OF -
DRAWN BY: JN
FILE NAME: 01-170

Nov. 02, 2023 - 4:10pm Joe Nuccio
X:\Projects\Current Projects\100's\107-01-22 NWA Purdy Drive WWR\01 170-01-22 Forest Utilities Asset List.dwg

LIFT STATION #1 (LAUREL OAKS)
(RED FOX ROAD)
NUMBER OF 8" DIA. MANHOLES: 2
TOTAL LENGTH OF 8" PIPE: 253'
FORCE MAIN LENGTH: 182'

LIFT STATION #2 (LAUREL OAKS)
(GOLDEN BEAR COURT)
FORCE MAIN LENGTH: 503'

LIFT STATION #3 (LAUREL OAKS)
(RED FOX RUN & LAUREL DAWN DRIVE)
FORCE MAIN LENGTH: 261'

LIFT STATION #4 (LAUREL OAKS)
(LAUREL DAWN DRIVE)
FORCE MAIN LENGTH: 722'

LIFT STATION #104 (LAUREL OAKS)
(EAST/WEST OF L.S. #3)
FORCE MAIN LENGTH: 22'

ASSET LIST
(LIFT STATION, MANHOLES, GRAVITY SEWERS & FORCE MAINS)

JAMES P. ELLIOTT, P.E.
FLORIDA CERTIFICATE NUMBER 21022

DATE_____

SOURCE, INC.
ENGINEERS - PLANNERS
Engineering Business #34338

1334 LAFAYETTE STREET * CAPE CORAL, FL 33904
TELEPHONE (239)549-2345 FAX (239)549-6779

JOB NO. 170-01-22

DATE 10-31-23

EXHIBIT 3 OF -

DRAWN BY: JN

FILE NAME: 01-170

Nov. 02, 2023 - 4:11pm Joe Nuccio
X:\Projects\Current Projects\100's\107-01-22 NWA Purdy Drive WWR\01 170-01-22 Forest Utilities Asset List.dwg

EXHIBIT D



CSWR, LLC and Subsidiaries

Consolidated Financial Statements

For the years ended December 31, 2024 and 2023

CSWR, LLC and Subsidiaries
As of December 31, 2024 and 2023

Consolidated Balance Sheets

	2024	*2023*
Current Assets		
Cash		
Accounts Receivable, net		
Other Current Assets		
Total Current Assets		
Property, Plant and Equipment, Net		
Non-Current Assets		
Preliminary Survey and Investigation		
Other Long-Term Assets		
Total Non-Current Assets		
Goodwill		
Intangible Assets		
Total Assets		
Current Liabilities		
Accounts Payable		
Notes Payable - Current		
Other Current Liabilities		
Total Current Liabilities		
Long-Term Liabilities		
Notes Payable, net of Current Portion		
Contributions in Aid of Construction		
Other Long-Term Liabilities		
Total Long-Term Liabilities		
Member's Equity		
Paid-In Capital		
Accumulated Deficit		
Total Member's Equity		
Total Liabilities and Member's Equity		

See notes to consolidated financial statements

CSWR, LLC and Subsidiaries

For the years ended December 31, 2024 and 2023

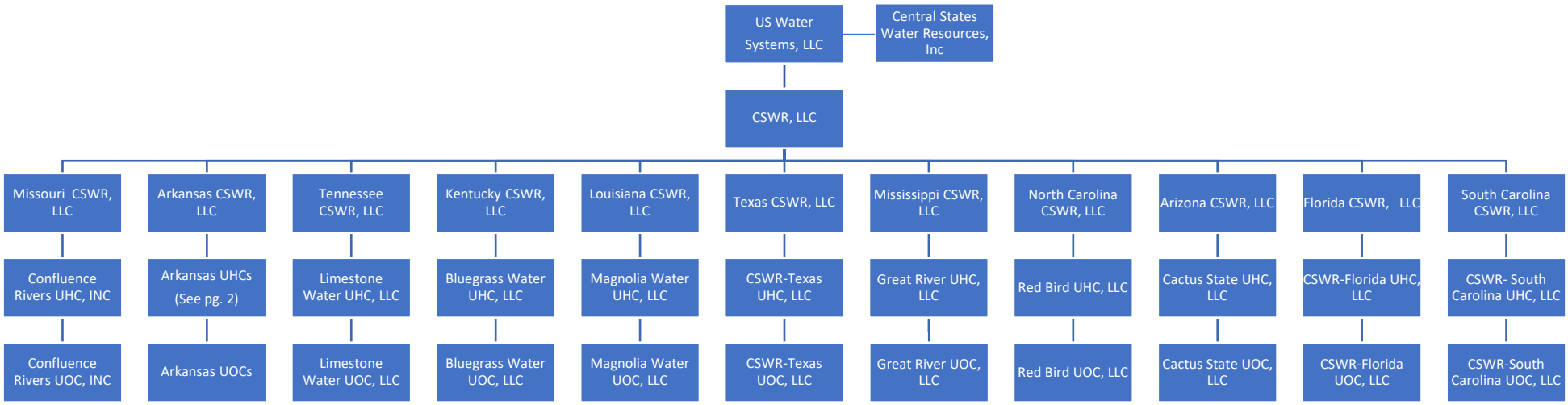
Consolidated Statements of Operations

	2024	*2023*
Operating Revenue		
Operating Revenue	[redacted]	
Operating Expense		
Operations and Maintenance		
General and Administrative		
Depreciation and Amortization		
Total Operating Expense		
Operating Loss		
Other Expense		
Interest Expense		
Total Other Income (Expense)		
Net Loss		

See notes to consolidated financial statements

EXHIBIT E

Central States Water Resources Corporate Entity Organizational Chart



Arkansas CSWR Organizational Chart Detail

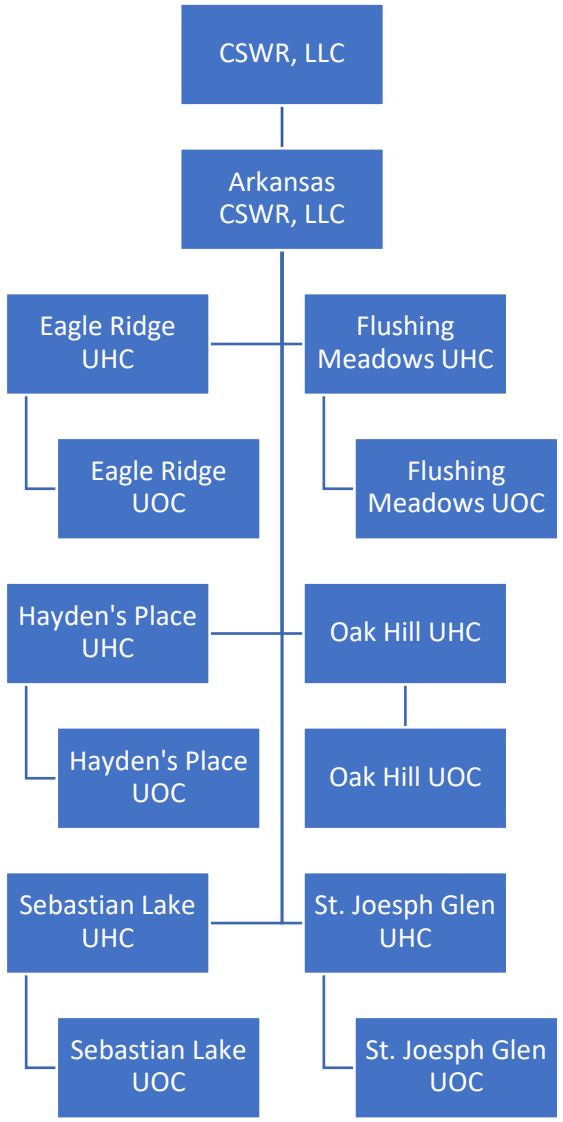


EXHIBIT F

Josiah Cox – President

Mr. Cox is President of Red Bird Utility Operating Company, LLC, Red Bird Utility Holding Company, LLC, and also of, CSWR, LLC, ("CSWR") and Central States Water Resources, Inc. All those companies are part of an affiliated group that provides water and/or wastewater utility services to approximately 160,000 customers in 11 states.

Mr. Cox received a Bachelor of Science degree with a major in Environmental Science from the University of Kansas where he was also a student-athlete. Professionally he has worked at the Kansas state biological survey, where he performed a wildlife habitat study. He then worked at a civil engineering firm where he was involved in various facets of the land development process including permitting, entitlement, civil design, project management, and construction management. He focused mainly on the water and wastewater side of the civil engineering business and participated in every aspect of that business from waste-load allocation studies (now known as the anti-degradation processes), to design, permitting, project management, and construction management. He also ran the firm's environmental consulting division and was the second private consultant to submit a Water Quality Impact Assessment in the state of Missouri in 2003. He later joined the engineering firm's executive leadership team and helped run all the firm's operations.

Beginning in 2005, he formed a full-service civil engineering, environmental consulting, general contracting, and construction management firm. He gained extensive experience with rural communities in every facet of the water and wastewater compliance process, including environmental assessment, permitting, design, construction, operation and community administration of the actual water and wastewater (sewerage) systems. The firm performed stream sampling and built waste-load allocation models to determine receiving water-body protective permit-able effluent pollutant loads. They did full engineering design of multiple whole community water and wastewater infrastructure systems including wells, water distribution, water treatment, water storage, wastewater conveyance, and wastewater treatment plants and delivered these designs through federal and state administered permitting processes in Missouri. The engineering firm also administered the construction of these water and wastewater systems from green field site selection all the way through system startup and final engineering sign-off. During this time, Mr. Cox also began the Master of Business Administration (MBA) program at Washington University in St. Louis, from which he earned his advanced degree and graduated in 2007.

Additionally, beginning in 2008, Mr. Cox took over the operations of a rural sewer district where he managed the functioning, testing, and maintenance of this system. In that capacity, he also acted as the administrator for the system, performing all the billing, emergency response, accounts payable/accounts receivable, collections, budgeting, customer service, and public town meetings required to service the community. He no longer has any responsibilities for that system.

In late 2010, after working on several small, distressed water and wastewater systems, Mr. Cox created a business plan to acquire and recapitalize failing systems as investor-owned, regulated water and wastewater utility companies. In early 2011, he went to the capital markets to raise money to implement his plan, and over a period of approximately three years met with more than fifty- two infrastructure investment groups in an attempt to raise necessary financing. In February 2014, he was able to raise sufficient debt and equity capital to start CSWR. In 2018, he attracted an additional large institutional private equity investor, which allowed CSWR to expand the scope of its business plan. Since its formation, CSWR has acquired, and is currently operating more than 800 water and/or wastewater systems in Arizona, Arkansas, Florida, Kentucky, Louisiana, Missouri, Mississippi, North Carolina, South Carolina, Tennessee, and Texas.

Todd Thomas – Vice President

Todd Thomas holds the office of Senior Vice President of CSWR. Mr. Thomas received his Bachelor of Science in Civil Engineering from The Missouri University of Science and Technology, and a Master of Business Administration from Washington University in St. Louis.

Before joining CSWR, Mr. Thomas was President of Brotcke Well and Pump, Vice President of Operations and Business Development of the Midwest for American Water Contract Operations, and General Manager of Midwest Operations for Environmental Management Corporation. Mr. Thomas currently serves on the Technical Advisory Team for the Public Water Supply District 2 of St. Charles County, MO.

Mr. Thomas's past positions in related industries has provided him with extensive experience in water and sewer utilities. He has in depth, firsthand knowledge about the amount of damage resulting from the lack of maintenance on a well system, and he understands how much money and effort are required to restore a well system after neglect.

In his position as Senior Vice President at CSWR, Mr. Thomas's primary responsibilities include utility operations along with the acquisition, development, and rate stabilization of CSWR- affiliated utilities. Those duties include operations, maintenance, capital planning, and regulatory compliance for all affiliate-owned facilities. He is responsible for the management of all operations and maintenance service providers, and engineering firms.

Mark Joensen – Chief Financial Officer

Mr. Joensen is the Chief Financial Officer at CSWR. Mr. Joensen joined CSWR in September 2024, bringing extensive expertise in financial management, corporate development, and strategic planning. Over the course of his career, he has held Chief Financial Officer and senior leadership roles across prominent organizations, including The Transportation Network Group, US Methanol, Liberty One Methanol, Longview Intermediate Holdings C, Allegheny Energy, Inc., and CONSAD Research Corporation.

As a private consultant, Mr. Joensen advised private equity firms on investment opportunities in the U.S. utility, independent power, and natural gas sectors. His strategic insights and analytical prowess have consistently driven value

creation and operational excellence.

Mr. Joensen holds a Ph.D. in Theoretical High Energy Physics from Carnegie Mellon University and a Bachelor of Science in Electrical Engineering from Iowa State University. With this unique blend of technical and financial expertise, he excels in bridging the gap between engineers, technical managers, and financial teams, delivering actionable insights and comprehensive reporting from operational to executive levels.

Brent Thies – Vice President & Corporate Controller

Brent Thies is the Vice President and Corporate Controller of CSWR and was promoted to that position in February 2022. As Vice President and Corporate Controller, he is responsible for the accounting books and records of CSWR and its regulated utility subsidiaries. This includes setting financial controls and accounting policy along with the responsibility for the accurate recording of revenues, expenses and capital expenditures. With his team, Mr. Thies is also responsible for preparing and filing regulatory annual reports and responding to certain data requests for the regulated utility subsidiaries of CSWR. He also prepares monthly and quarterly management reports and interfaces with external auditors and tax professionals.

Mr. Thies first earned a Bachelor of Arts in Communications/Public Relations from Missouri Baptist University in St. Louis, and a Bachelor of Science in Accounting from Liberty University in Virginia. He also earned a Master of Divinity degree from Midwestern Baptist Theological Seminary in Kansas City, Missouri and a Master of Business Administration degree from the University of Missouri-St. Louis. Mr. Thies is also licensed as a Certified Public Accountant in the State of Missouri. After receiving his degrees, Mr. Thies spent the first years of his career as the Controller of a multi-entity non-profit.

During his time at CSWR, Mr. Thies completed the Fundamentals, Intermediate and Advanced Regulatory Studies Programs through the Institute of Public Utilities at Michigan State University.

Mike Duncan –Vice President

Mike Duncan is the Vice President of CSWR and was promoted to that position in October 2020. As Vice President, he has played an integral role in researching, preparing, filing, and processing acquisition applications in Missouri, Kentucky, Tennessee, Louisiana, Texas, North Carolina, and Mississippi. He also has taken a leading role in preparing and filing rate cases in Missouri, Kentucky, and Louisiana.

After receiving his Bachelor of Arts degree from Washington University in St. Louis, the first eleven years of his career were spent as an administrator and later director at a non-profit organization in St. Louis, Missouri. As Executive Director, Mr. Duncan oversaw accounting, finance, human resources, IT, and communications for the organization. During his employment he earned his Master of Business Administration from the Olin School of Business at Washington University. Prior to joining CSWR, he spent two years as Director of Operations with NAPA Auto Tire & Parts, a partner-owned chain of auto parts stores, overseeing projects related to distribution, logistics, IT, and general management.

Jake Freeman – Director of Engineering

Jake Freeman is the Director of Engineering of CSWR and has held this position since January 2019. As Director of Engineering, he oversees the engineering, surveying, and facility construction upgrades for all newly acquired CSWR water and wastewater utilities including those in Arizona, Arkansas, Florida, Kentucky, Louisiana, Missouri, Mississippi, North Carolina, South Carolina, Tennessee, and Texas. He also oversees ongoing capital upgrade projects on all CSWR affiliated and operated facilities.

After receiving a Bachelor of Science degree in Mechanical Engineering from the University of Missouri – Columbia, Mr. Freeman spent the first two years of his career working for Corrigan Mechanical, a design-build mechanical contractor in St. Louis, where he designed, estimated, and managed plumbing, HVAC and process piping construction projects in Missouri and southern Illinois. He then spent eleven years performing similar tasks for Brotcke Well & Pump, a well and pump service contractor servicing water wells and water treatment equipment throughout Missouri, Illinois, Kentucky, and Kansas. Prior to his employment with CSWR, he held the position of Vice President of Brotcke Well & Pump and Principal for their engineering services and managed their newly opened office in Kansas City.

Jo Anna McMahon - Vice President of Government Affairs

Jo Anna McMahon is the Vice President of Government Affairs for CSWR. Ms. McMahon holds several top water and wastewater certifications throughout the country. She received her Bachelor of Business Administration degree from the University of Arkansas at Little Rock, and will be graduating in May 2023 with a Master of Business Administration degree from Washington University in St. Louis, Missouri.

Before joining CSWR, Ms. McMahon worked for both public and private utilities, respectively serving ~~a~~ both municipality and military installations. Ms. McMahon has extensive experience as both an Operations Coordinator and as a Specification Specialist.

In her previous position as Director for Environmental Health and Safety at CSWR, her responsibilities included managing daily operations of wastewater and water treatment facilities of various sizes ranging from 3,600 gallons per day (gpd) to 64,000,000 gpd. Throughout that time, Ms. McMahon led teams of operators in creating and executing infrastructure improvement plans, managing and developing employees, and providing a standard of excellence in customer service while keeping facilities and operations within regulatory compliance.

Ms. McMahon's previous employment equipped her with invaluable experience in water and sewer utilities. She has a wide range of firsthand experience in managing water and wastewater treatment facilities safely and in a financially and operationally sound manner.

Chelsie Carter - Director of Customer Experience

Chelsie Carter is the Director of Customer Experience at CSWR. Ms. Carter joined CSWR in 2021 as Customer Experience Manager and was promoted to

Director level within seven months, leading an overhaul of the CSWR's customer service functions during a period of dramatic growth.

Ms. Carter first earned a Bachelor of Science degree followed by her Master of Business Administration from Lindenwood University. She has a strong background in training and management as well as extensive experience with utility providers. Prior to joining CSWR, she led the Accounts Receivable division at the St. Louis Metropolitan Sewer District, where she also served as the point of contact for dozens of major accounts. Areas of oversight included billing $34M per month in customer invoices, customer service for 430k customers, processing an average of $1M in payment remittance per day and collecting more than $92M in delinquent accounts. Ms. Carter also spent 16 years with American Water, starting as the supervisor for the Customer Call Center and working her way up to Business Services Specialist. In this role she was the point of contact for the Public Service Commission on customer-related issues and resolutions. She has provided direction and support for several rate cases, acquisitions, and software implementations.

Since joining CSWR, Ms. Carter continues to oversee the entire customer life cycle, focusing on improving the customer experience in the areas of self-service, software systems and processes.

EXHIBIT G

DESCRIPTION OF TERRITORY SERVED

Order No. 10430

The Southeast Quarter (SE 1/4) of Section 35, Rs4E, T45S; and that part of the Southwest Quarter (SW 1/4) of Section 36; R24E, T45S lying Southwesterly of U.S. 41;

and the East half (E 1/2) of Section 2, Rs4E, T46S; and that part of Section 1, R23E, T46S lying Southwesterly of U.S. 41;

and the Northwest Quarter (NW 1/4) of Section 11, R24E, T46S;

and the North half (N 1/2) of Section 12, R24E, T46S

Order No. 15382

Township 46 South, Range 24 East, Sections 11 and 12, the South 1/2 of Section 12, and the East 1/2 of Section 11.

Order No. PSC-96-0930-FOF-SU

The northeast portion of Section 1, Township 46 South, Range 24 East, lying east of US 41 (State Road 45) in Lee County, Florida and

The south half of the south half of Section 36, Township 45 South, Range 24 East, lying east of US 41 (State Road 45) in Lee County, Florida and

The northeast quarter of the southwest quarter of Section 36, Township 45 South, Range 24 East, lying east of US 41 (State Road 45) in Lee County, Florida.

Laurel Oaks Subdivision
Phases I and II

Laurel Oaks, Unit 1, according to the Plat thereof, recorded in Plat Book 52, Pages 24 through 29, inclusive, of the Public Records of Lee County, Florida

Laurel Oaks, Unit II, a subdivision, as recorded in Plat Book 56, Pages 13 through 17, inclusive, of the Public Records of Lee County, Florida

Also described as:

The South One-Half (S1/2) of the North One-Half (N1/2) of the Southeast Quarter (SE1/4) of Section 36, Township 45 South, Range 24 East, Lee County, Florida

(Continued on Sheet No. 3.2)

(Continued from Sheet No. 3.1)

PARCEL I:
The South 222 feet of the Southeast quarter (SE ¼) of the Southeast quarter (SE ¼) of Section 25, Township 45 South, Range 24 East, excepting the former Iona Drainage District right of way, Public Records of Lee County, Florida.

PARCEL II:
The Northeast quarter (NE 1/4) LESS right of way for railroad, of Section 36, Township 45 South, Range 24 East.

PARCEL III:
The North half (N 1/2) of the Northwest quarter (NW 1/4) of Section 36, Township 45 South, Range 24 East, lying East of State Road No. 45.

Excepting therefrom a commercial strip of land 300 feet wide described as follows:

PARCEL A:
Beginning at the Northwest corner of Jamaica Bay West, said point being on the Northeasterly right of way of U.S. No. 41, thence 764.70 feet along the arc of a curve concave to the Northeast having a radius of 2732.79 feet and subtended by a chord having a length of 762.21 feet and bearing South 23º33'00" East to a point of tangency; thence South 31º34'00" East along said right of way for 52.37 feet to a point of curvature; thence 39.27 feet along the arc of a curve concave to the Northeast having a radius of 25.00 feet and subtended by a chord having a length of 35.36 feet and bearing south 76º34'00" East to a point of reverse curvature on the Northerly right of way of Jamaica Bay Drive; thence 169.85 feet along said right of way along the arc of a curve concave to the Southwest having a radius of 144.83 feet and subtended by a chord having a length of 160.28 feet and bearing South 87º58'11" East to a point of reverse curvature on said Northerly right of way; thence 239.88 feet along said Northerly right of way along the arc of a curve concave to the Northeast having a radius of 500 feet and subtended by a chord having a length of 237.59 feet and bearing South 68º07'01" East to a point on a line 300 feet, as measured perpendicular, from the Northeasterly right of way of U.S. No. 41; thence North 31º34'00" West parallel with and 300 feet from said Northeasterly right of way for 356.92 feet to a point of curvature; thence 600.64 feet along said 300 foot line along the arc of a curve concave to the Northeast having a radius 2432.79 feet and subtended by a chord having a length of 599.11 feet and bearing North 24º29'38" West to the North line of Jamaica Bay West; thence South 89º21'17" West along the North line of Jamaica West for 311.79 feet to the Point of Beginning.

Also excepting therefrom:

PARCEL B:
Beginning at the Southwest corner of Jamaica Bay West , said point being on the Northeasterly right of way of U.S. No.41 and the South line of the North half (N ½) of the Northwest quarter (NW ¼) of Section 36, Township 45 South, Range 24 East; thence North 31º34'00" West along said right of way 526.87 feet to a point of curvature; thence 39.27 feet along the arc of a curve concave to the Southeast having a radius of 25.00 feet and subtended by a chord having a length of 35.36 feet and bearing North 13º26'00" East to a point of compound curvature on the Southerly right of way of Jamaica Bay Drive; thence 106.39 feet along said Southerly right of way along the arc of a curve concave to the South having a radius of 96.62 feet and subtended by a chord having a length of 101.09 feet and bearing North 89º58'36" East to a point of reverse curvature on said Southerly right of way; thence 288.54 feet along said Southerly right of way along the arc

(Continued on Sheet No. 3.3)

(Continued from Sheet No. 3.2)

of a curve concave to the Northeast having a radius of 570 feet and subtended by a chord having a length of 285.47 feet and bearing South 72º58'54" East to a point on a line 300 feet; as measured perpendicular, from the Northeast right of way of U.S. No. 41; thence South 31º34'00" East along said 300 foot line 463.50 feet to the South line of the North half (N 1/2) of the Northwest quarter (NW ¼) of Section 36, Township 45 South, Range 24 East, thence South 89º12'02" West along said South line for 349.14 feet to the Point of Beginning.

PARCEL IV:
The Northeast quarter (NE 1/4) of the Southeast quarter (SE 1/4) of the Northwest quarter (NW ¼) of Section 36, Township 45 South, Range 24 East.

PARCEL V:
Beginning at a point in the North line of the Southeast quarter (SE ¼) of the Northeast quarter (NE ¼) of Section 36, Township 45 South, Range 24 East, distance 116 feet Westerly from the Northeast corner thereof, and in the Westerly right of way line of Iona Drainage District, running thence Southerly on said Westerly right of way line of Iona Drainage District 2641.33 feet to its intersection with the South line of the Northeast quarter (NE ¼) of the Southeast quarter (SE ¼) of said Section 36 at a point therein distant 117 feet Westerly from the Southeast corner thereof; thence Westerly on said South line of the Northeast quarter (NE ¼) of the Southeast quarter (SE ¼) a distance of 138.6 feet; thence Northerly on a straight line parallel with and 50 feet Westerly from center line of main trac of Seaboard All Florida Railway as surveyed and staked across lands of grantor, 2641.56 feet to North line of said Southeast quarter (SE ¼) of the Northeast quarter (NE ¼) of Section 36; thence Easterly on said North line, 120.3 feet to the Point of Beginning.

PARCEL C:
Commencing at Northeast corner of Section 36, Township 45 South, Range 24 East, then South 89º10'56" West along the North line of said Section 36 for 183.30 feet to the Point of Beginning; thence continue South 89º10'56" West along said North line for 37.30 feet to the Westerly former right-of-way of the Seaboard All Florida Railroad; thence South 0º15'01" West along said Westerly right-of-way line for 1320.51 feet to the South line of the Northeast quarter (NE ¼) of the Northeast quarter (NE ¼) of said Section 36; thence North 89º07'32" East along said South line for 37.30 feet; thence North 0º15"01" East parallel with and 37.30 feet as measured at right angle from said Westerly right of way for 1320.48 feet to the Point of Beginning.

EXHIBIT H





FACILITY REPORT

Forest Utilities Wastewater Treatment Plant

JUNE 2024

Prepared For:

CSWR Central States Water Resources

Prepared By:

Kimley»Horn

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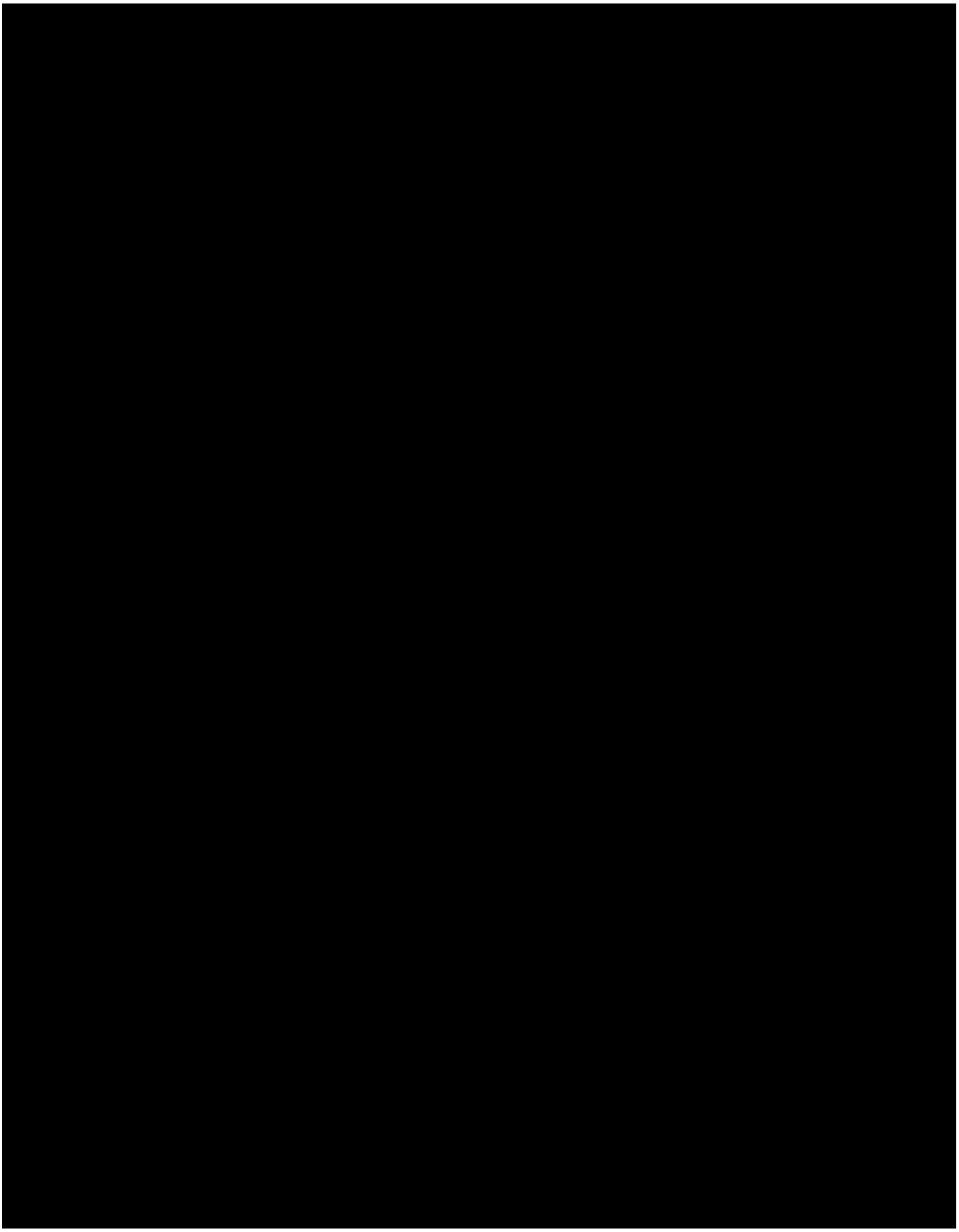
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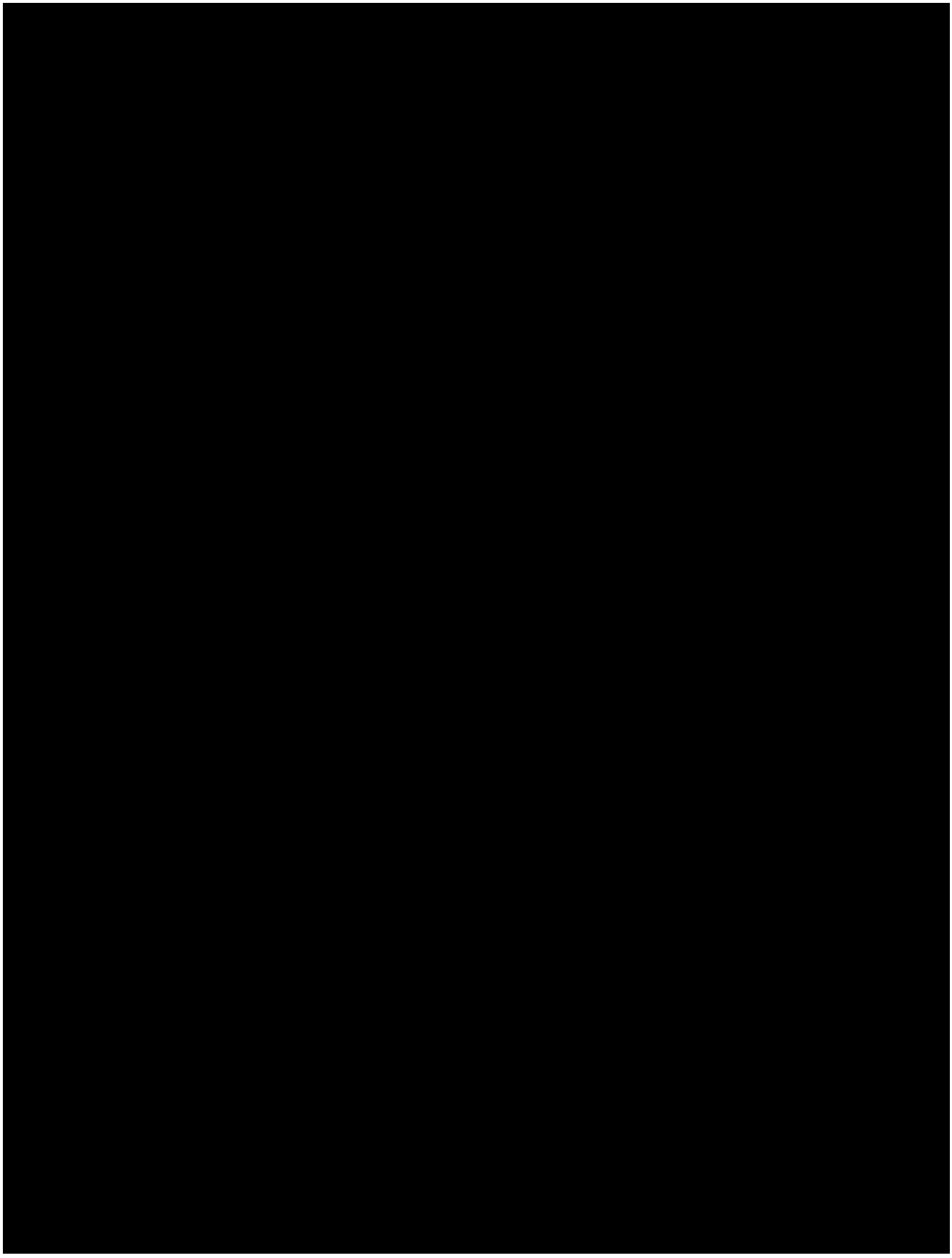
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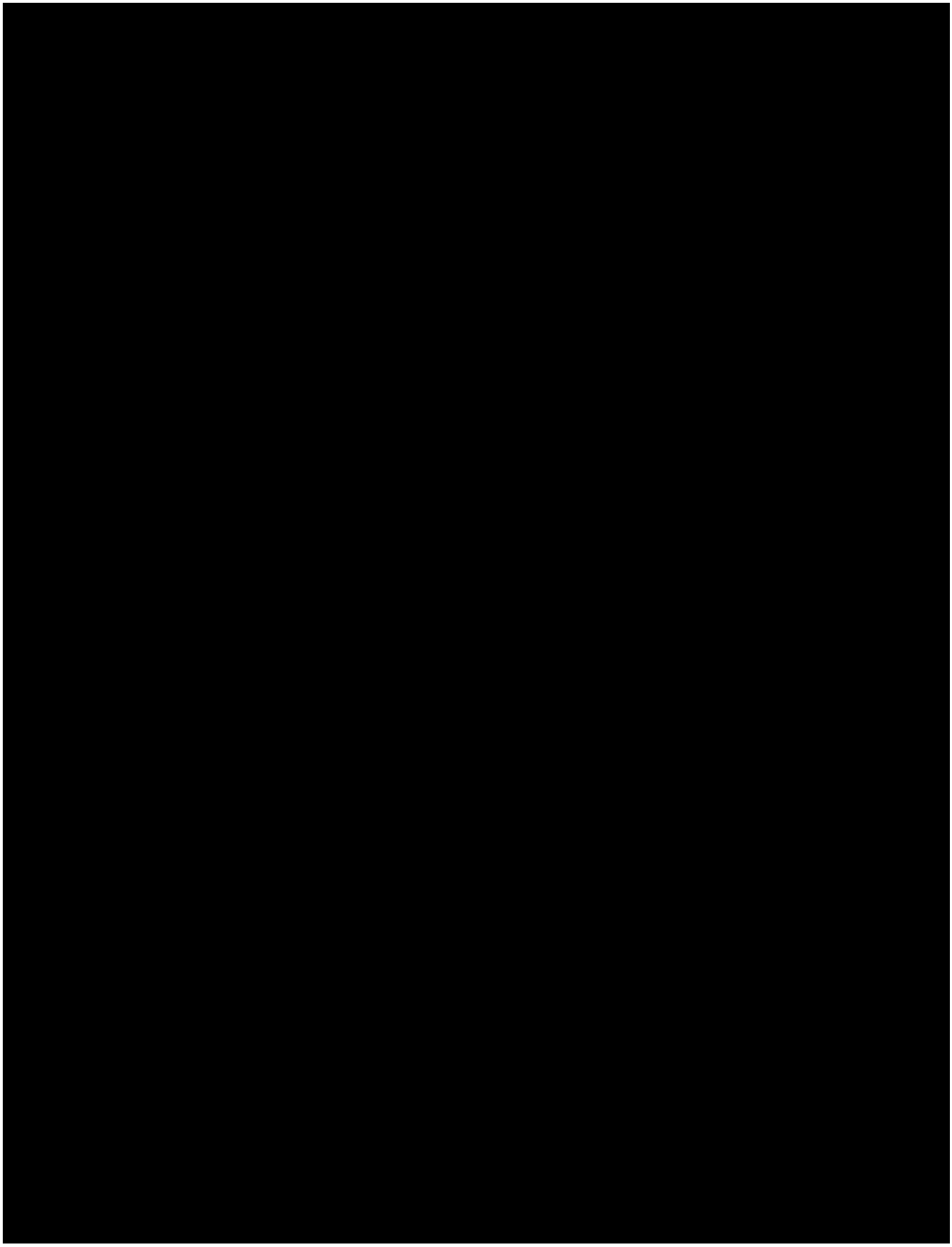
Table 1: Forest Utilities Recommended Improvements OPCC 6

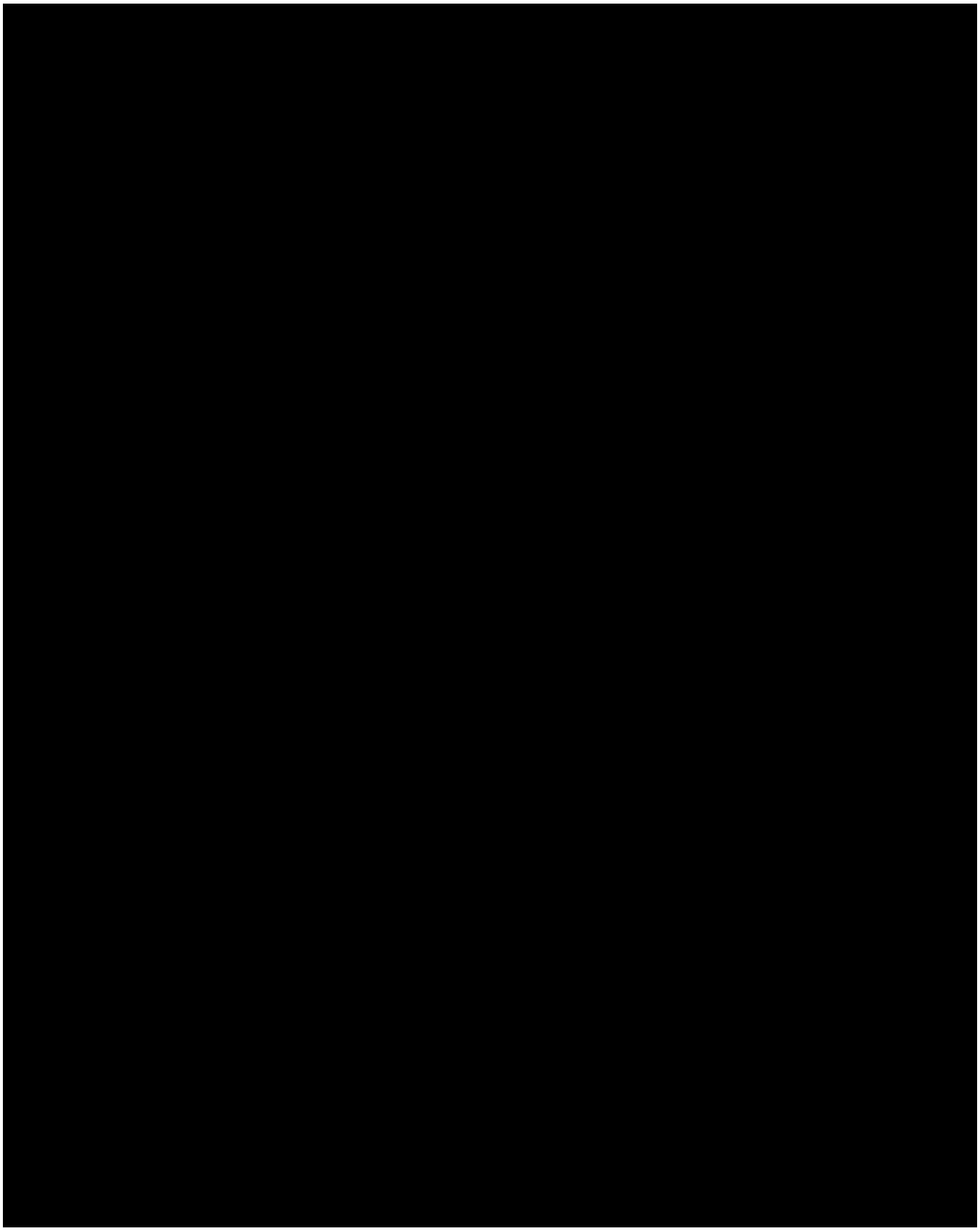
APPENDICES

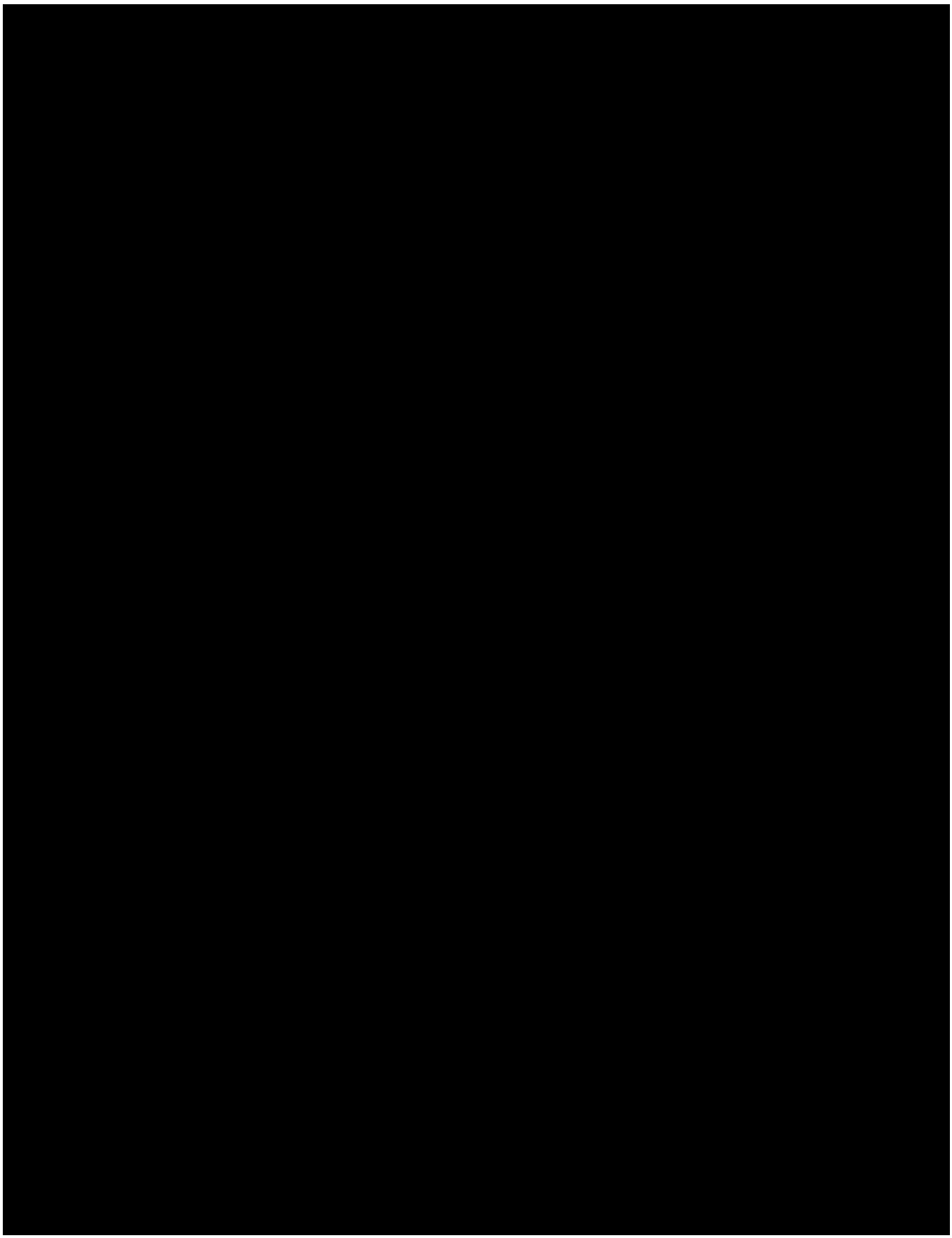
Appendix A Exhibit 1 – Service Area Overview
Appendix B Facility Observation Form
Appendix C System Information
Appendix D Opinion of Probable Construction Cost







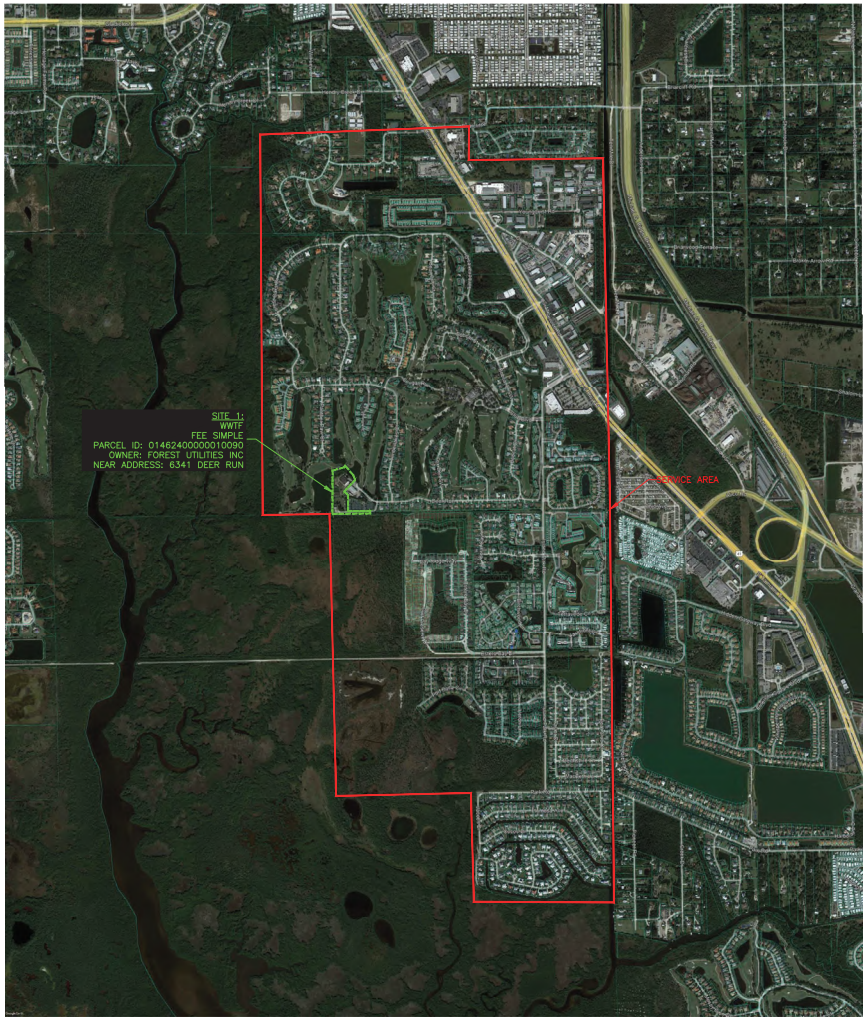




Appendix A

Exhibit 1 – Service Area Overview

ROUGH SERVICE AREA MAP
FOREST UTILITIES
(WASTEWATER)
LEE, FL



Utility Note Disclaimer:
The service area shown hereon are depicted based on the service area map provided by the system manager. 21 Design Group, Inc performed no field verification of the layout and are unable to determine the exact location at this time. The location represents approximate location only and should not be construed as being 100% accurate. It is shown to provide general service area of the system to assist with ordering title work and preparation of scope for a License Land Surveyor. This sketch should not be used to interpret encroachments.

DATE:	10/23/2023
PROJECT NO:	0633-23
DRAWN BY:	AMD
SCALE:	
SHEET NAME:	SERVICE AREA MAP

21 DESIGN GROUP INC.
1351 Jefferson, Suite 301
Washington, MO 63090
mail@21designgroup.net
P: 636-432-5029

Appendix B

Facility Observation Forms

Kimley»Horn
1514 Broadway, Suite 301
Fort Myers, Florida 33901

CSWR Forest Utilities

Cover Sheet

KHA Job No.: 160354009
KHA Rep.: Heather Ripley, P.E. and Rey Horta
Date: January 2024

Introduction

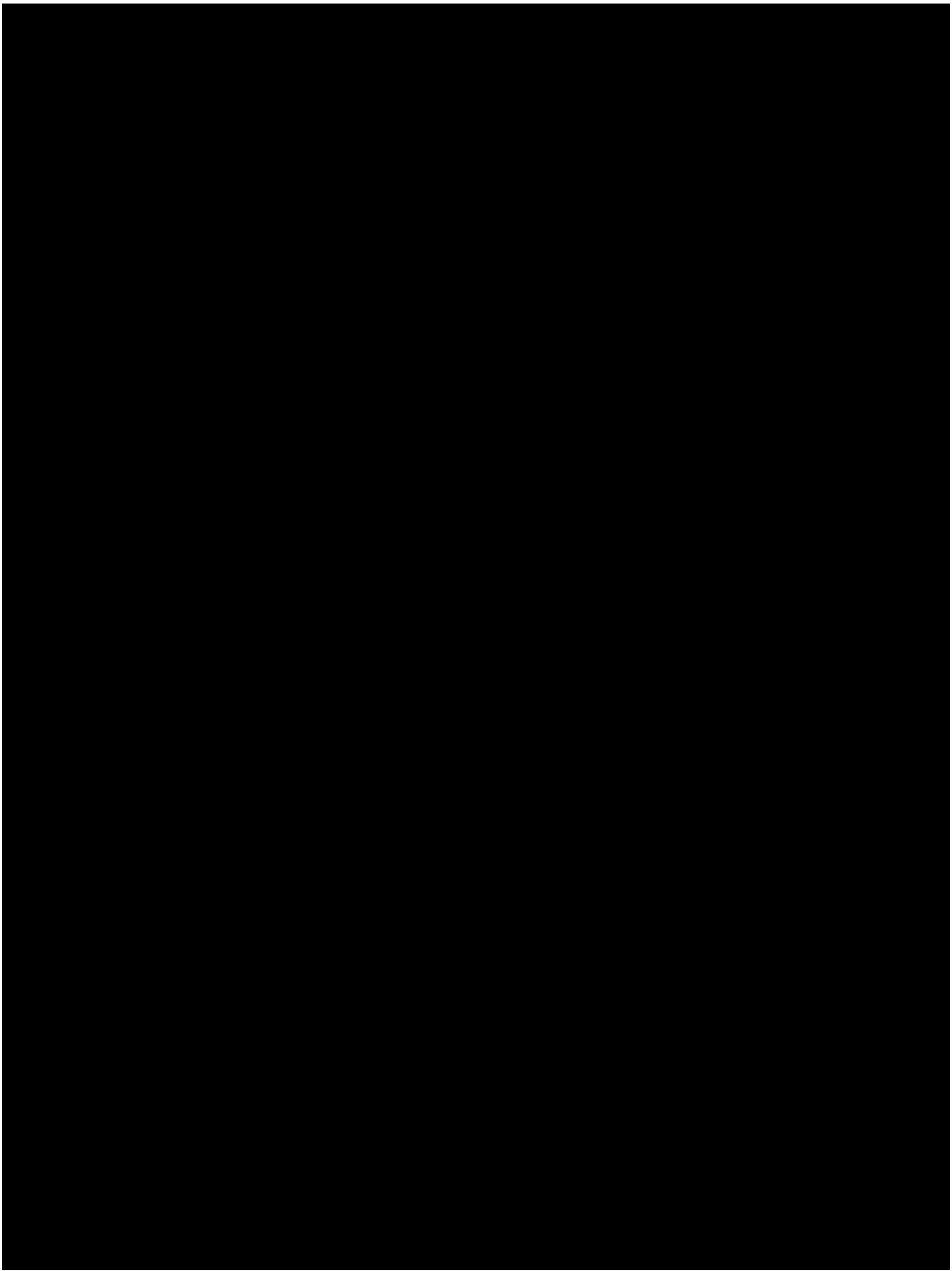
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Fort Myers, Florida 33901

CSWR Forest Utilities

Photograph Sheet

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Date: January 2024

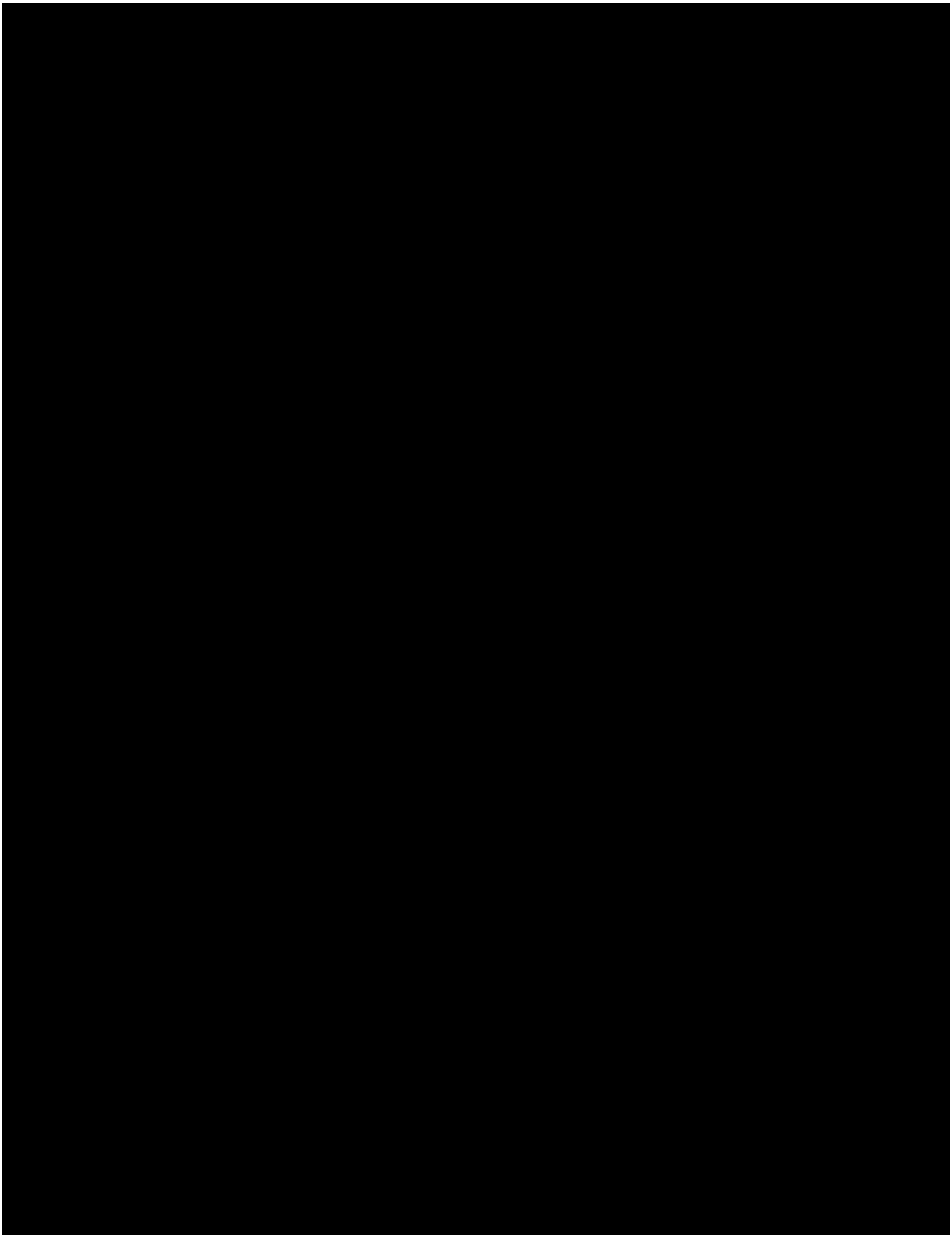


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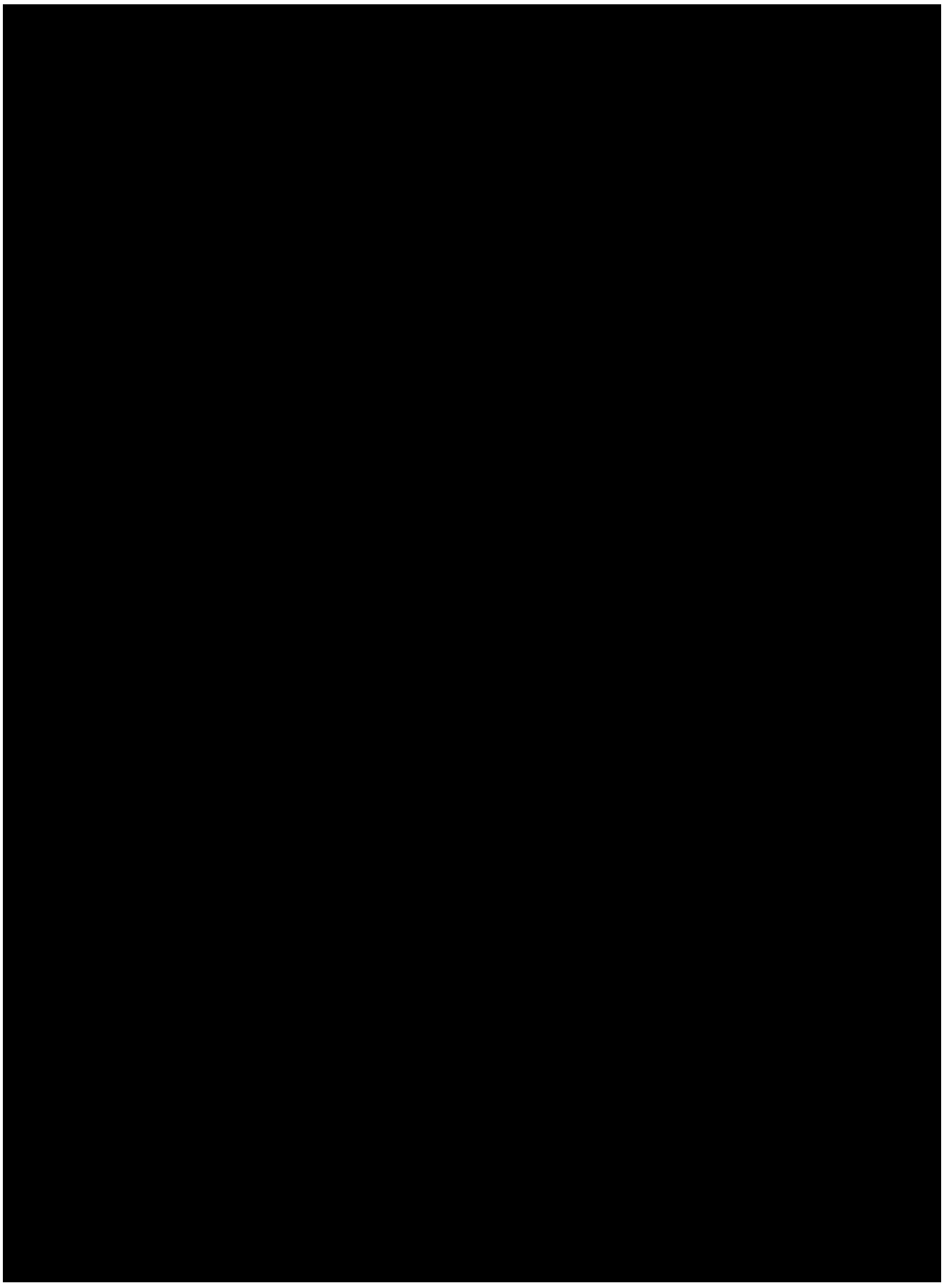


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KHA Rep.: Heather Ripley, P.E.
Date: January 2024
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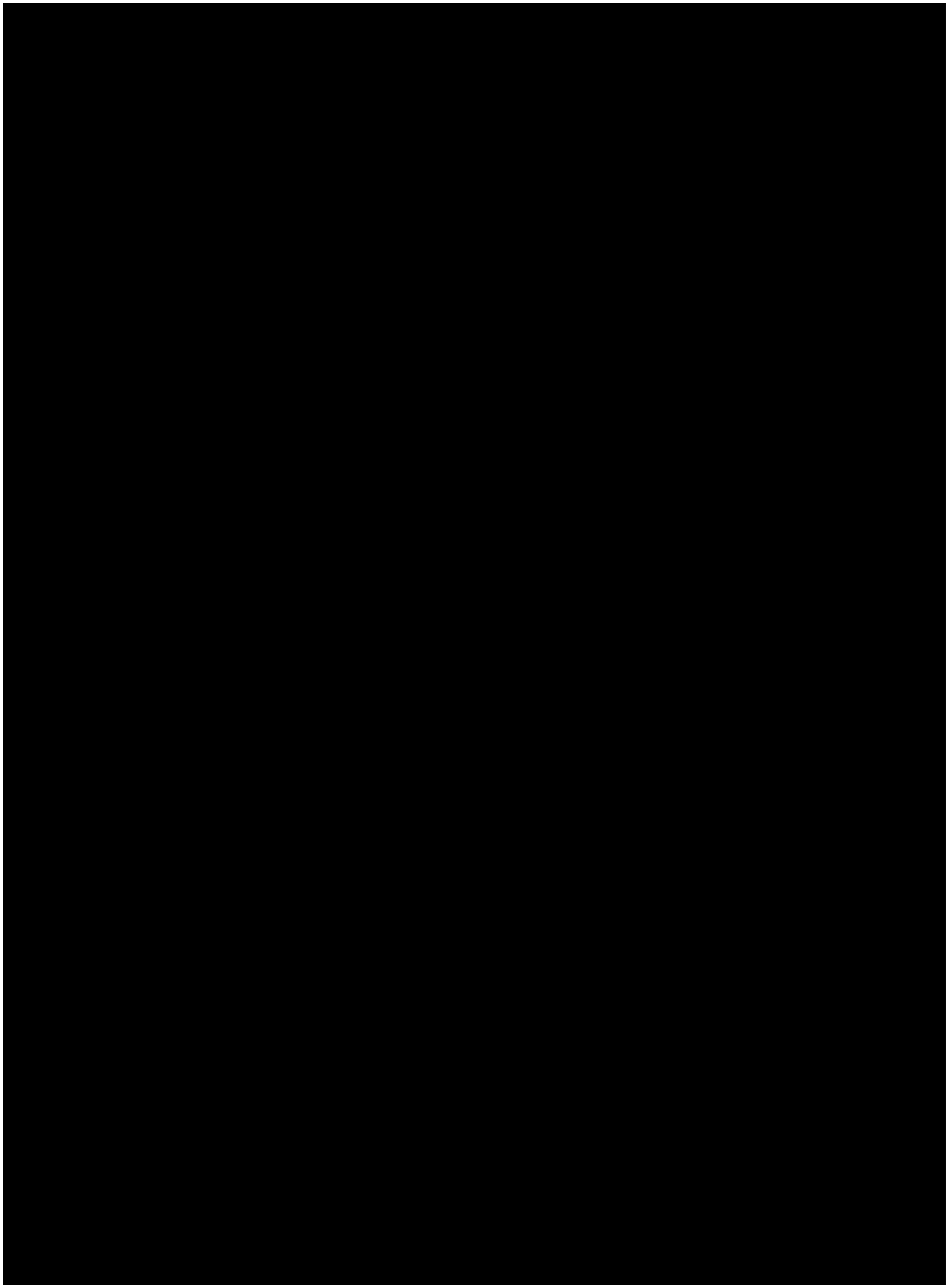
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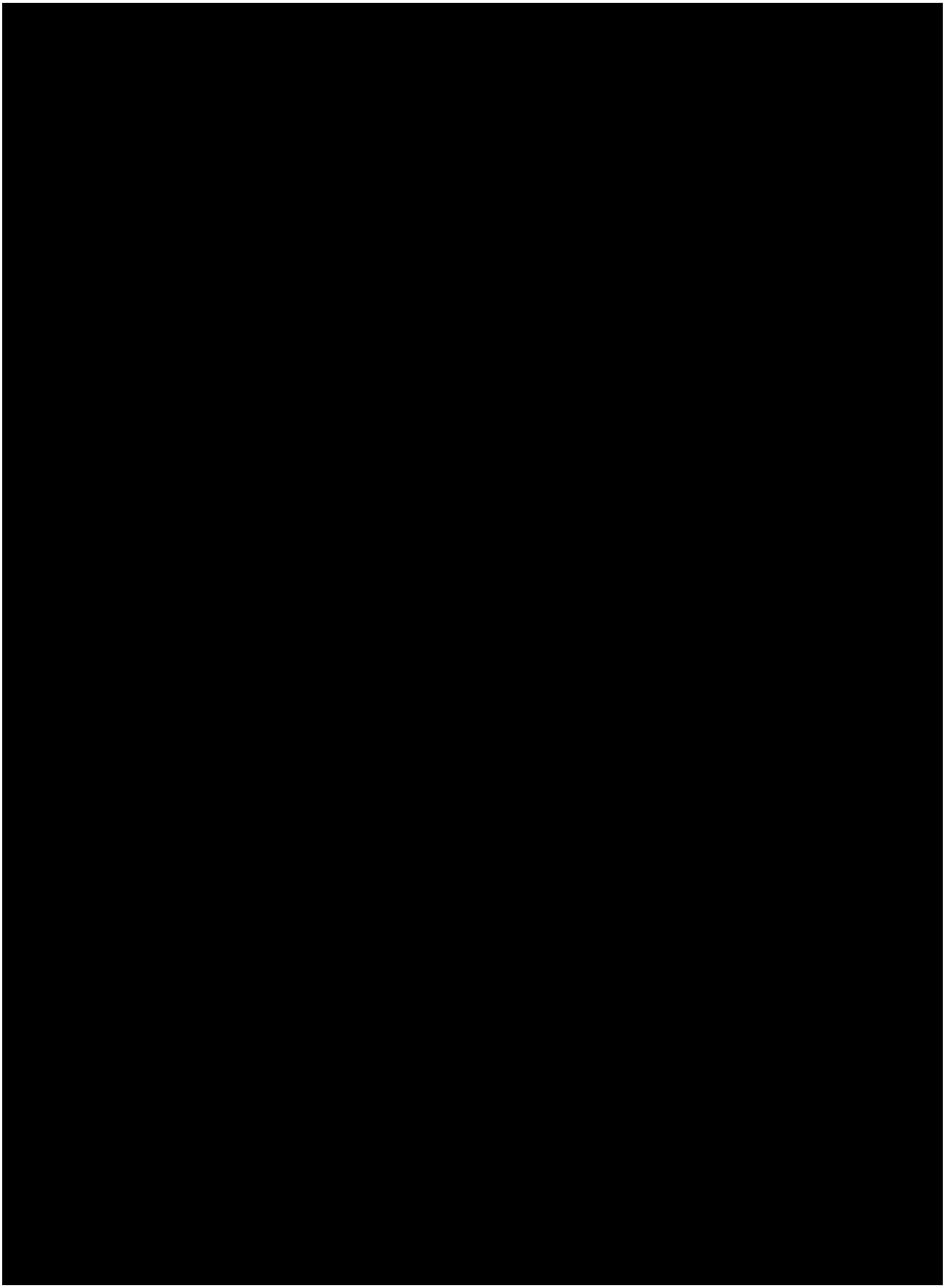


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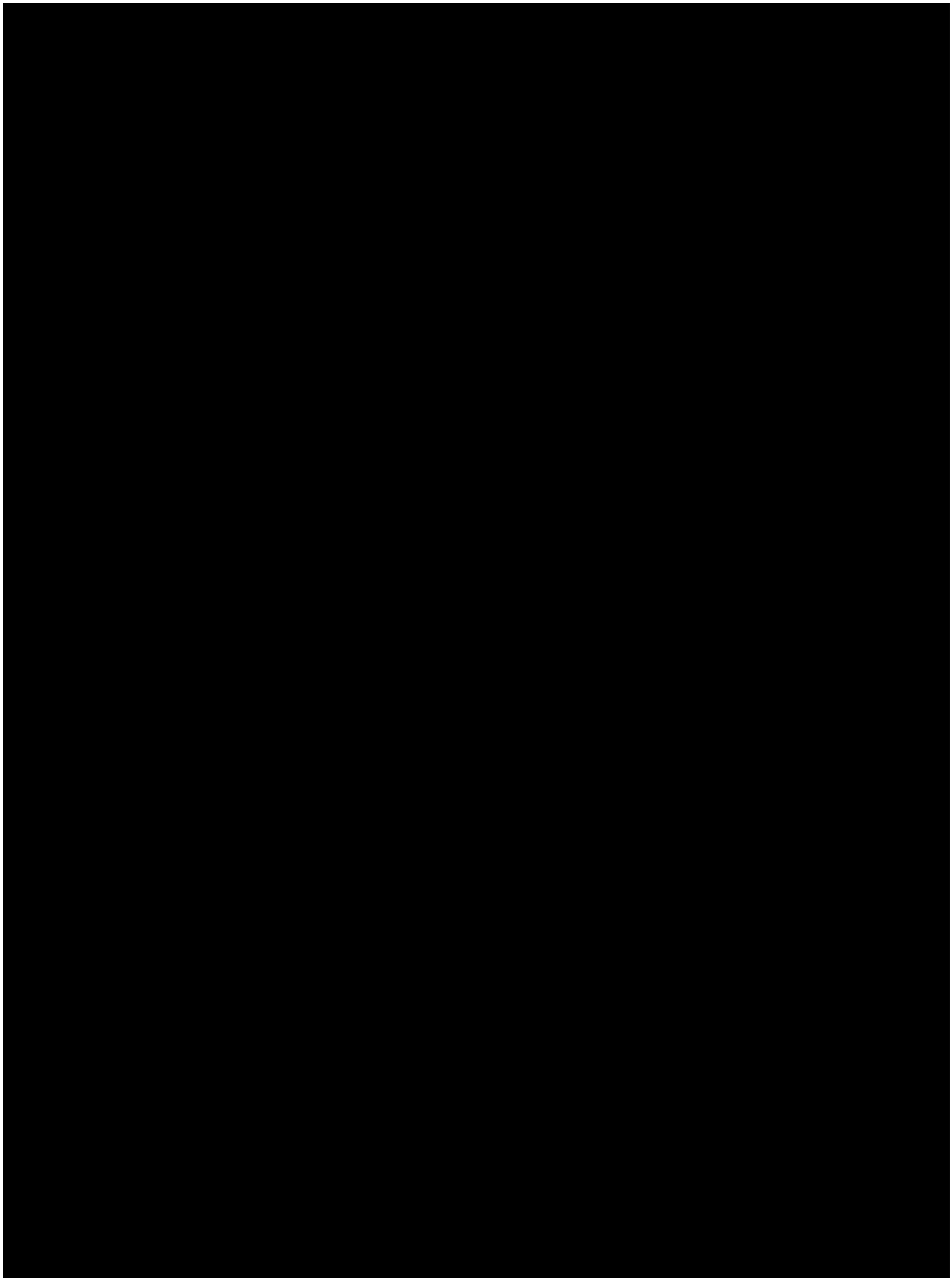


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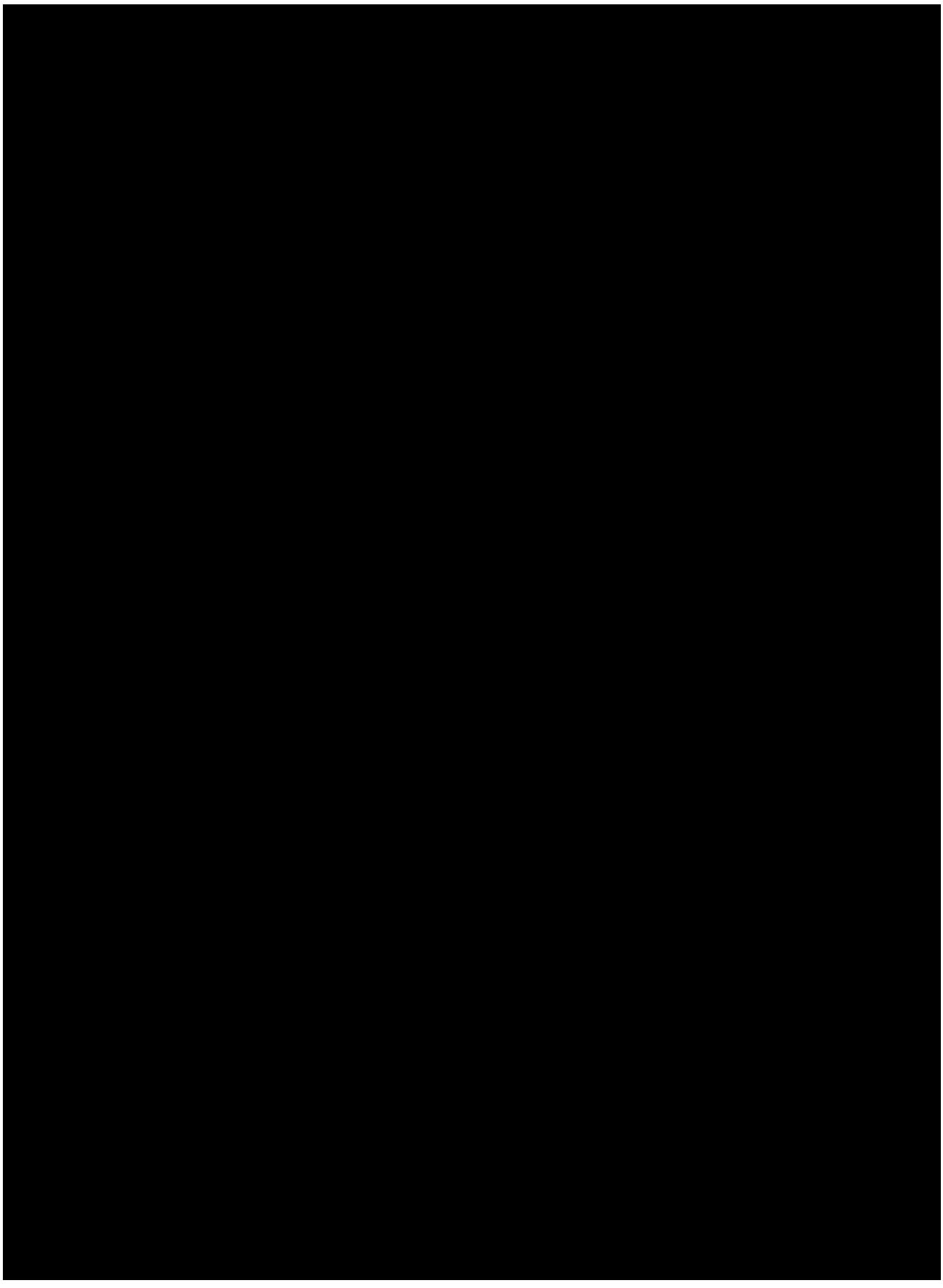


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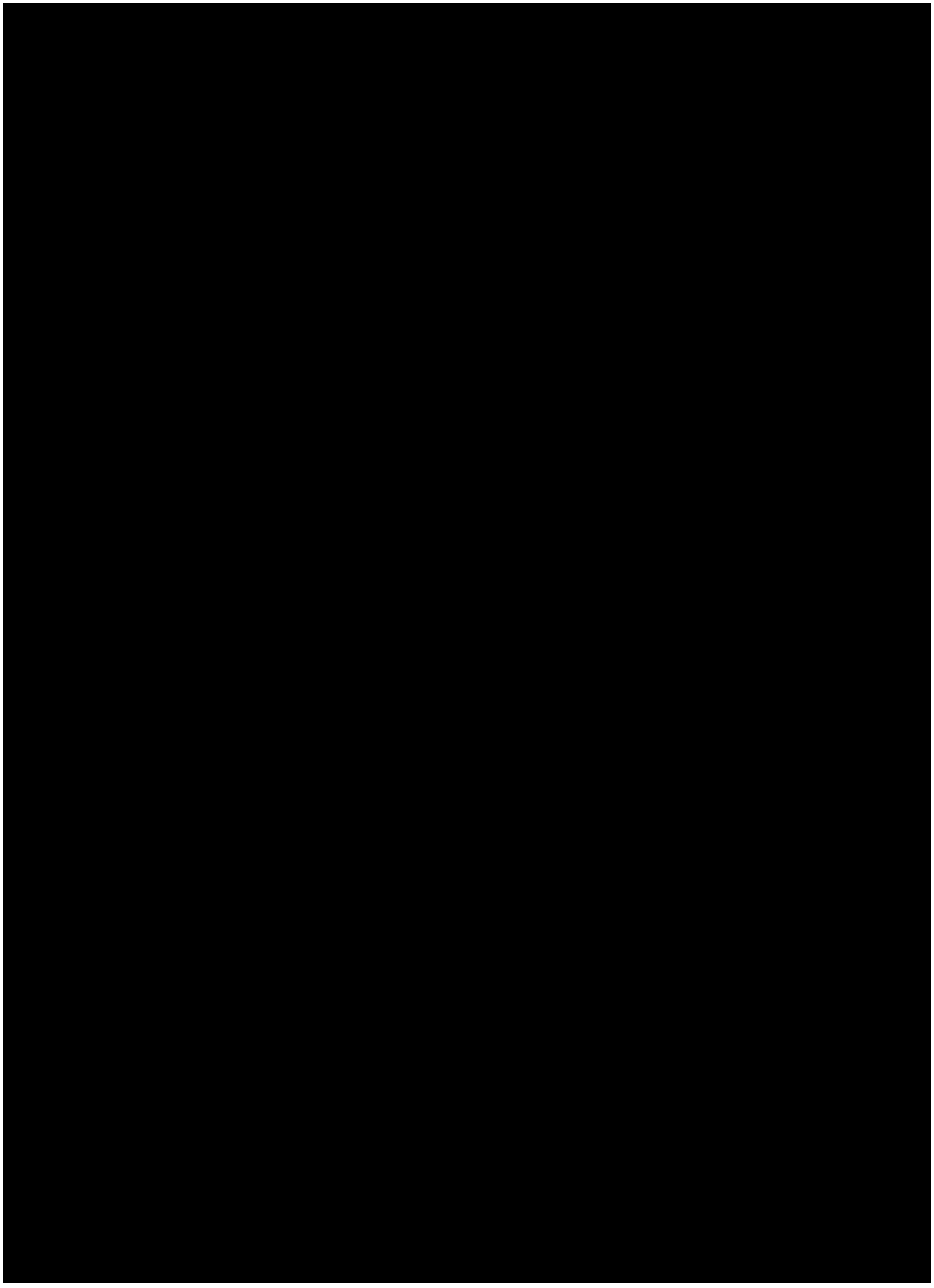


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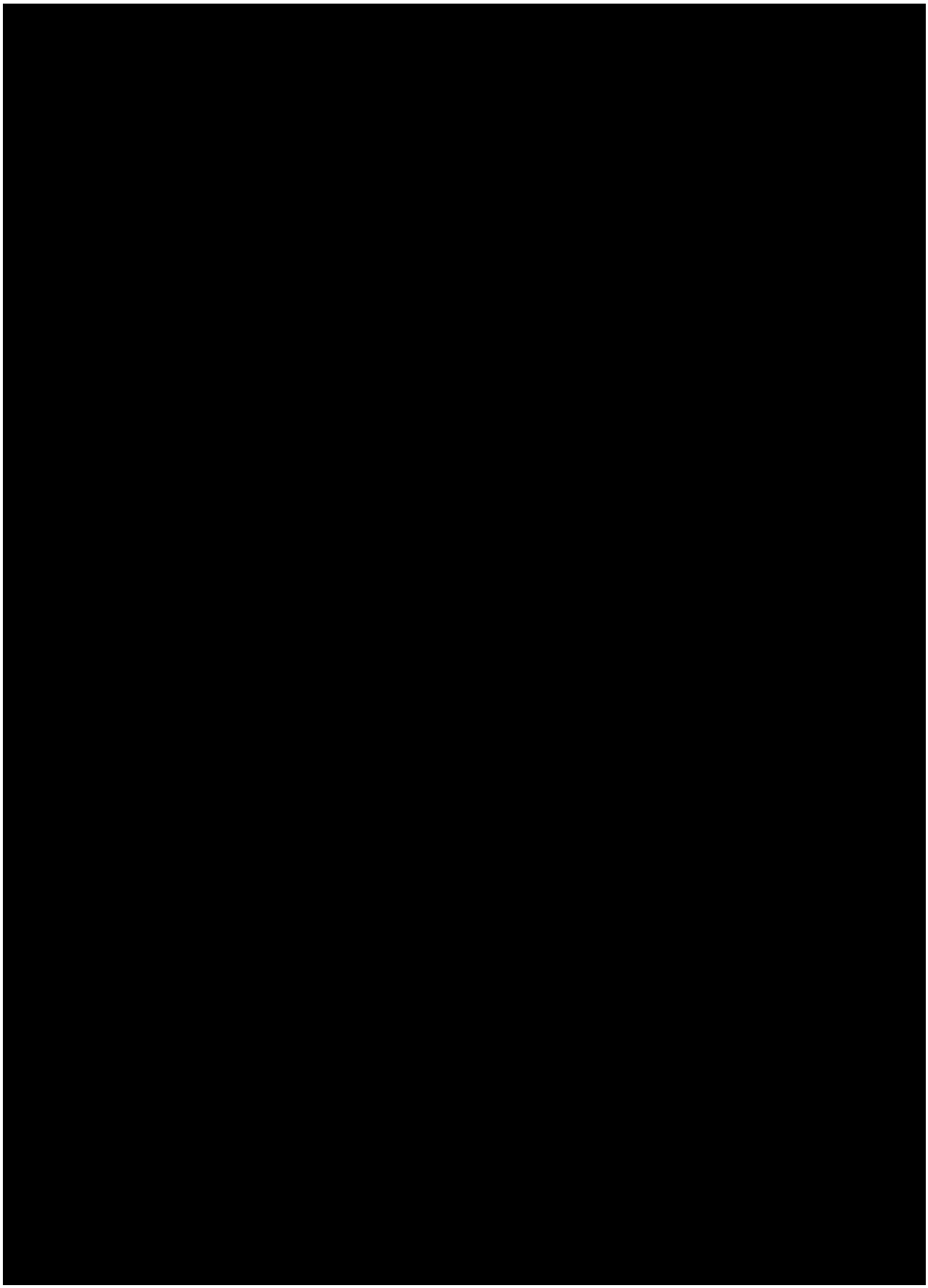


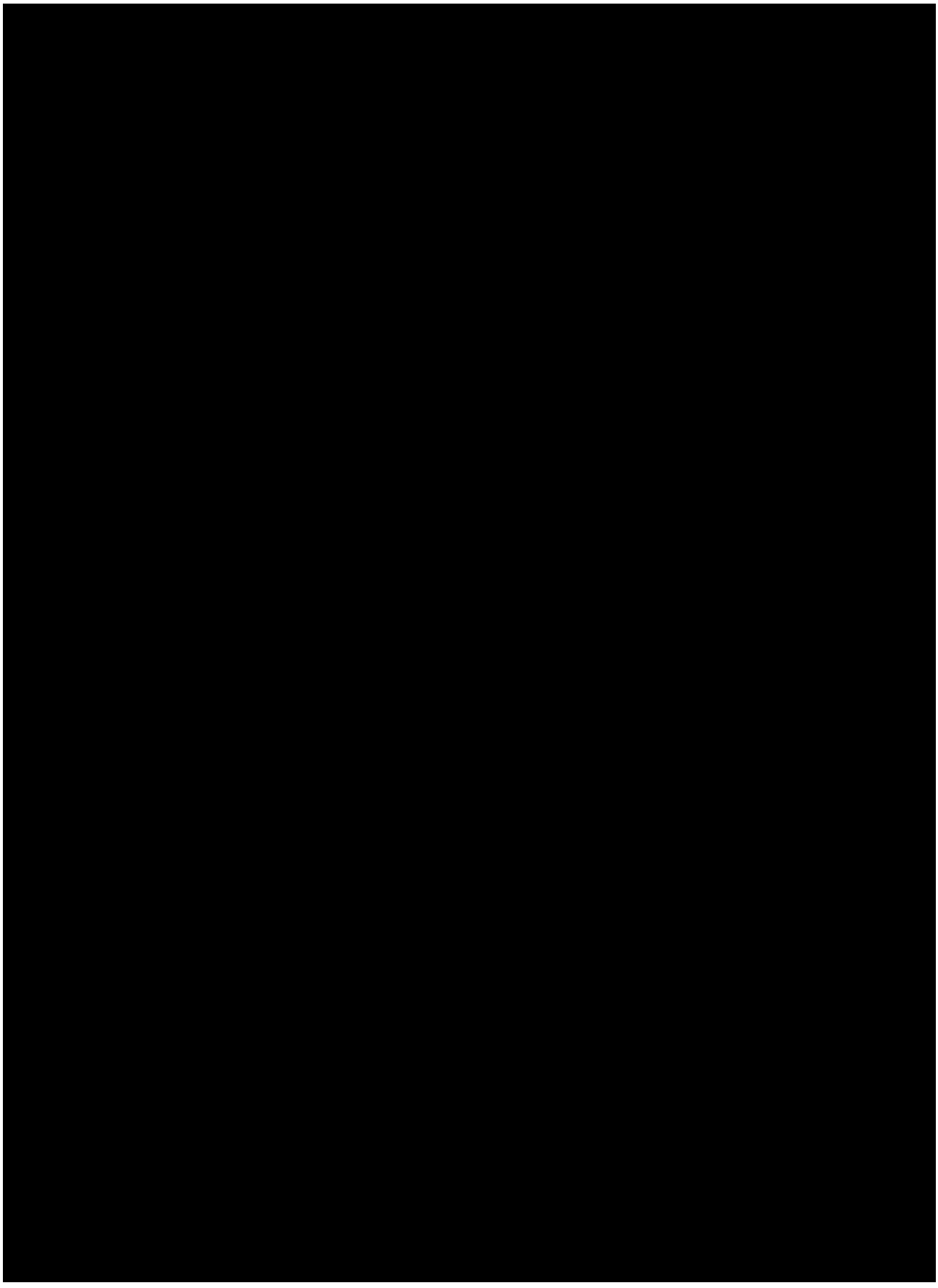
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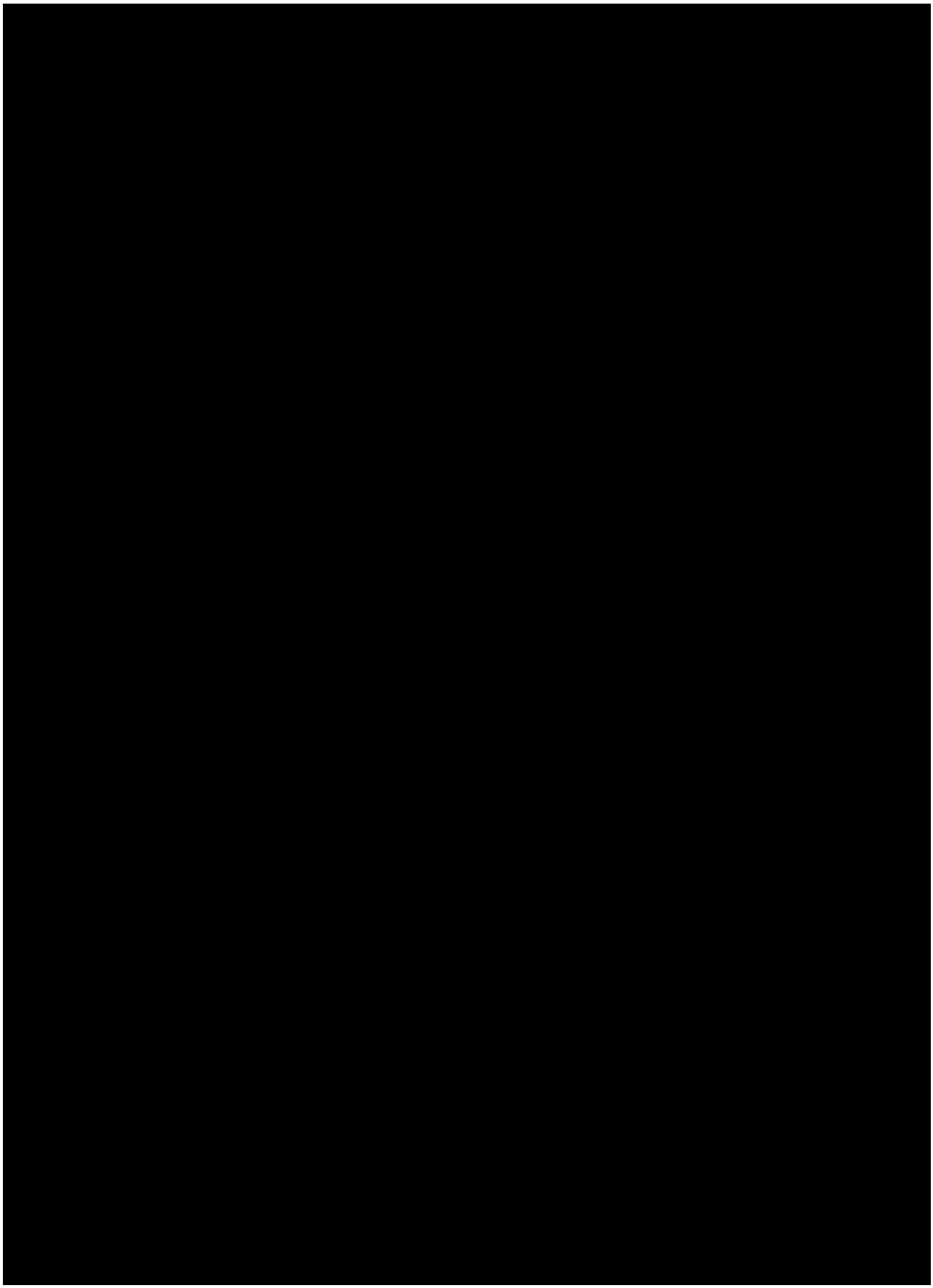


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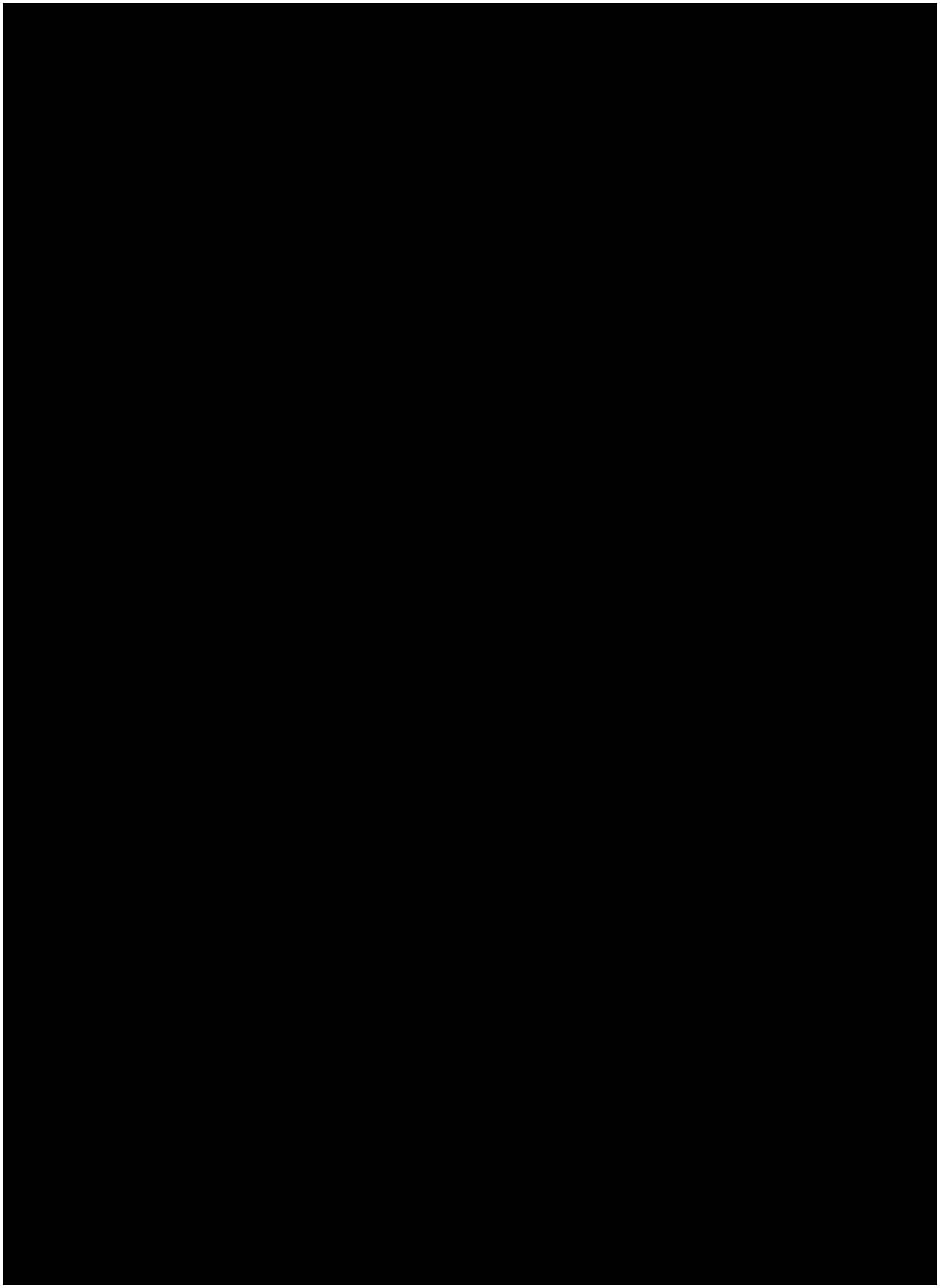


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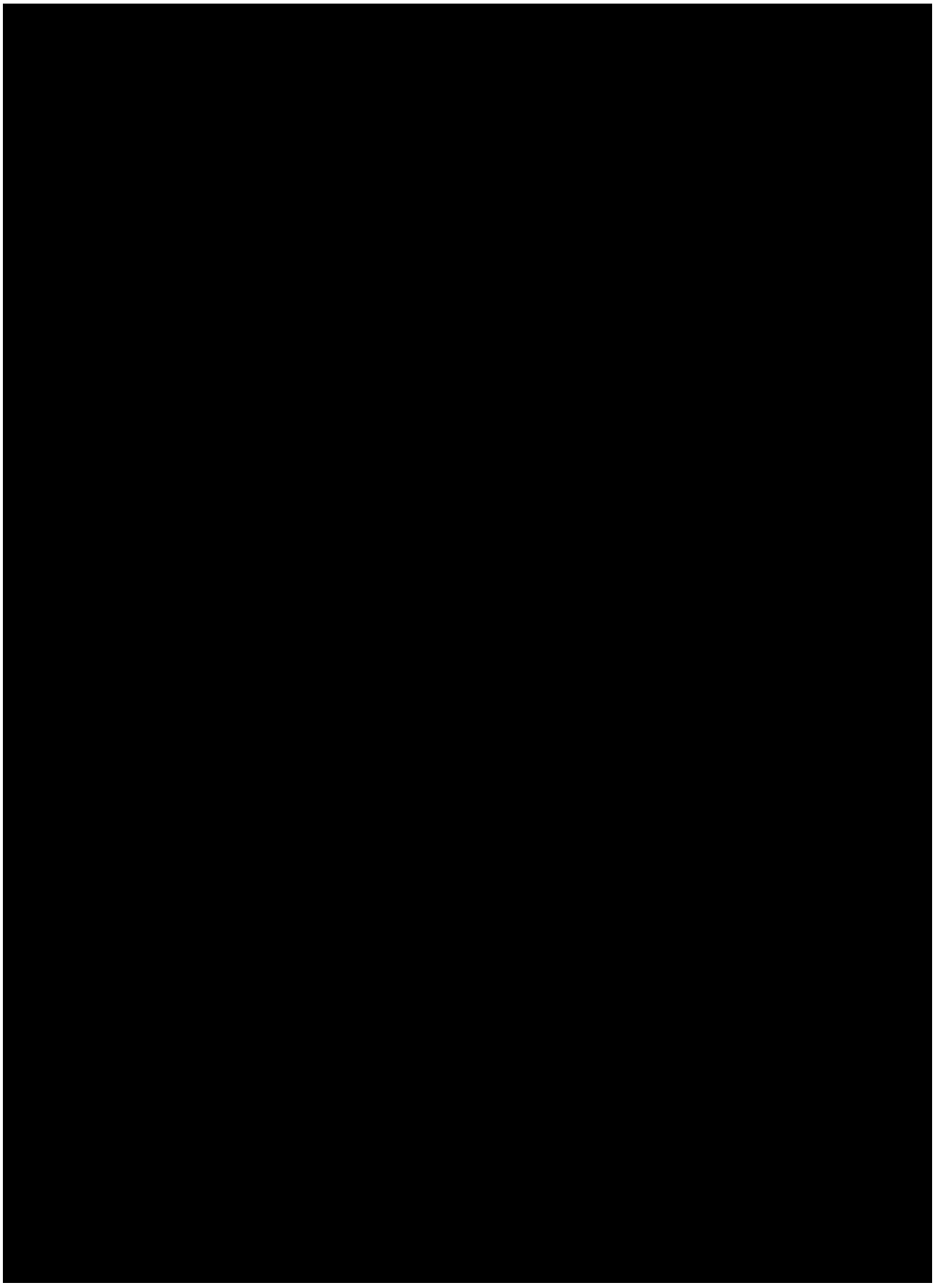


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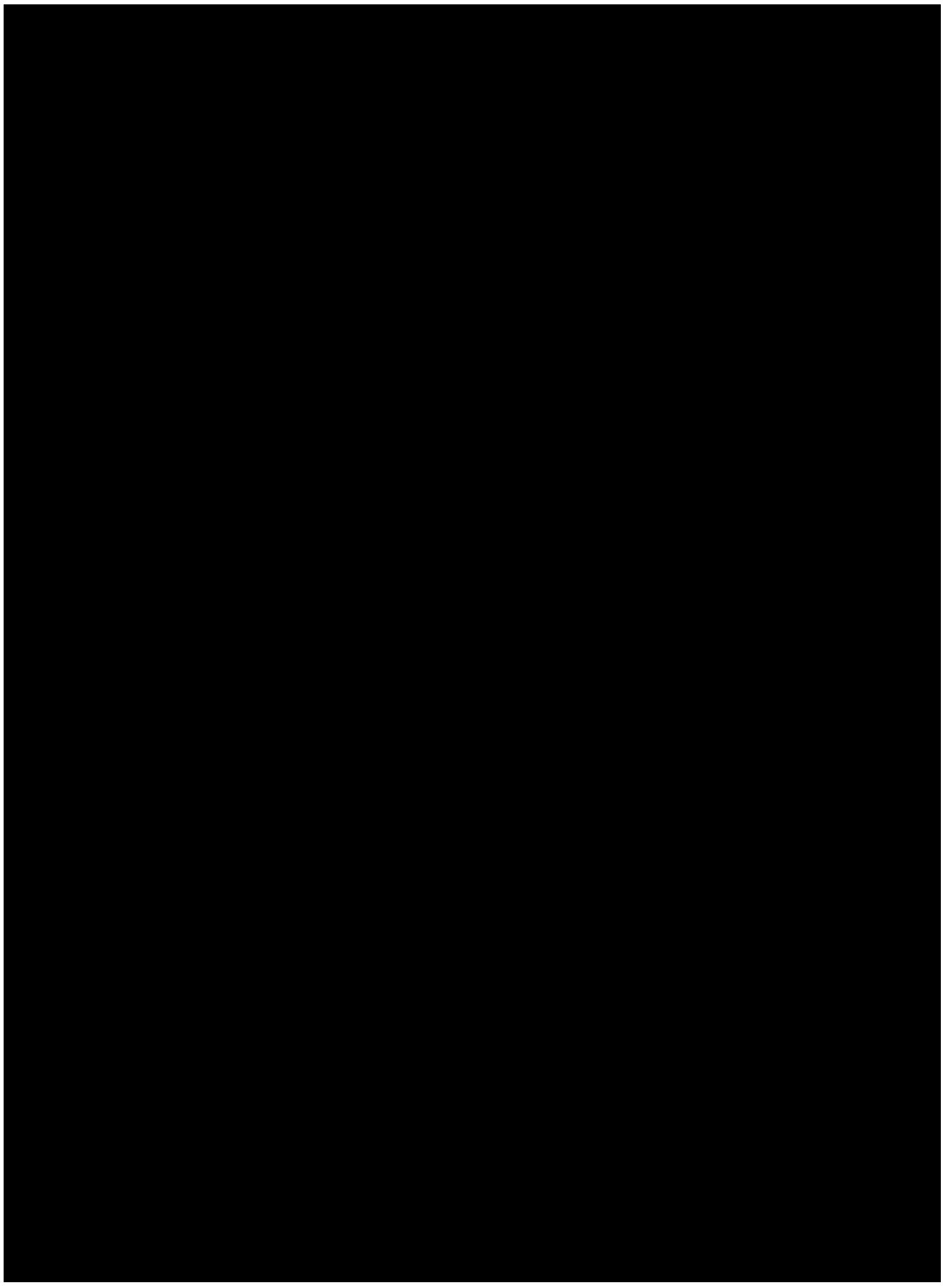


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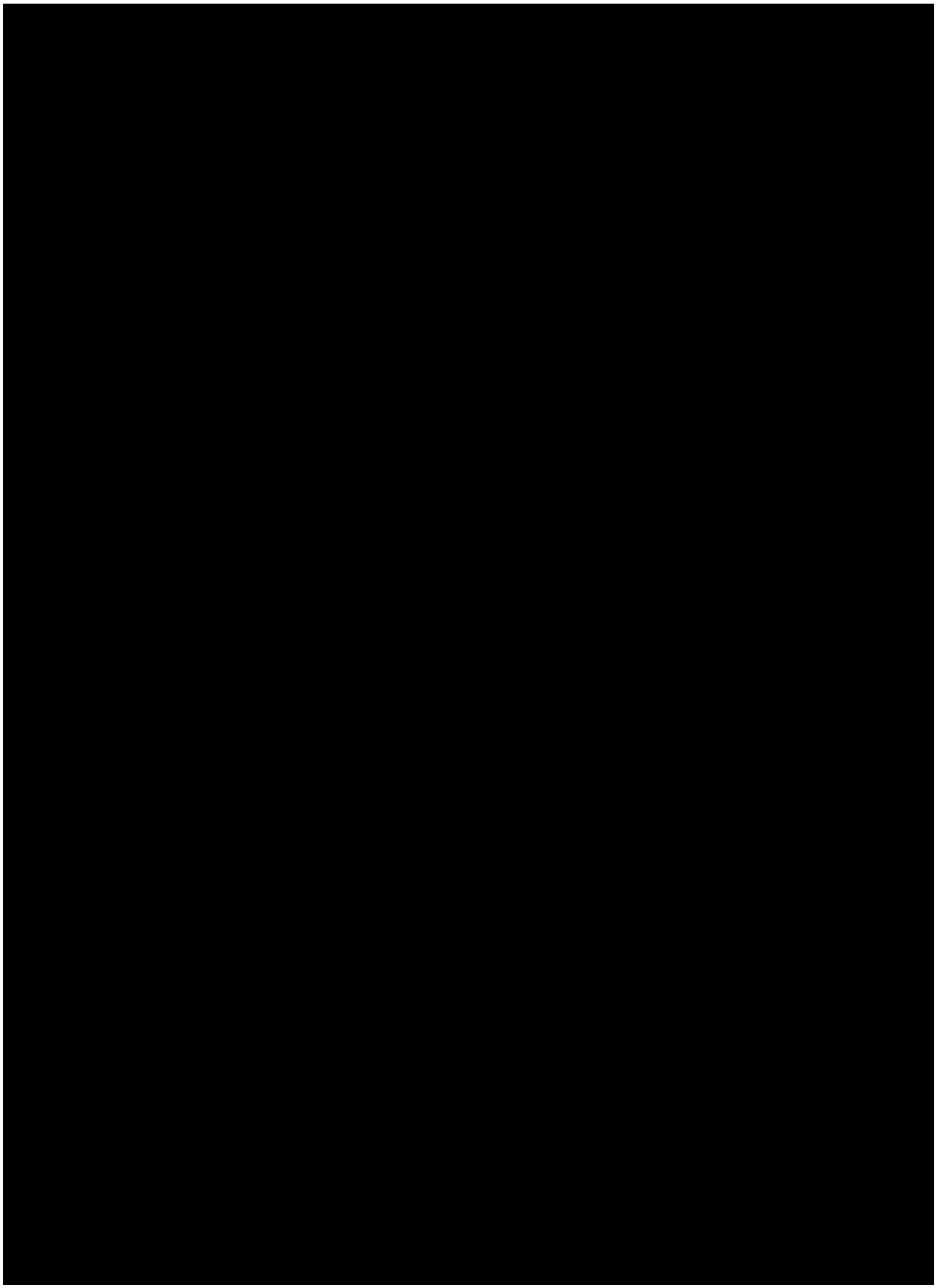


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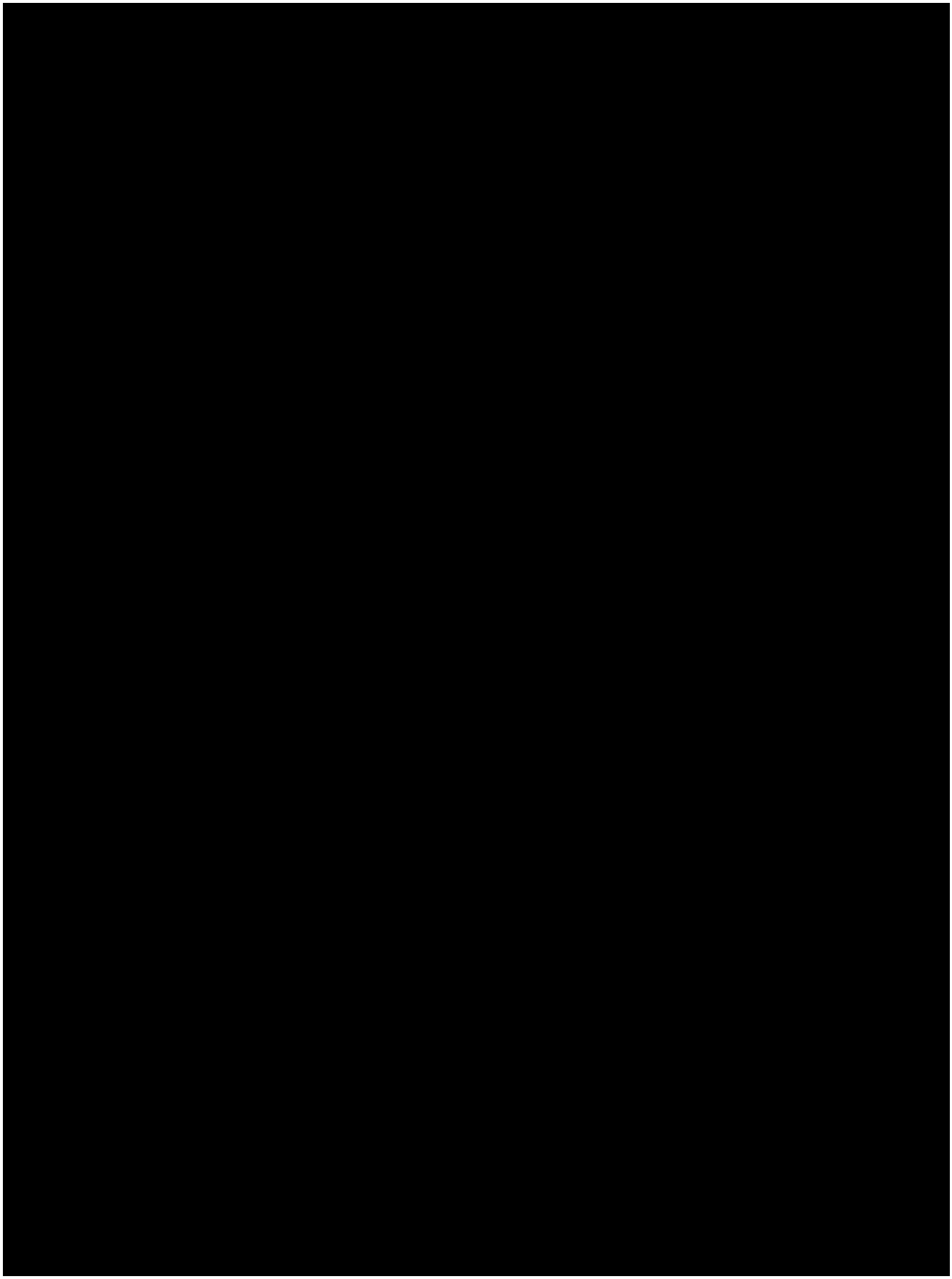


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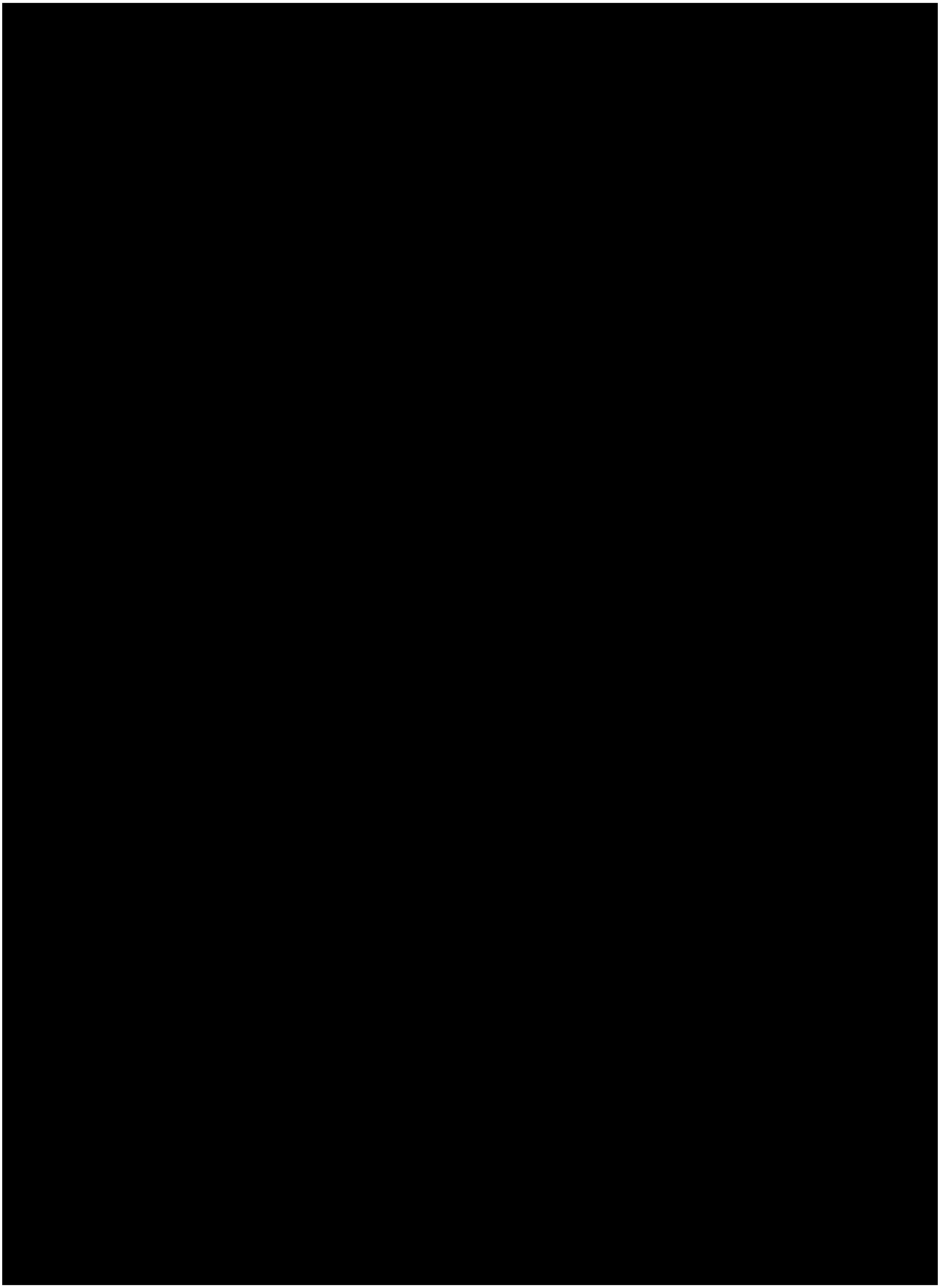


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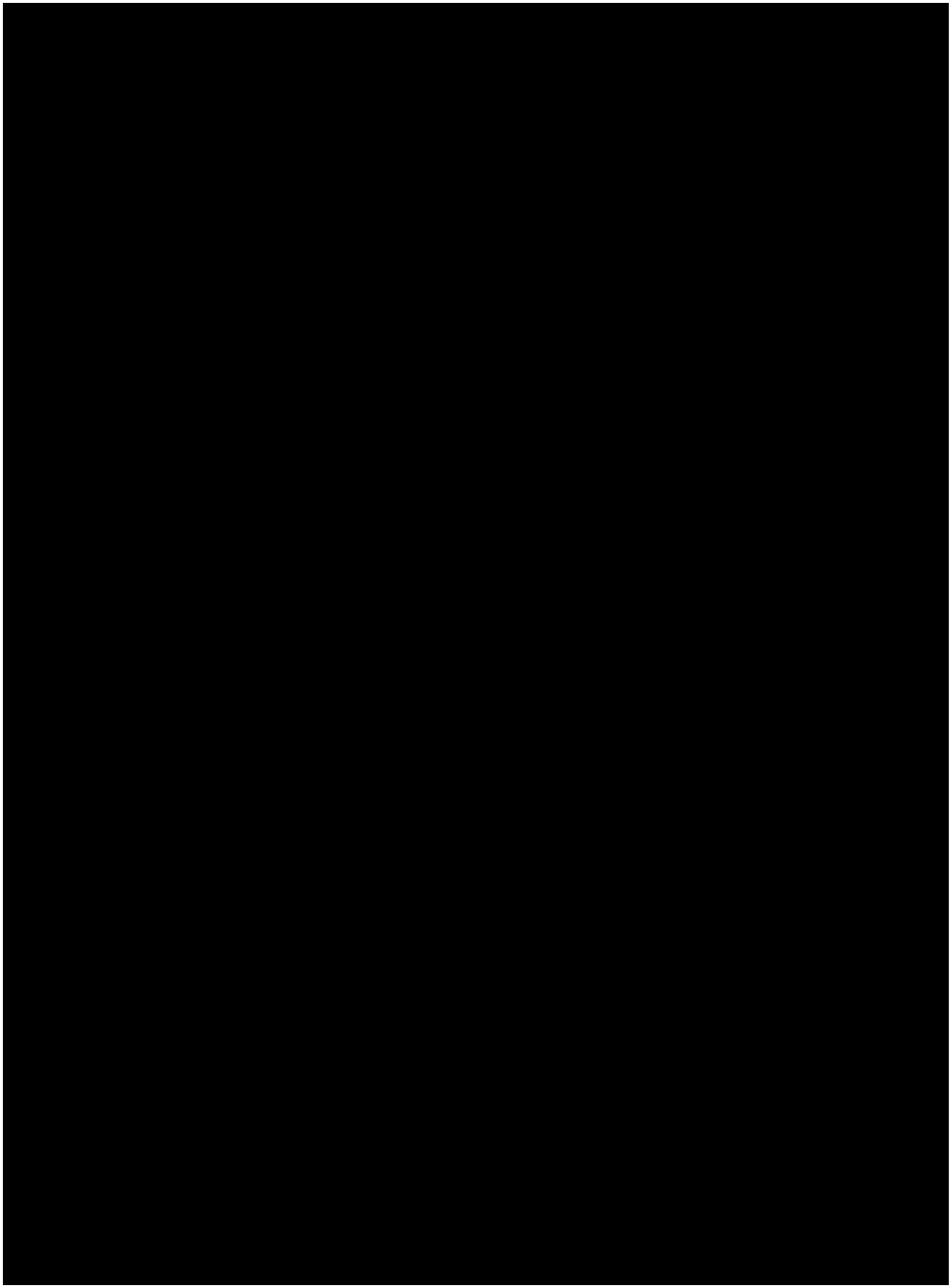


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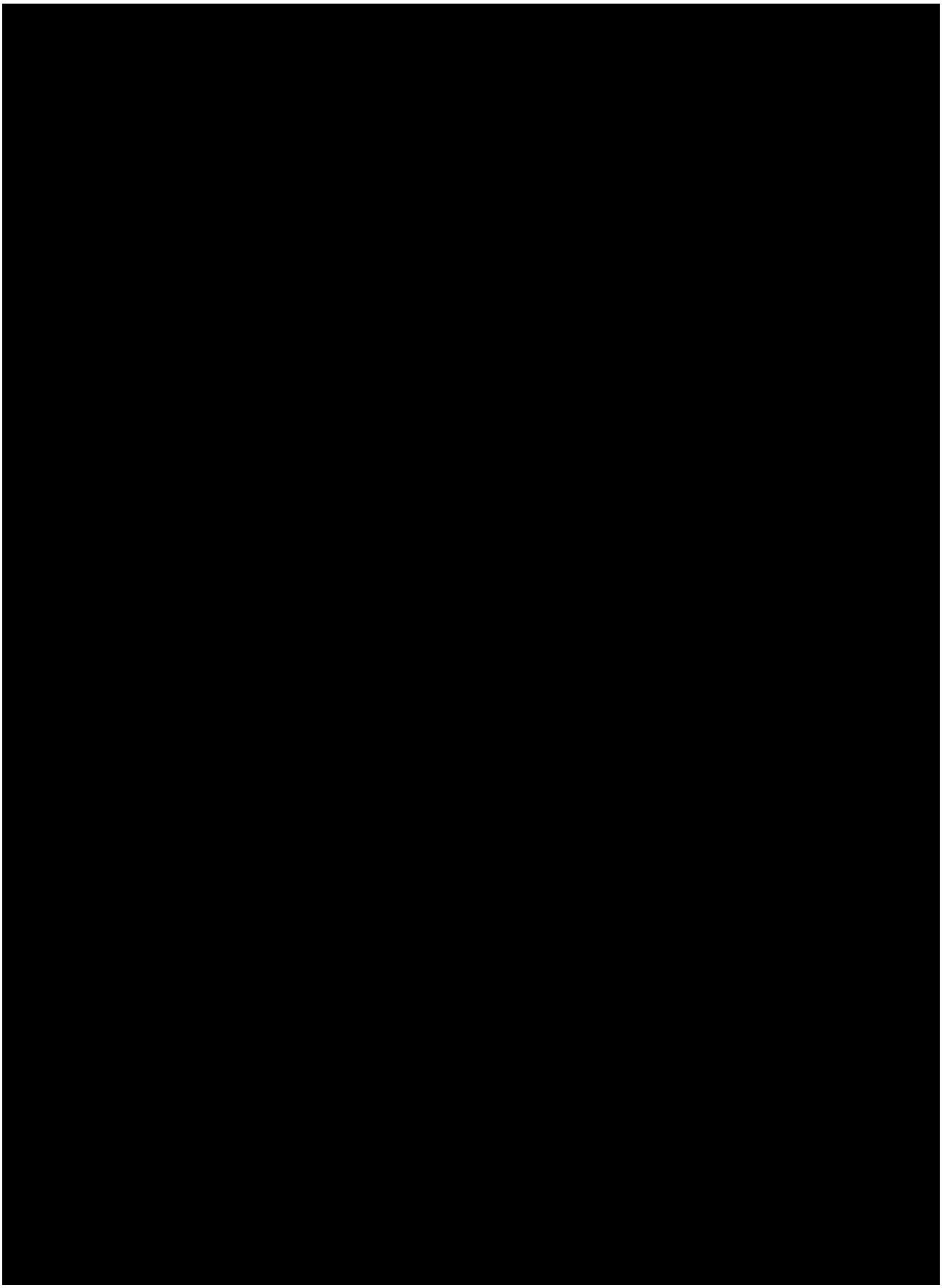


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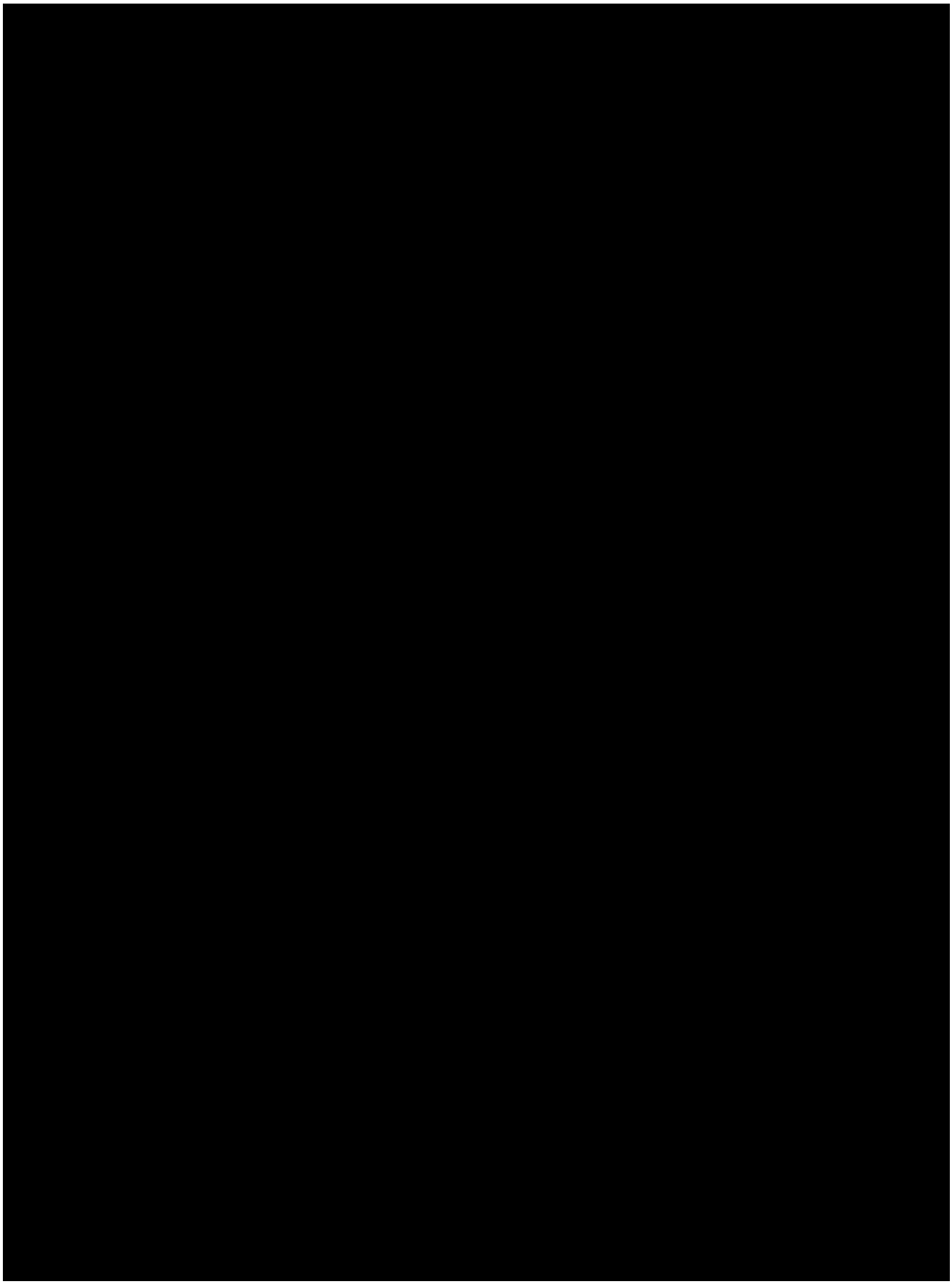


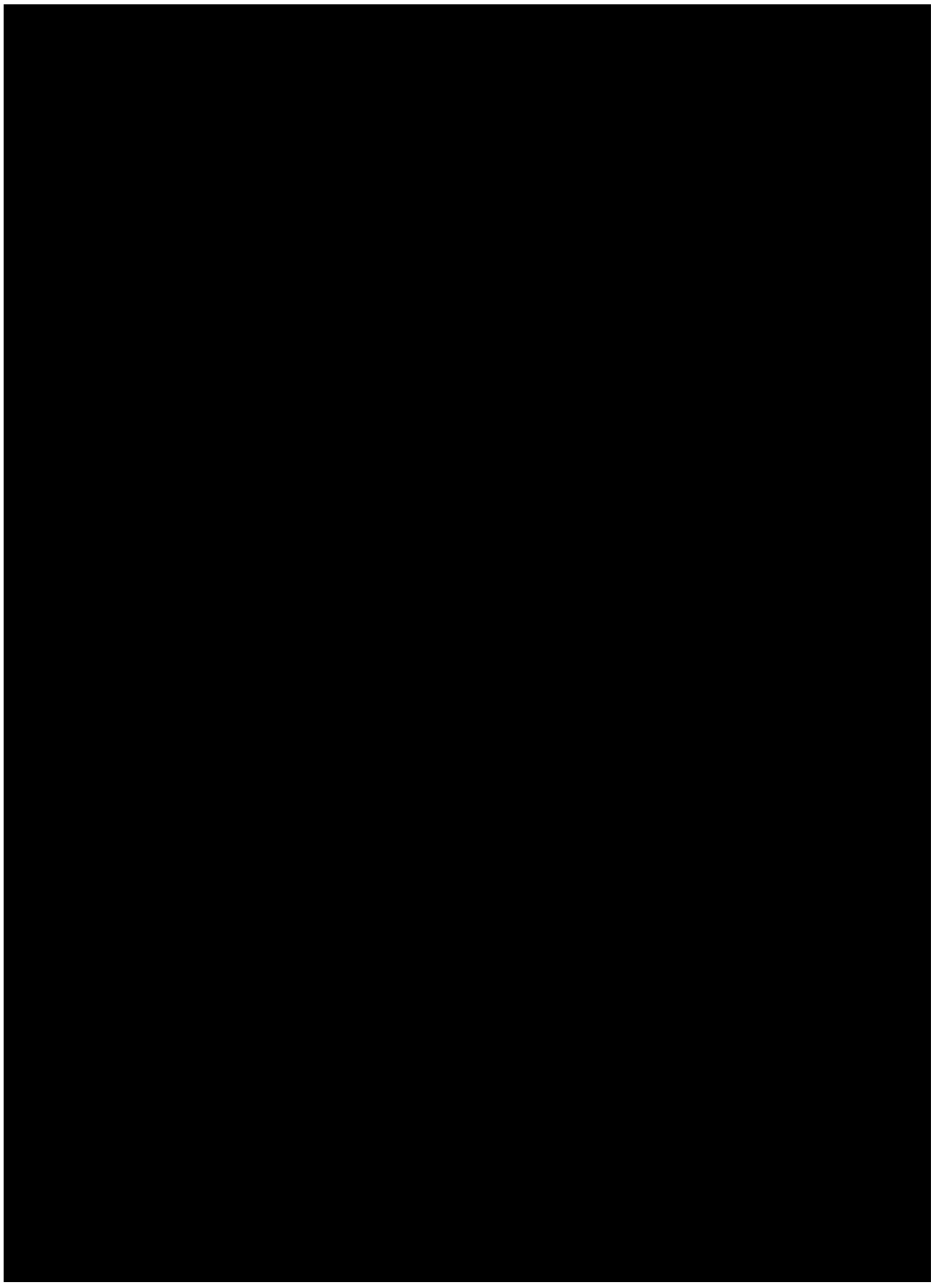
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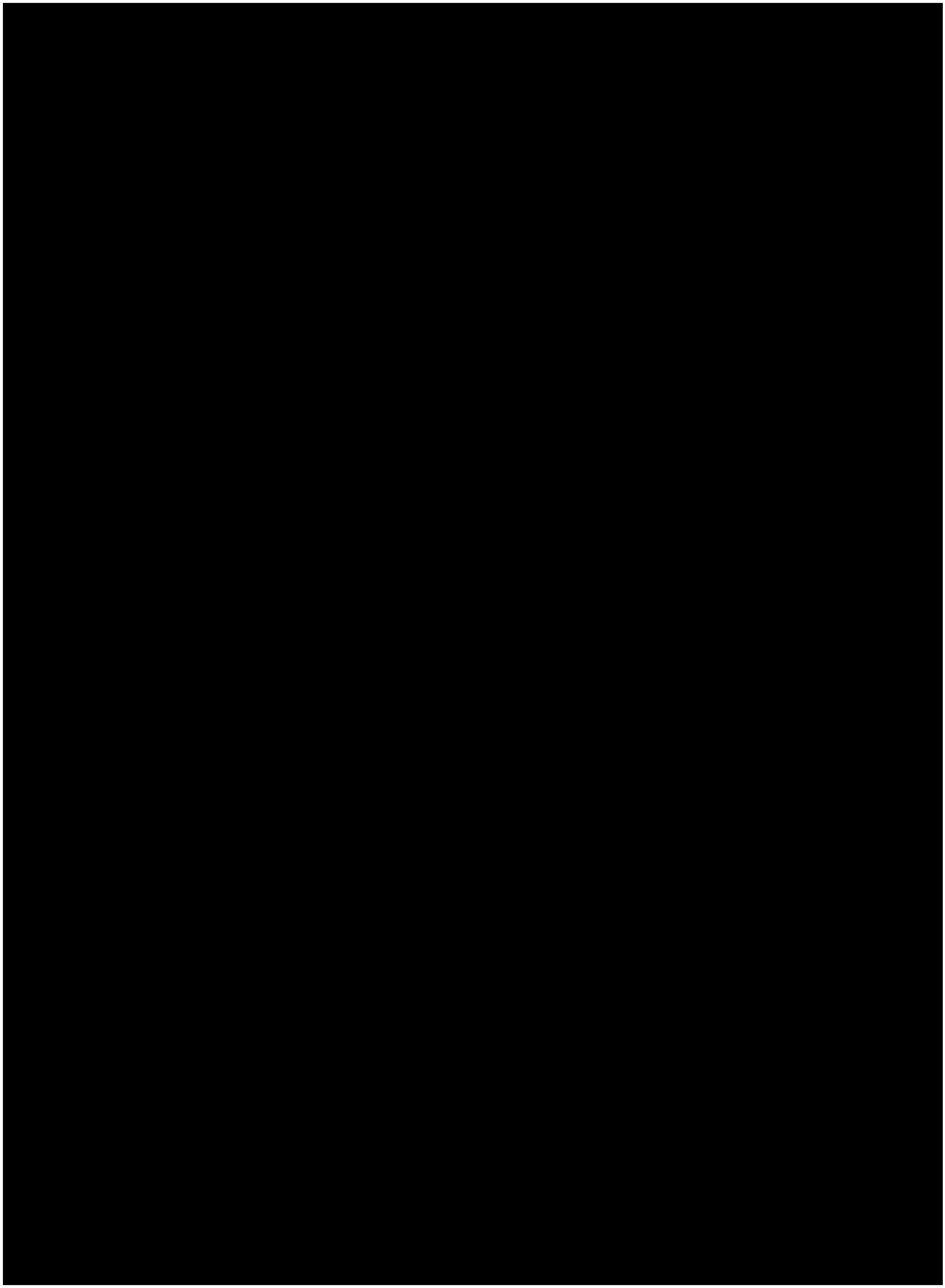


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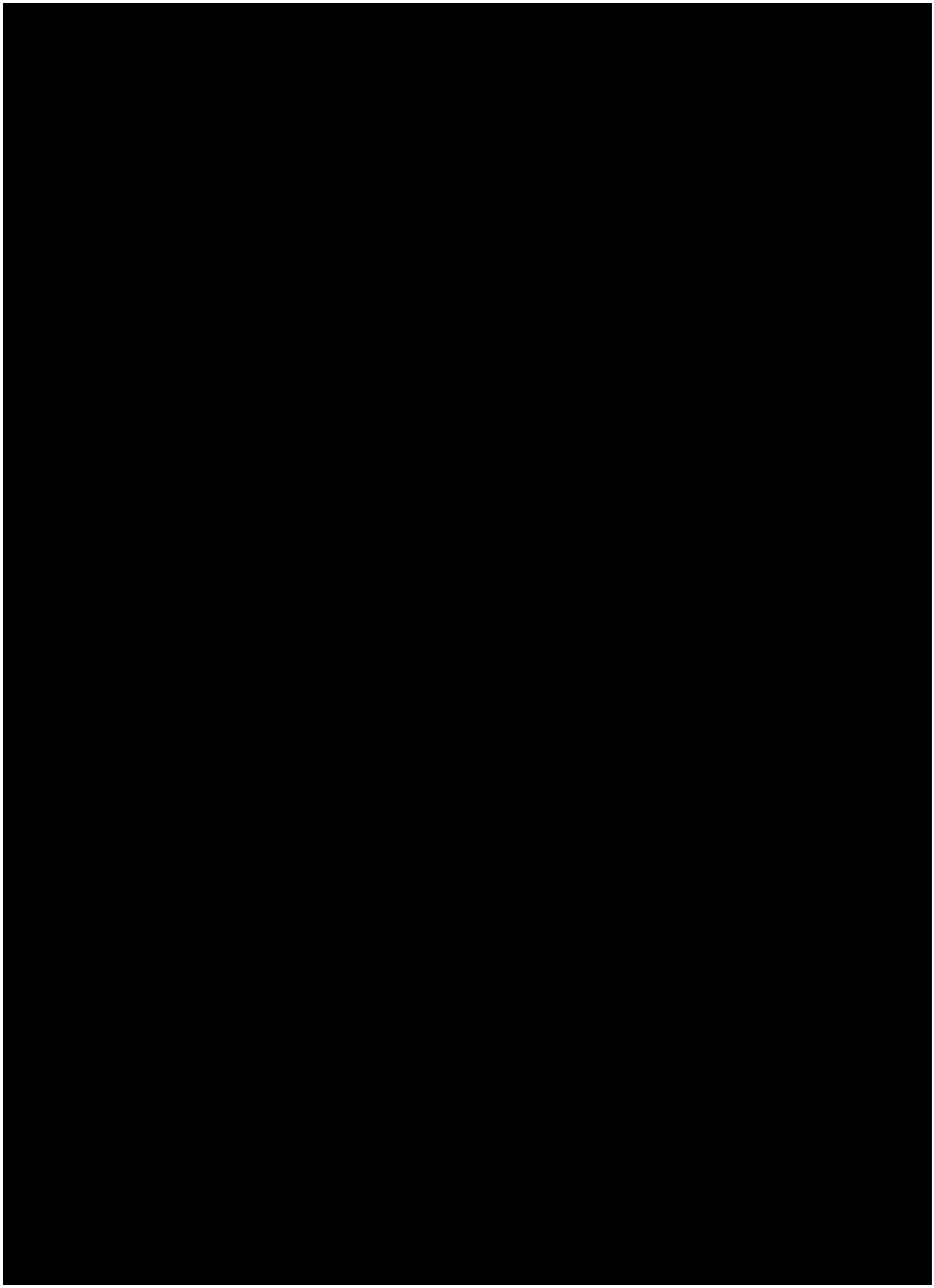


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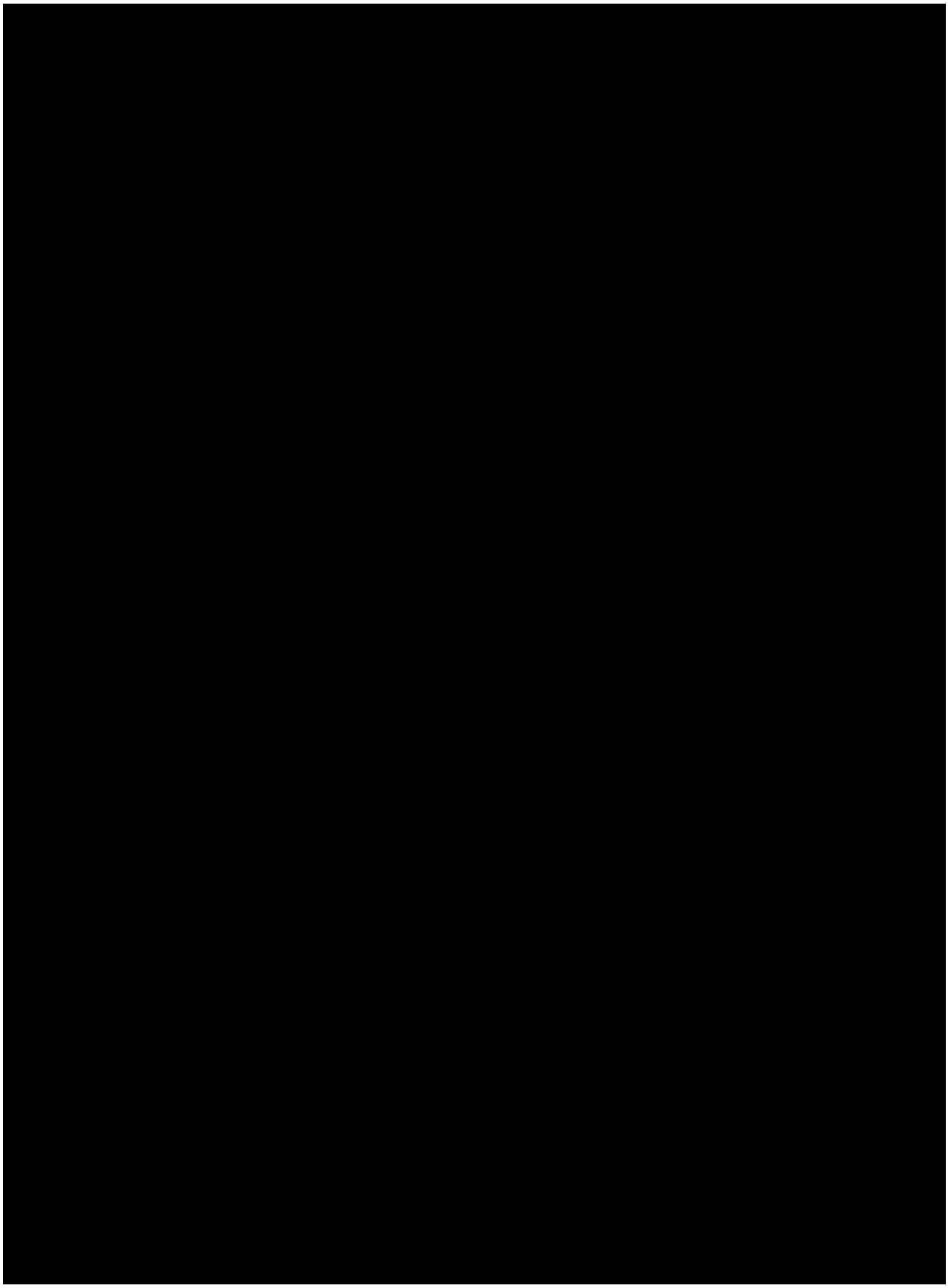


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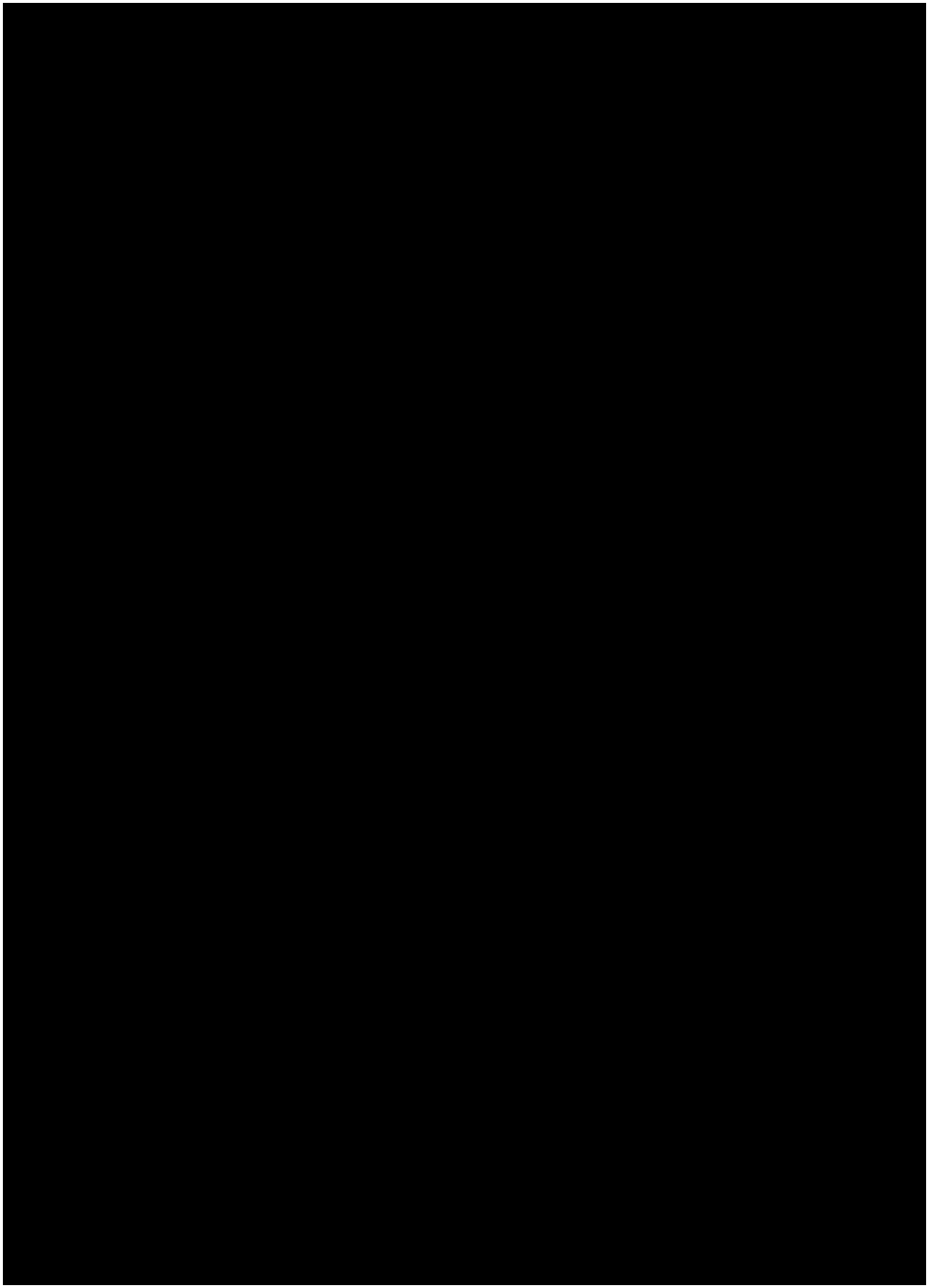


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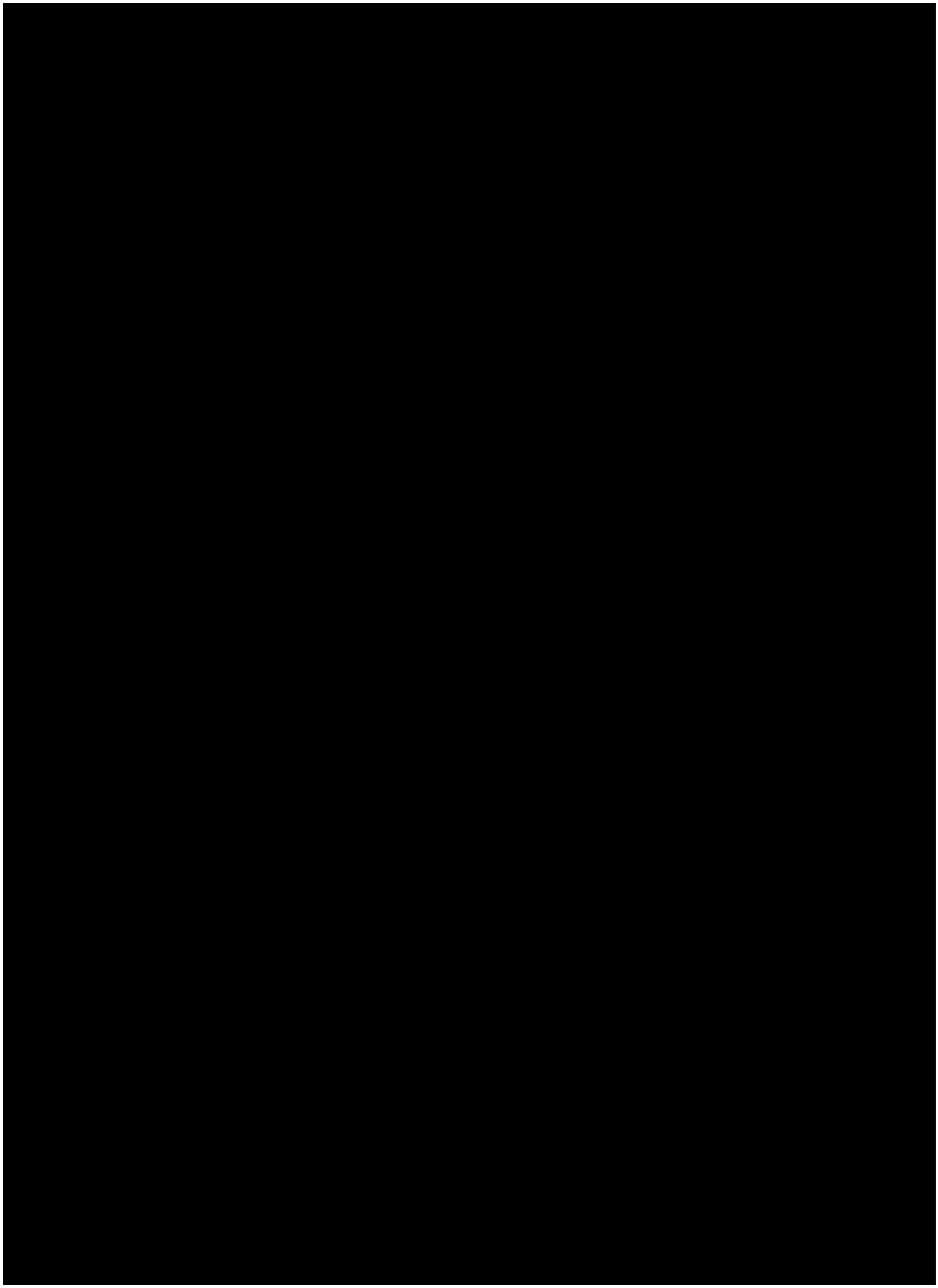


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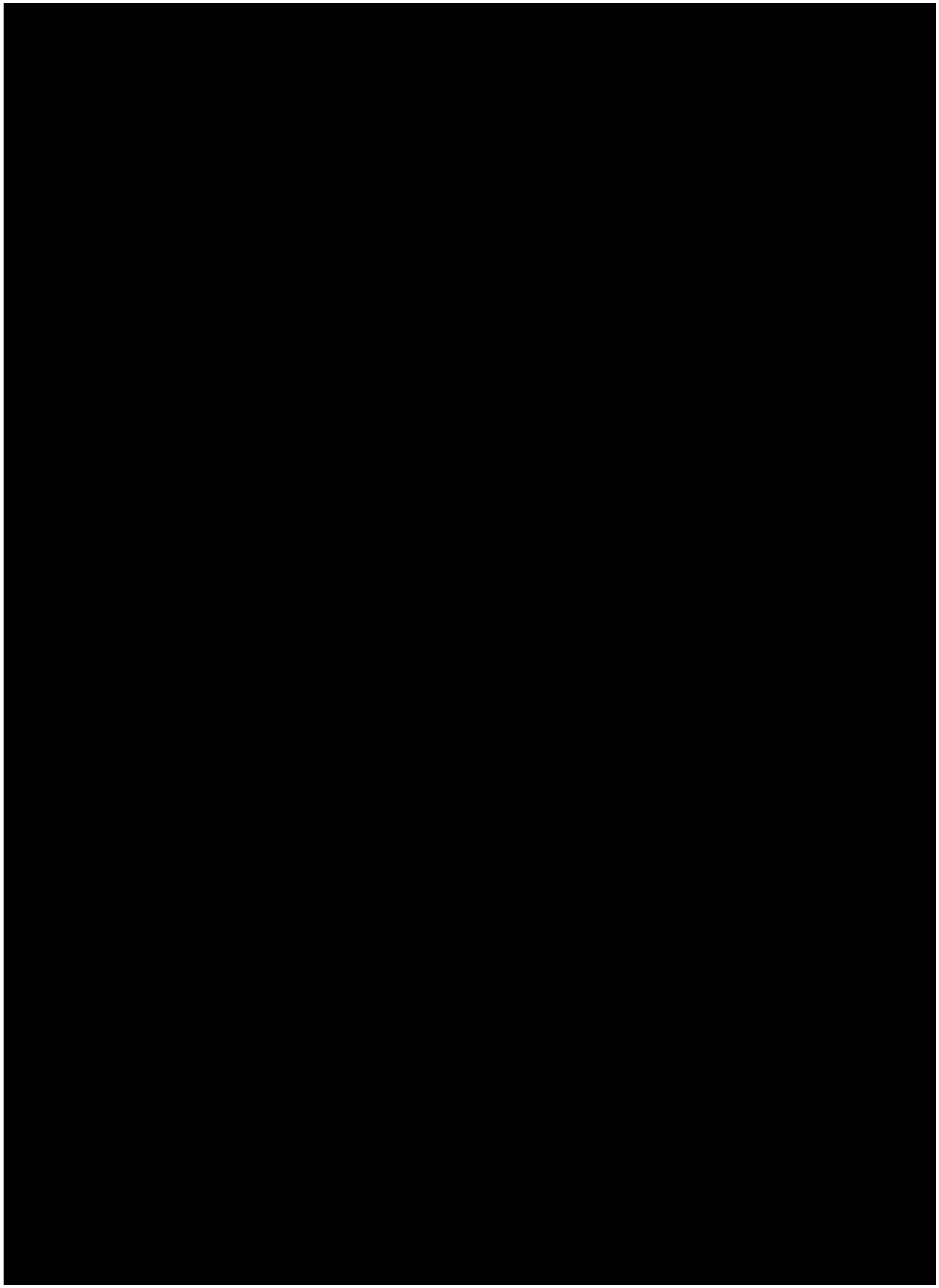


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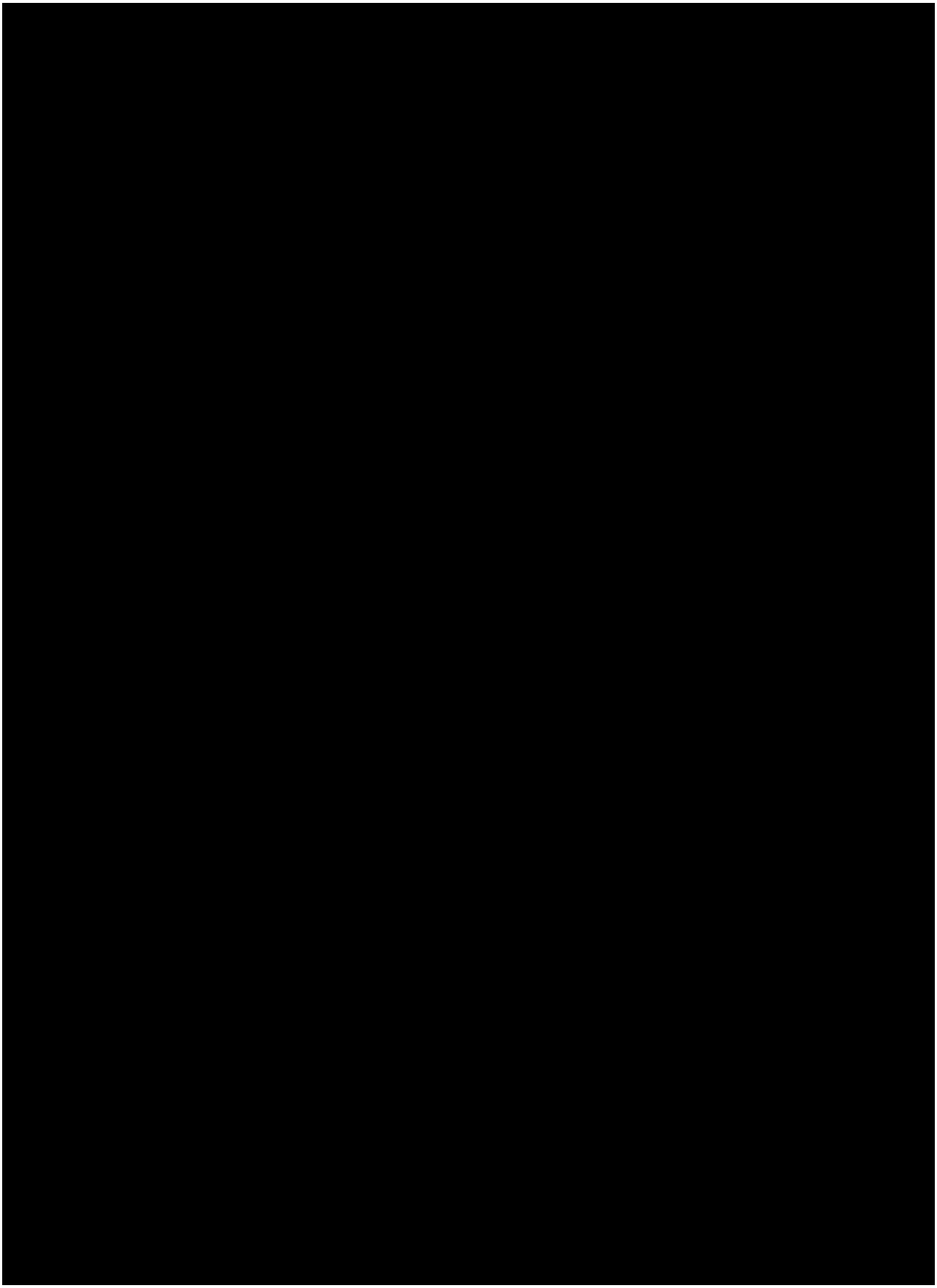


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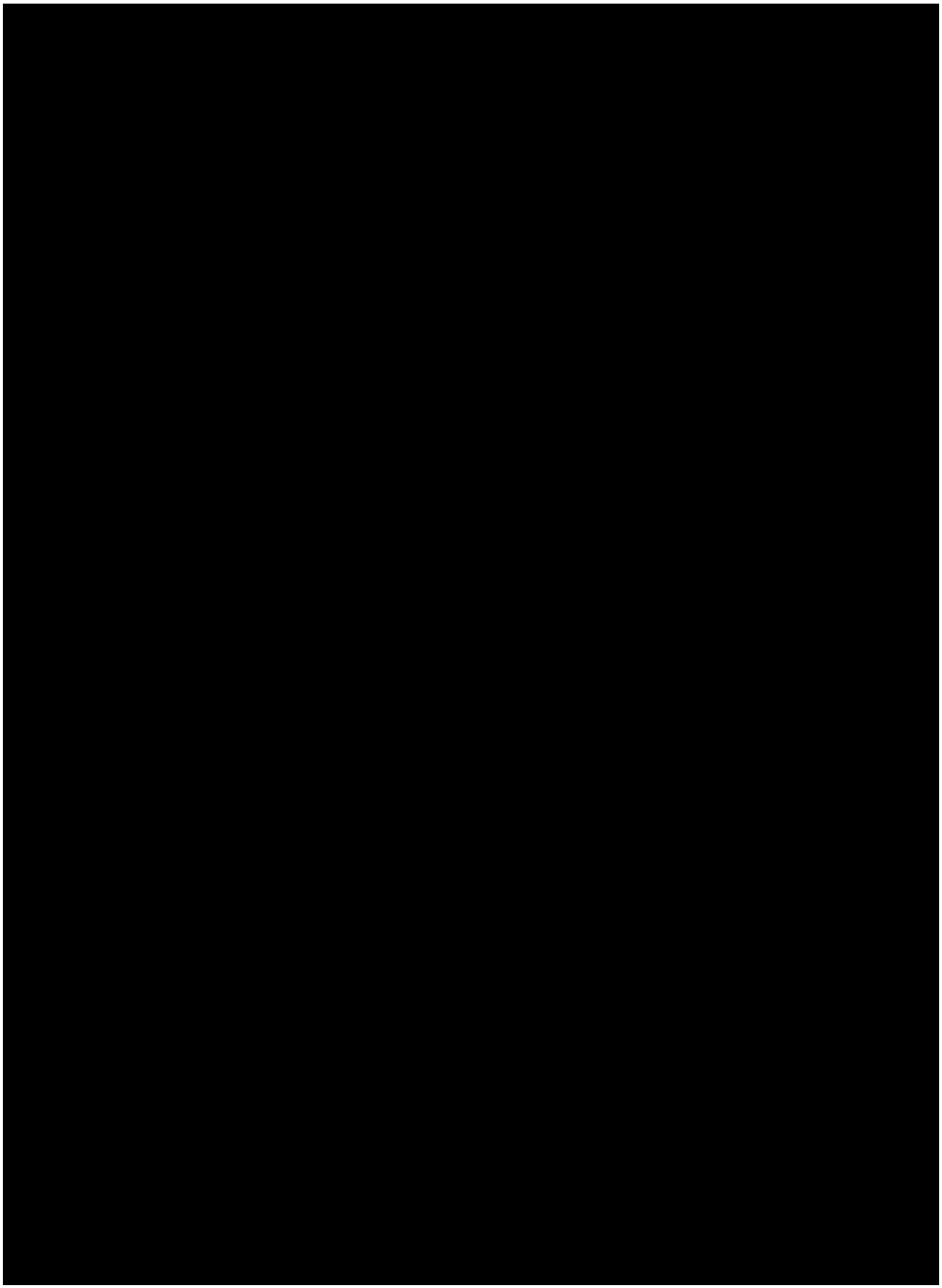


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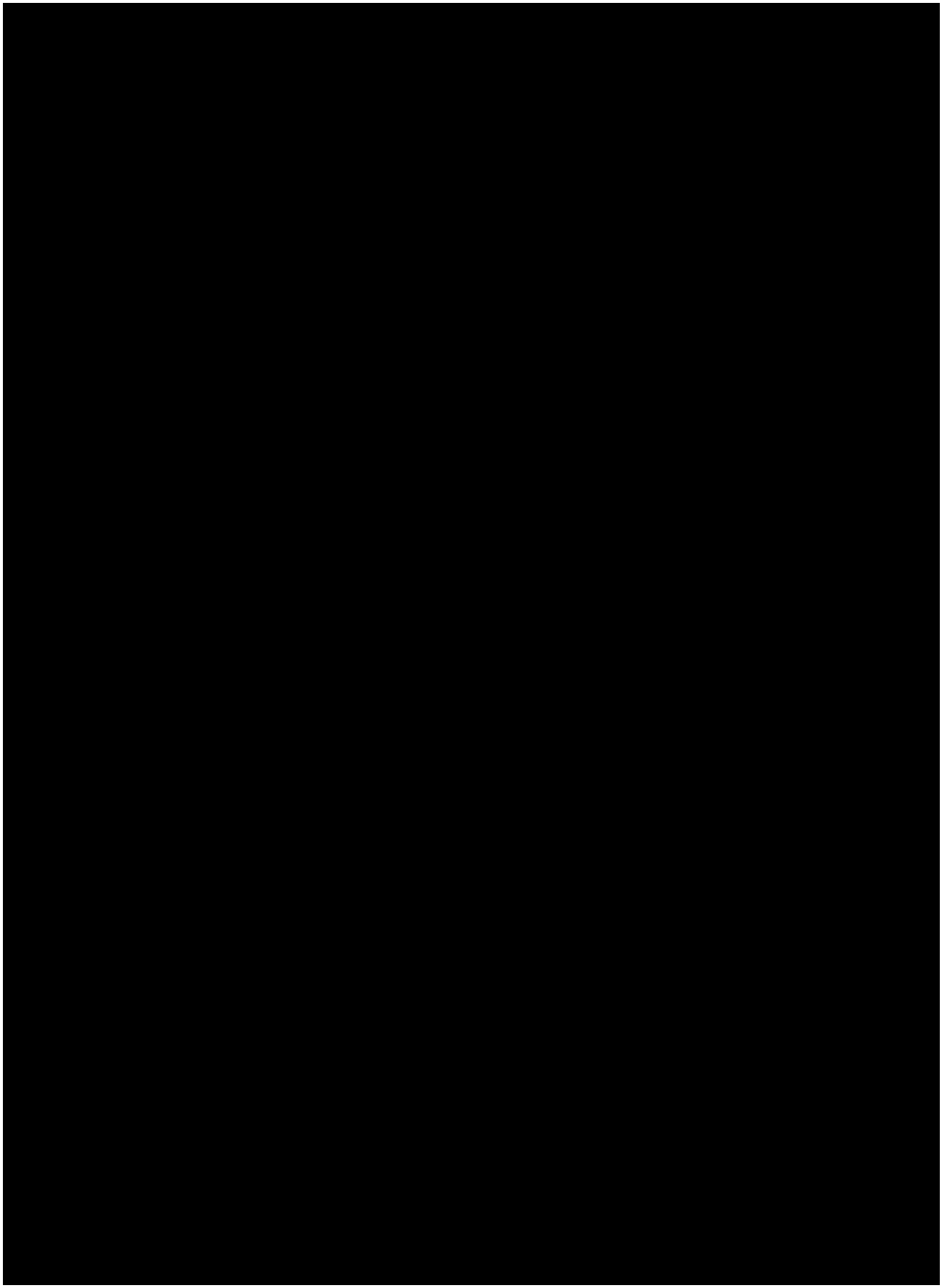


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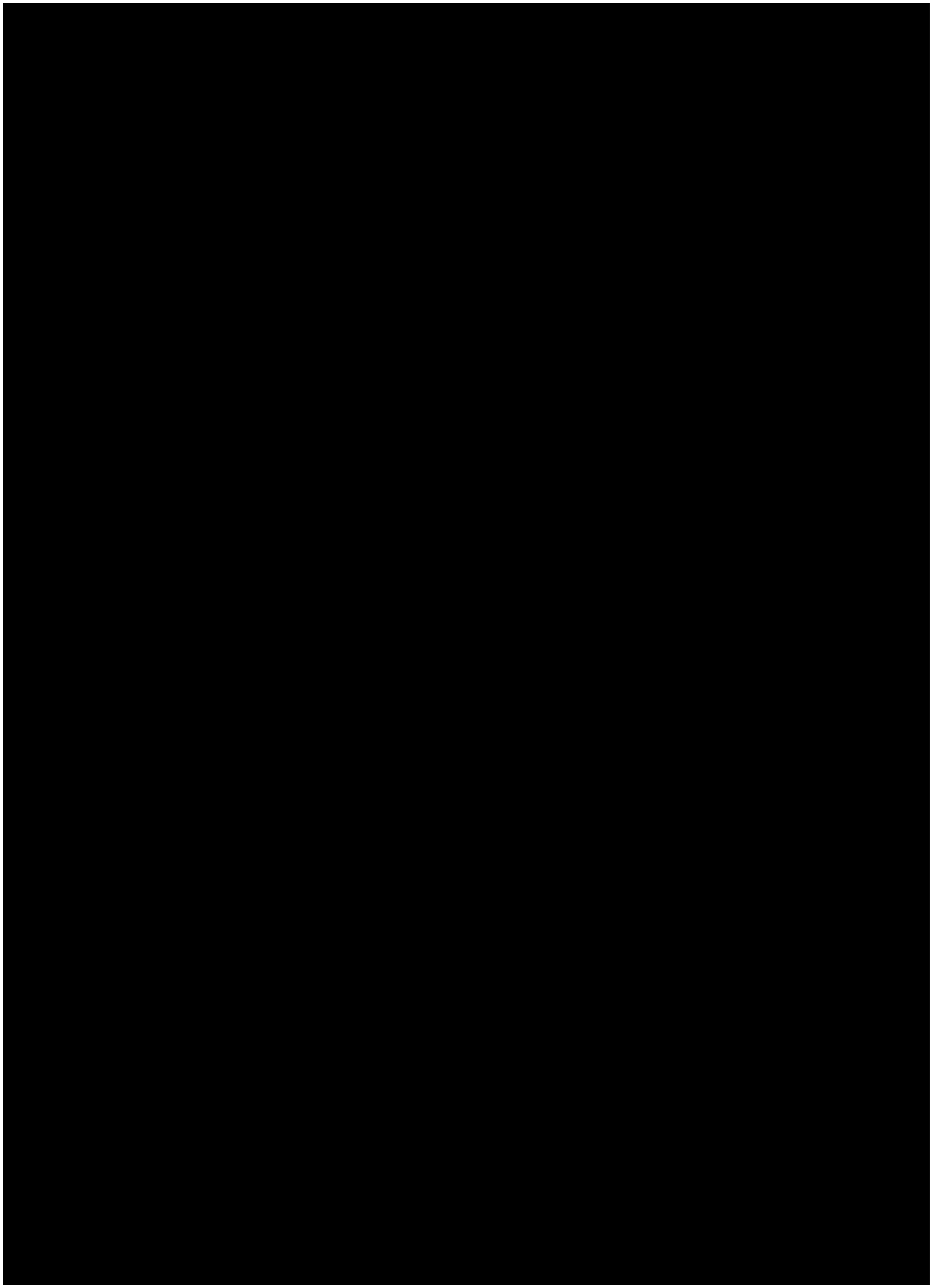


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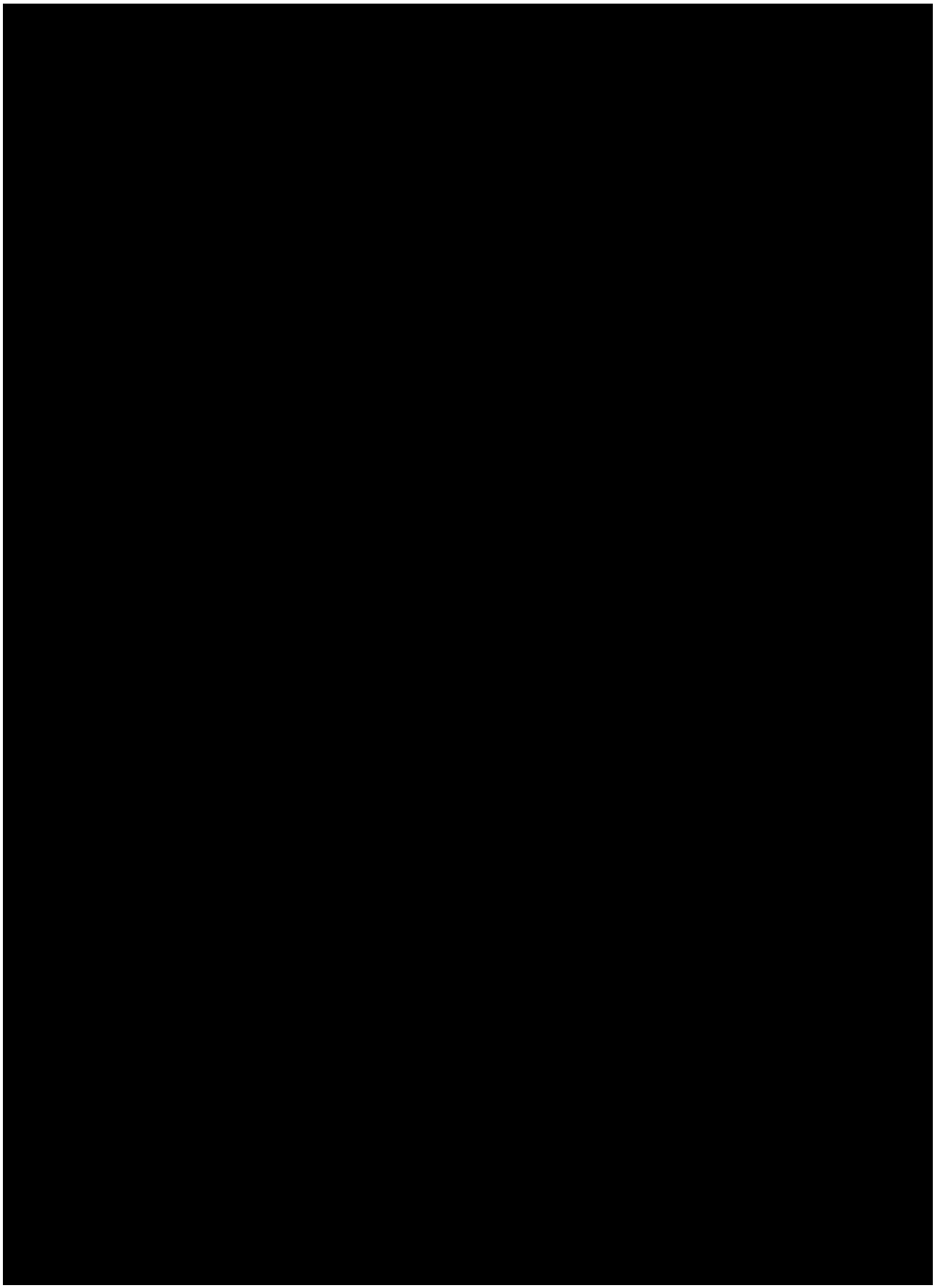


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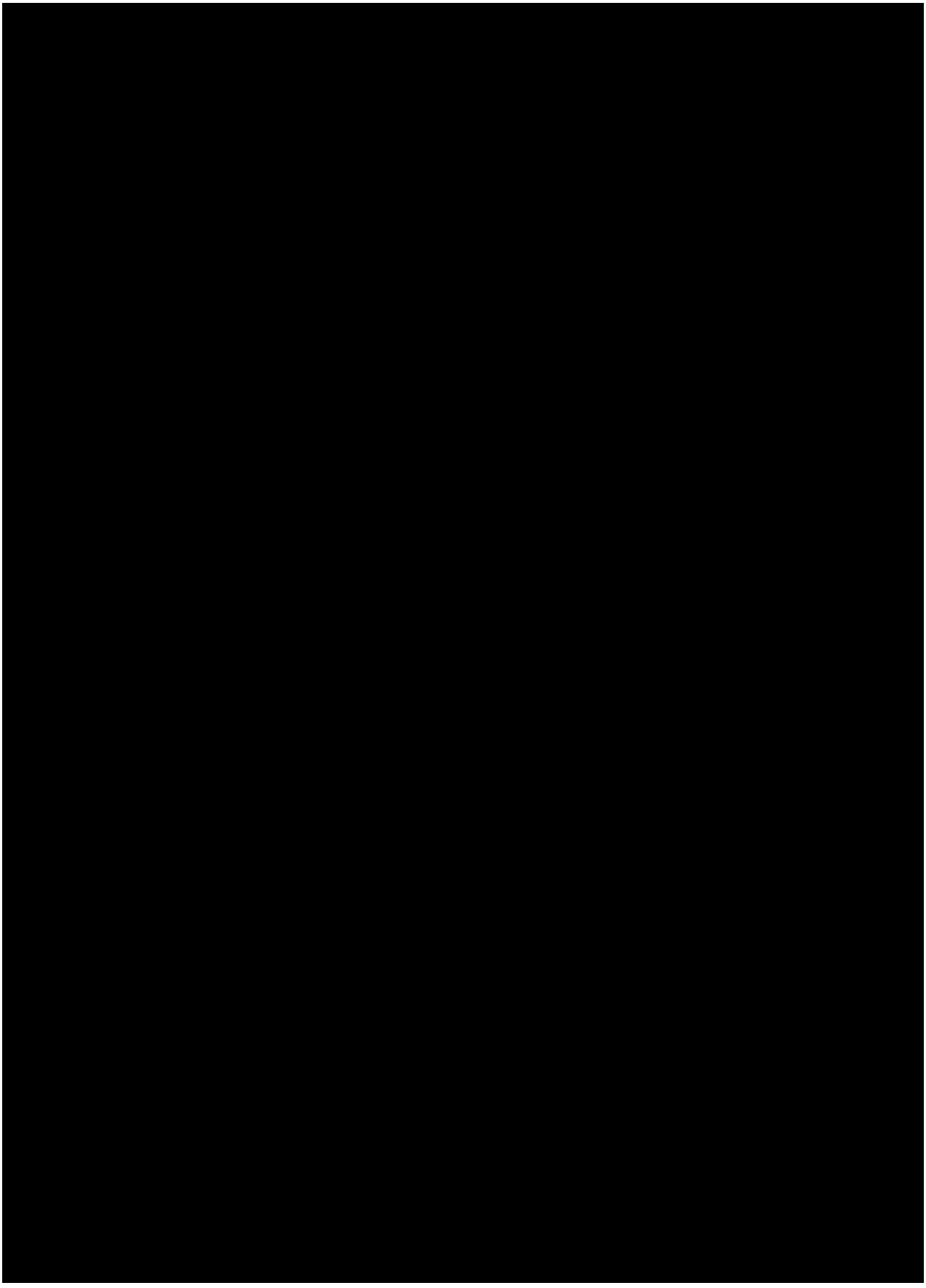


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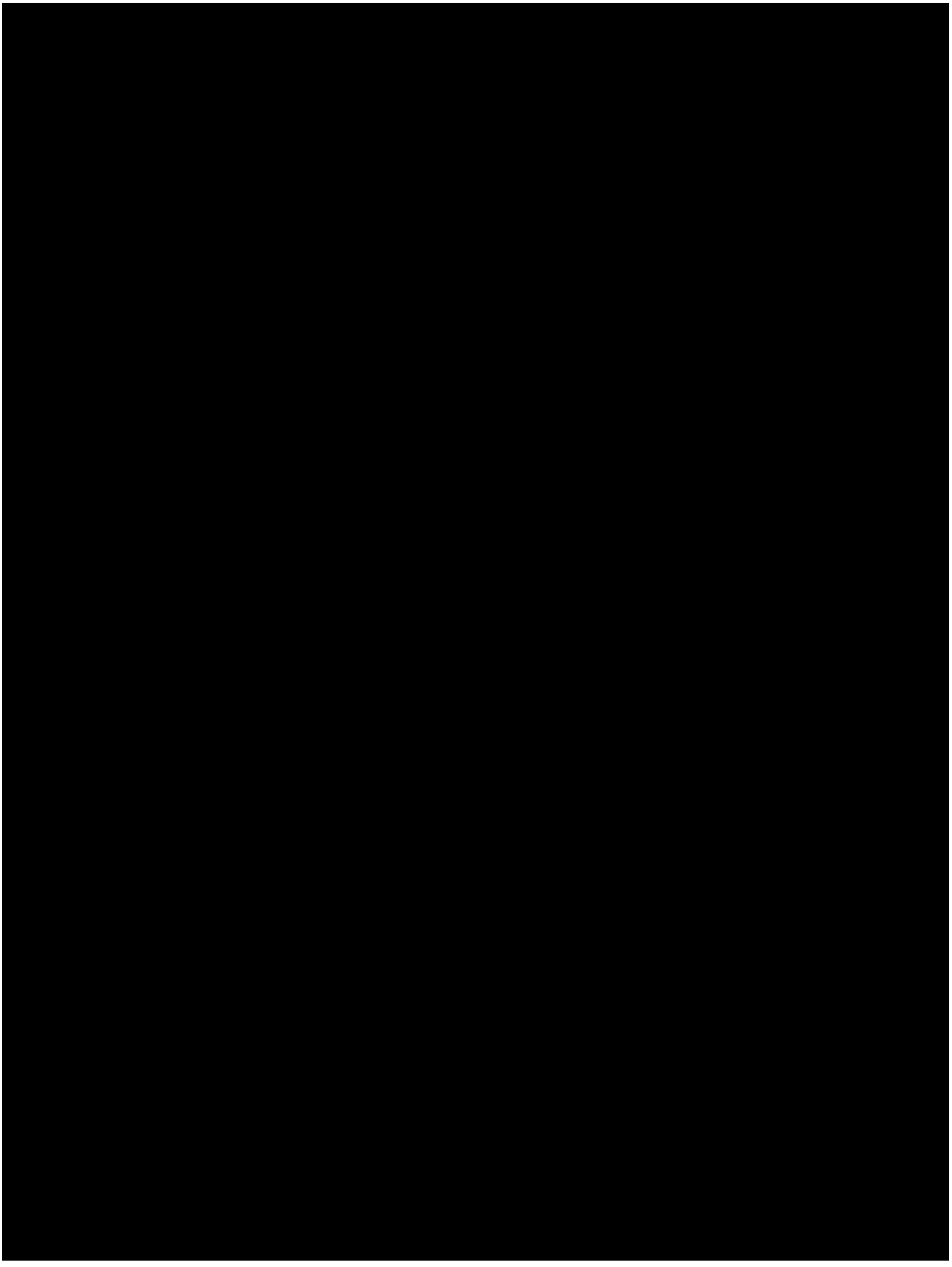


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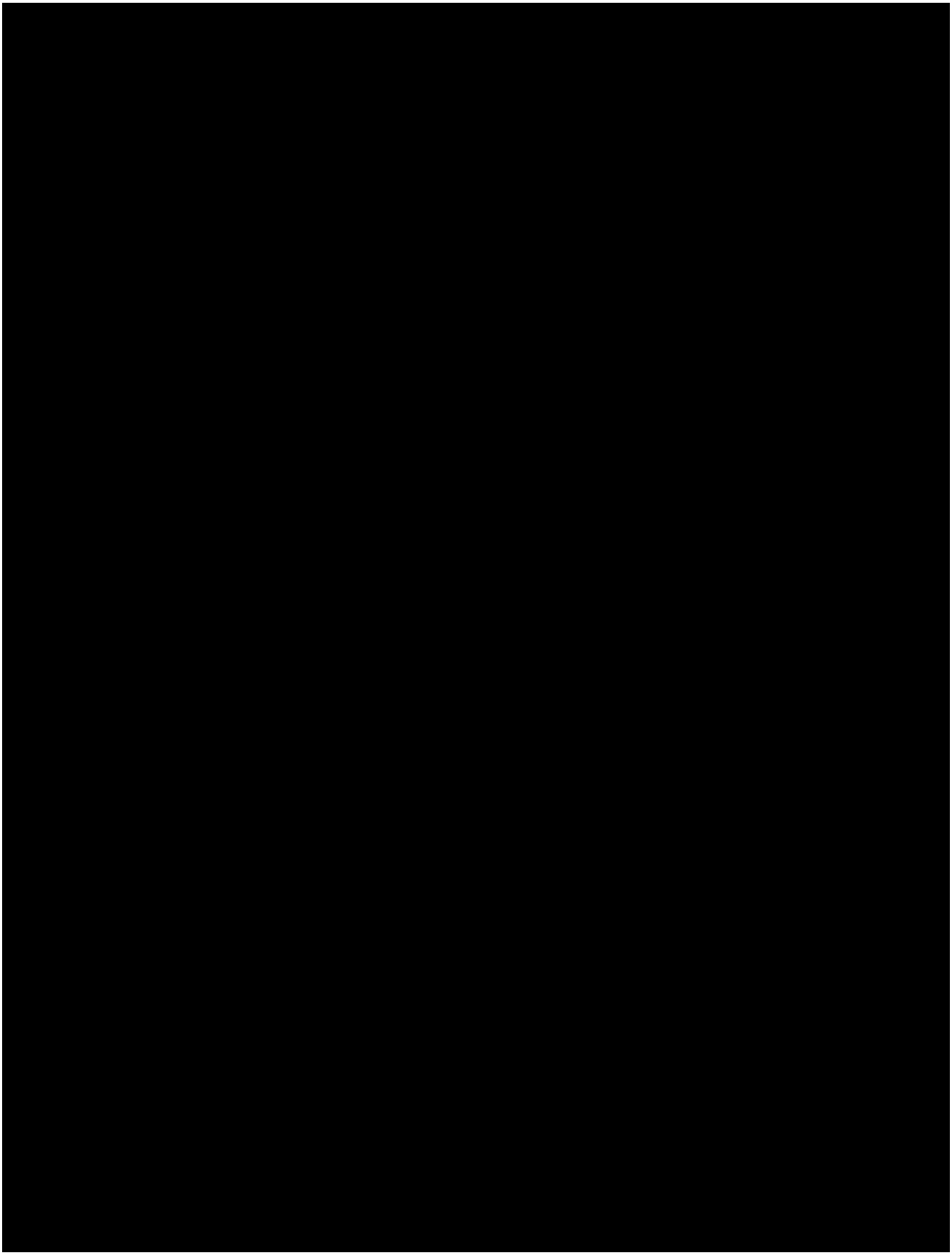


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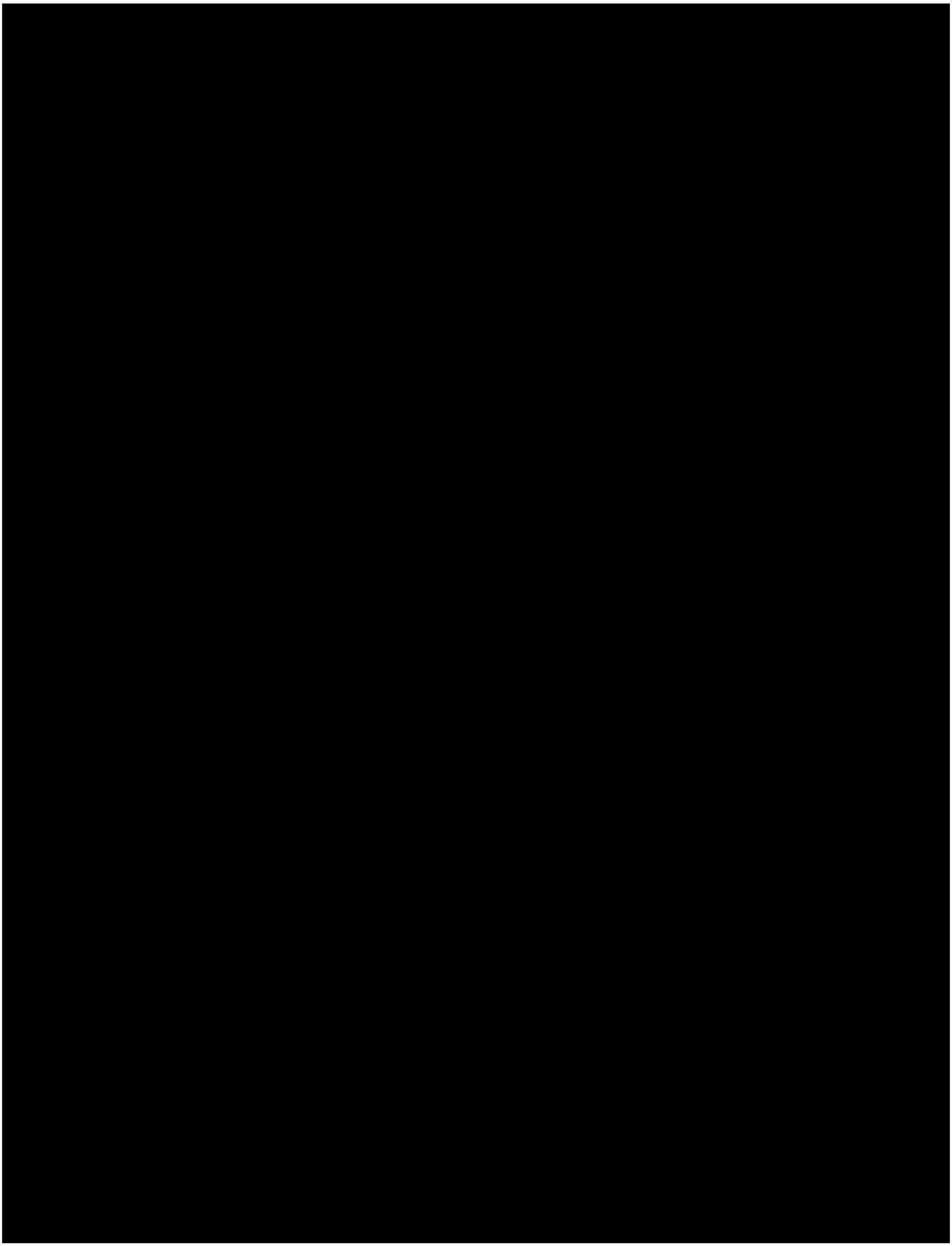


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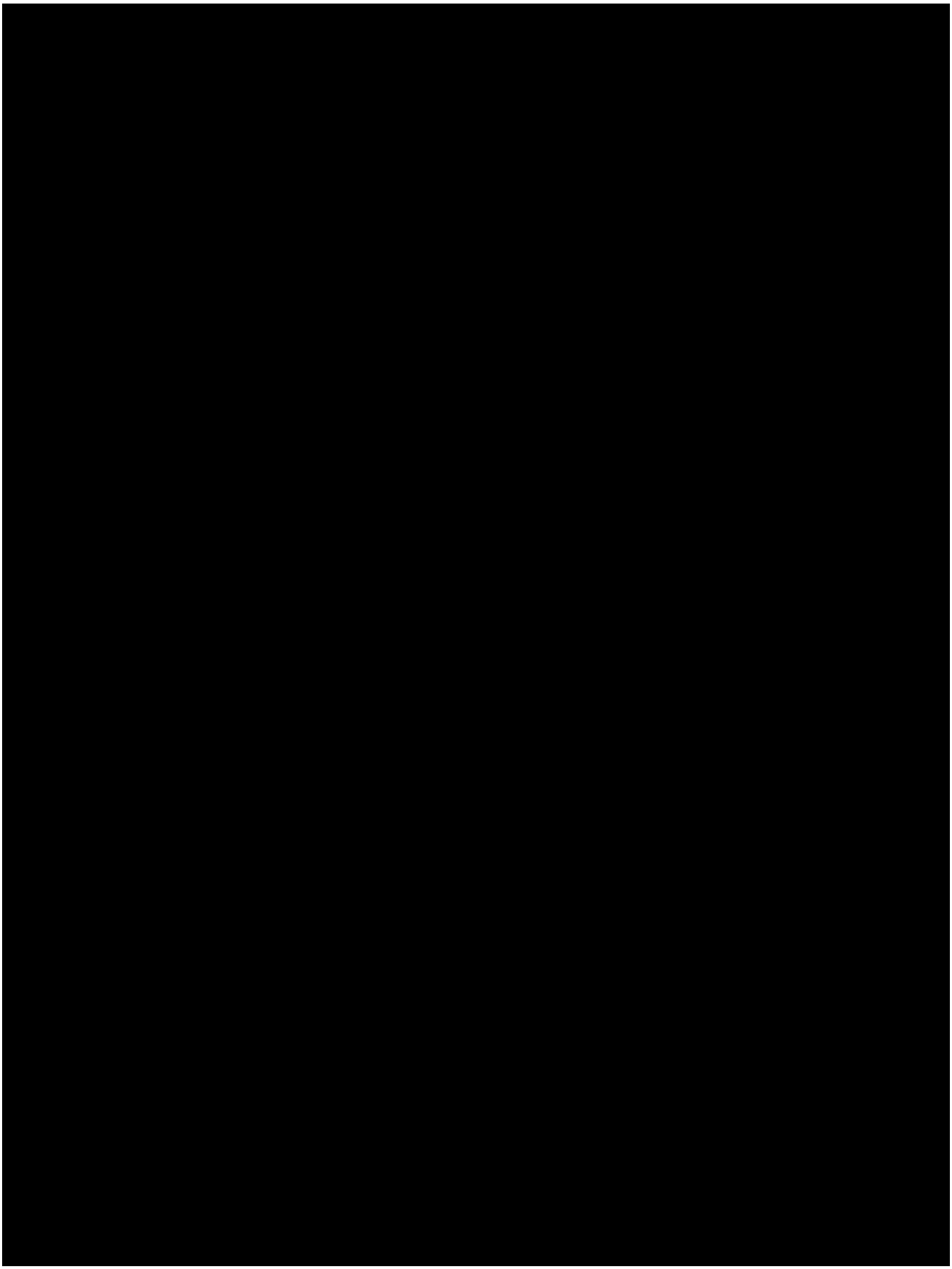


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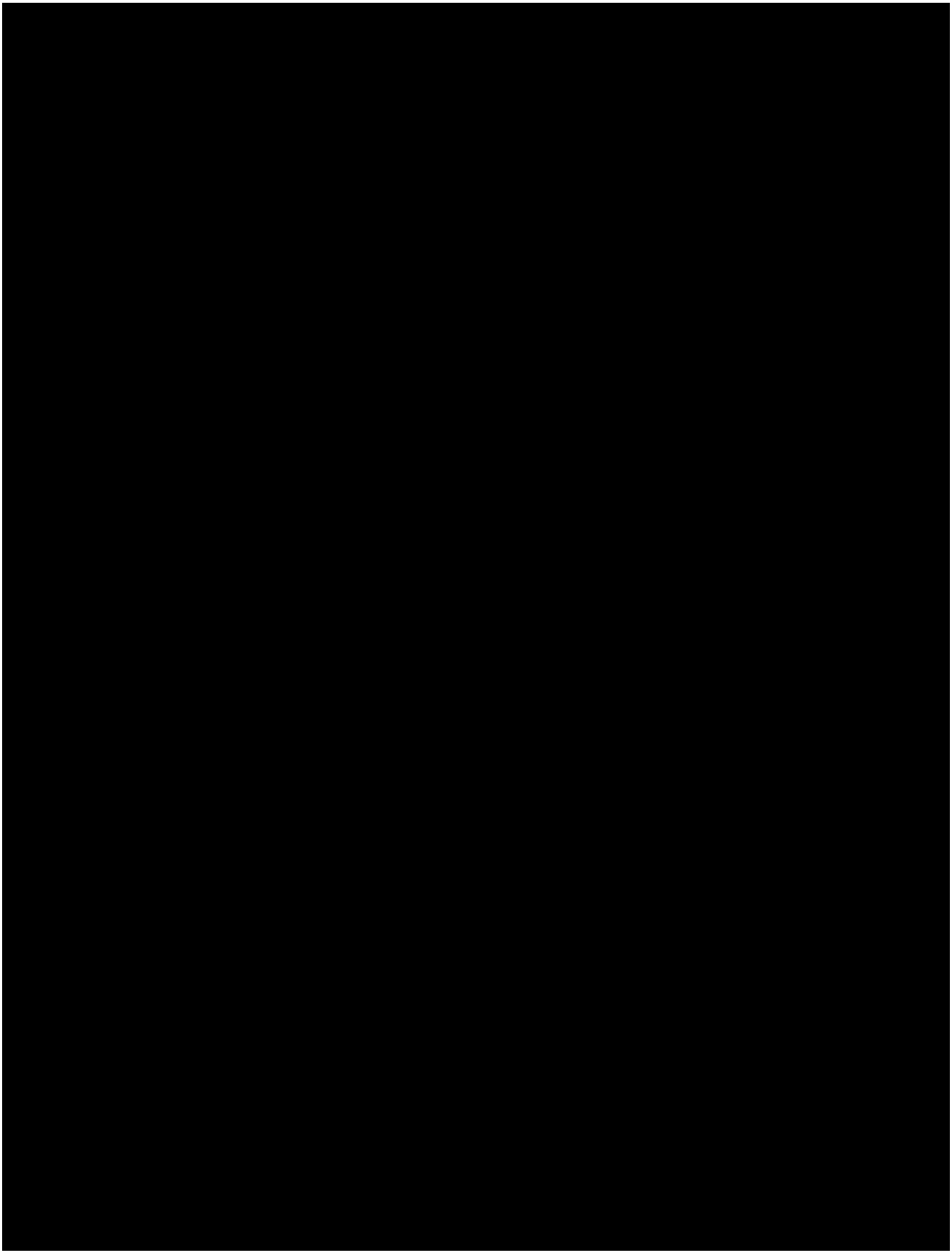


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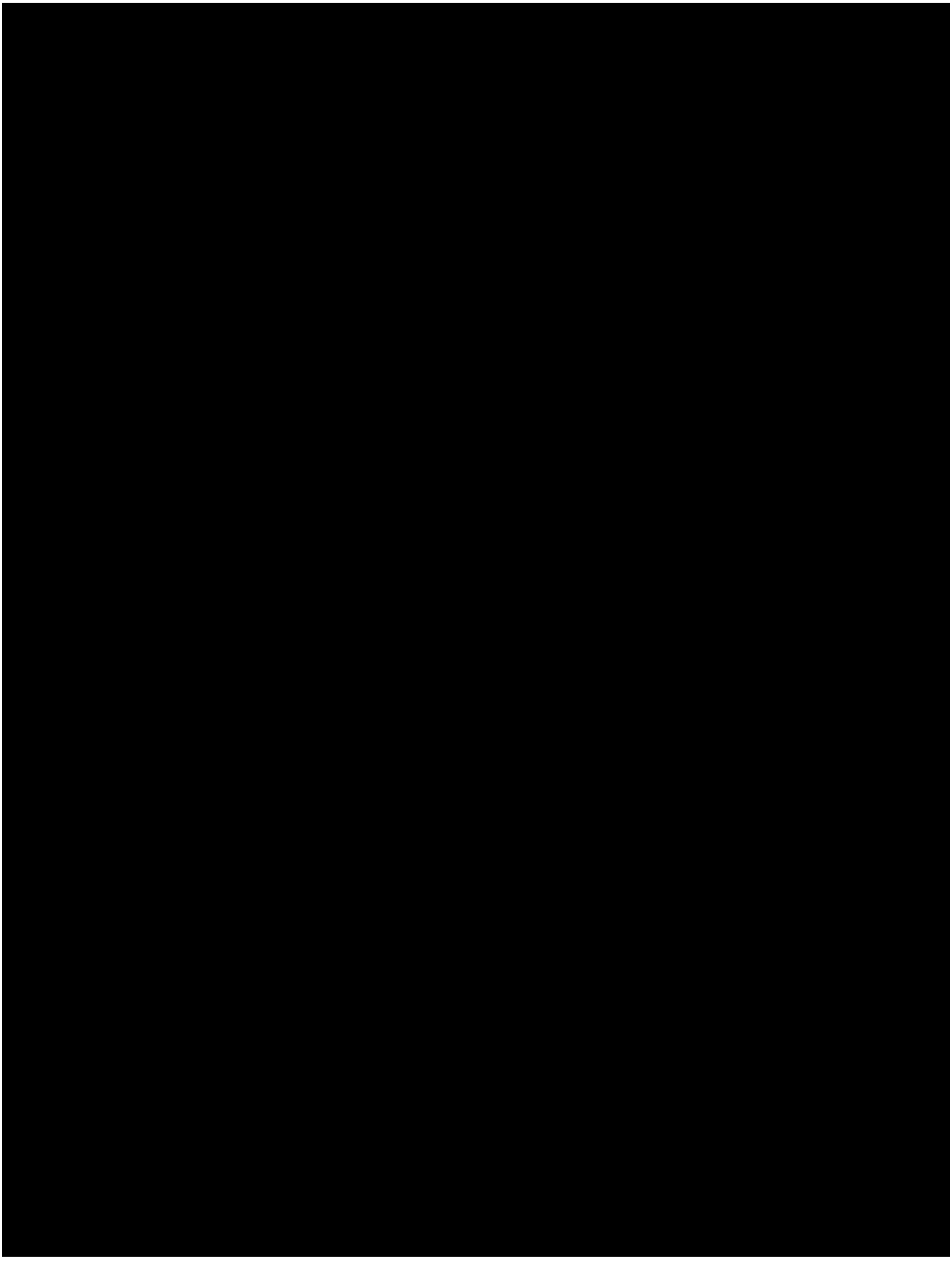


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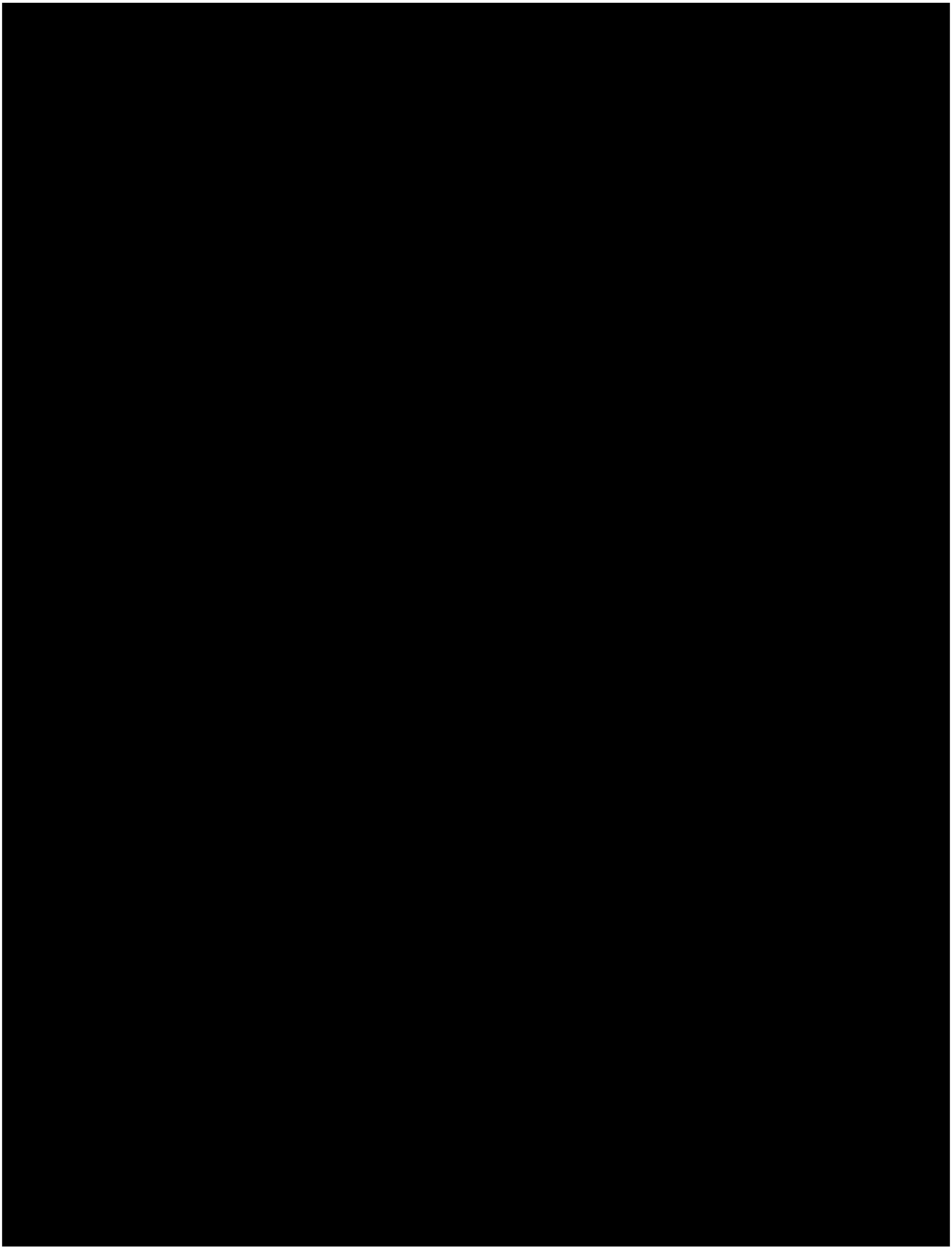


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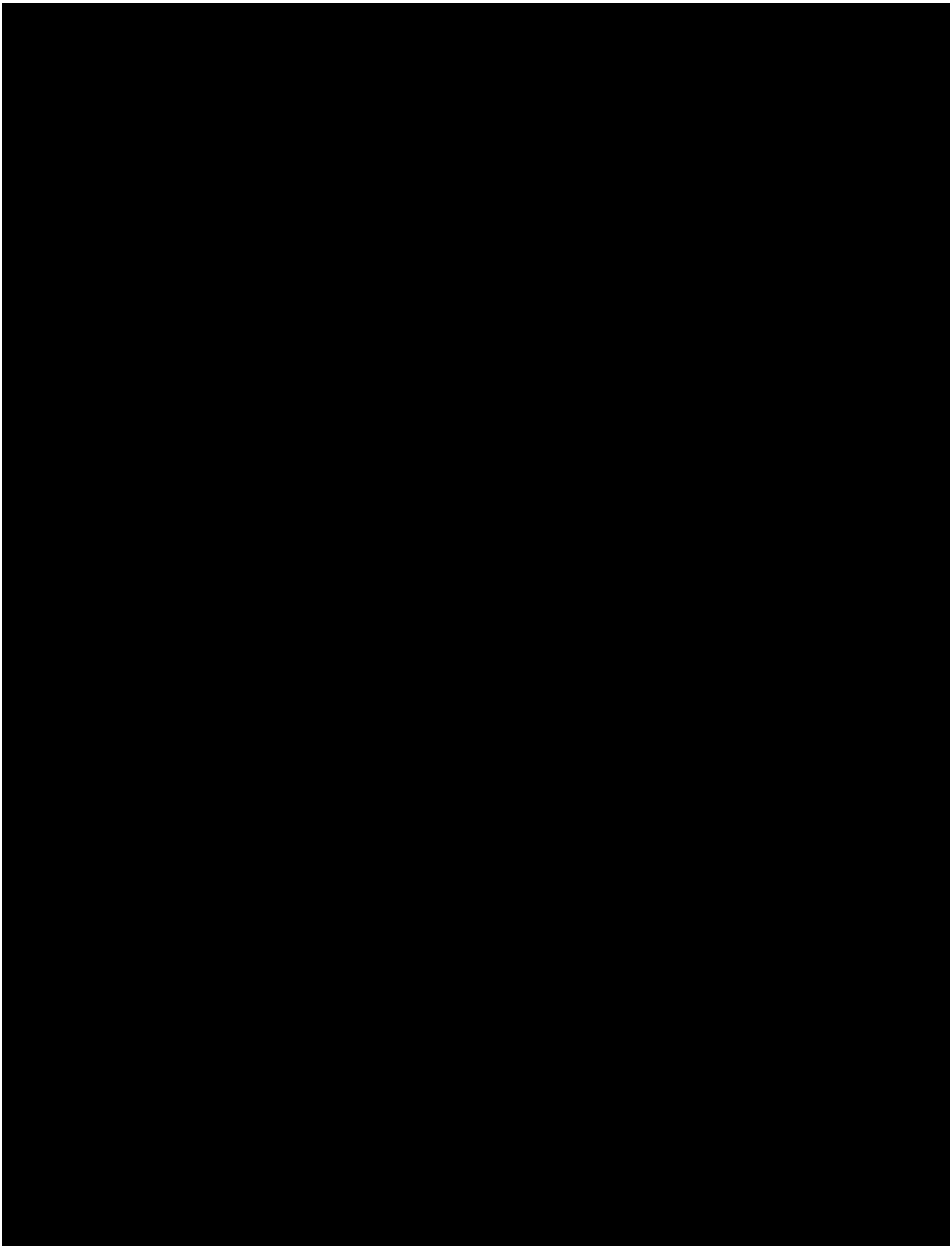


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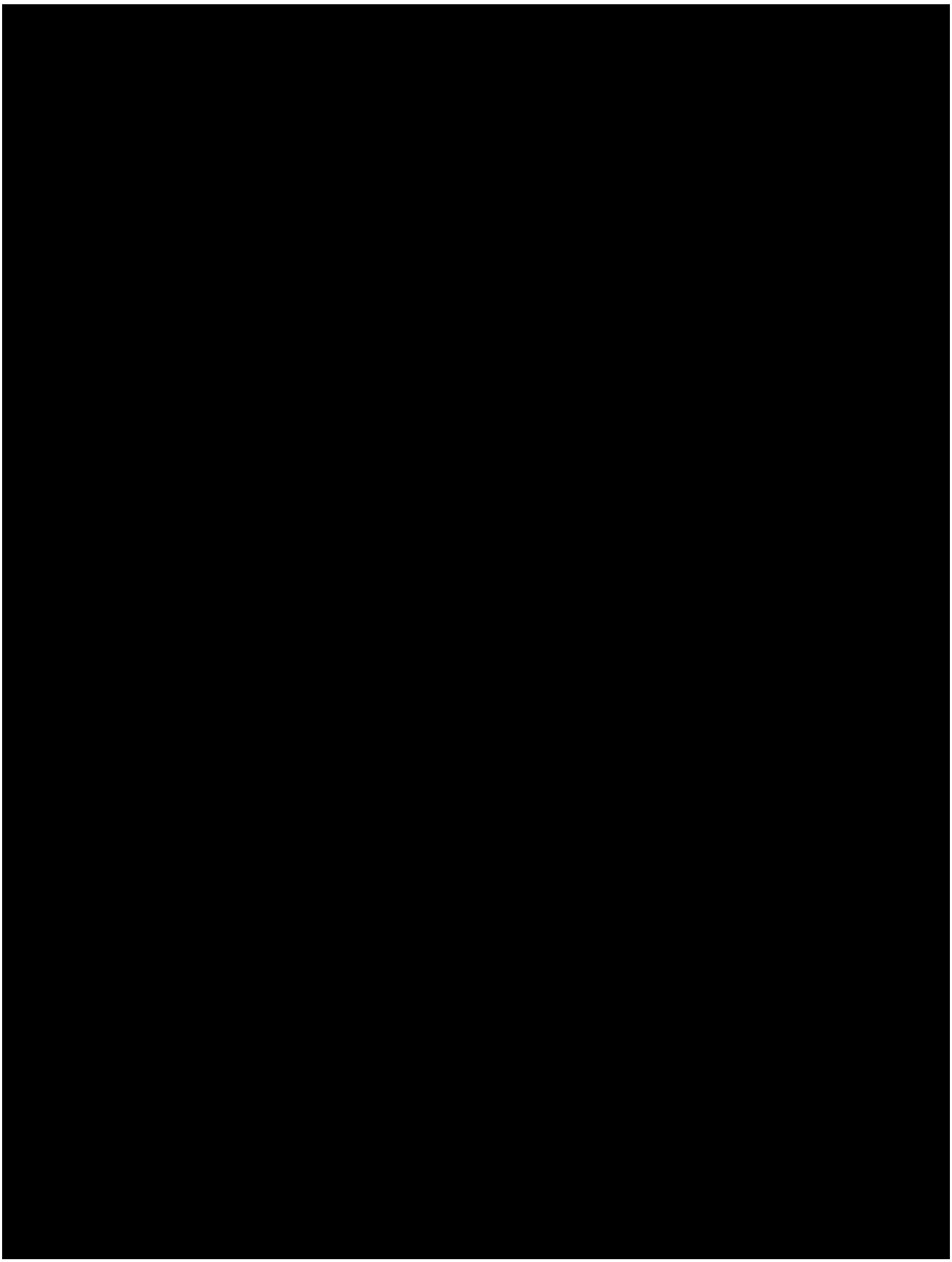


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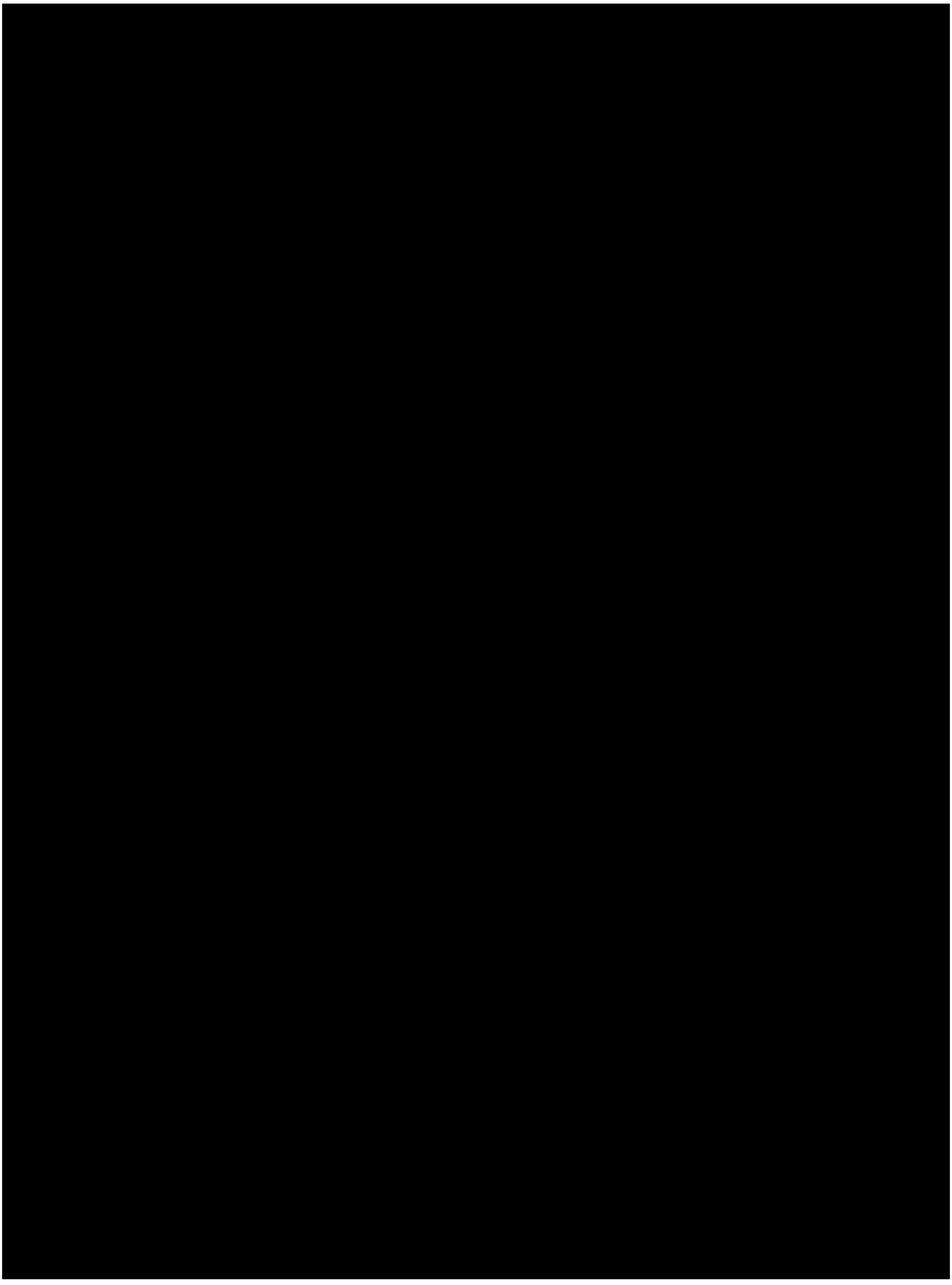


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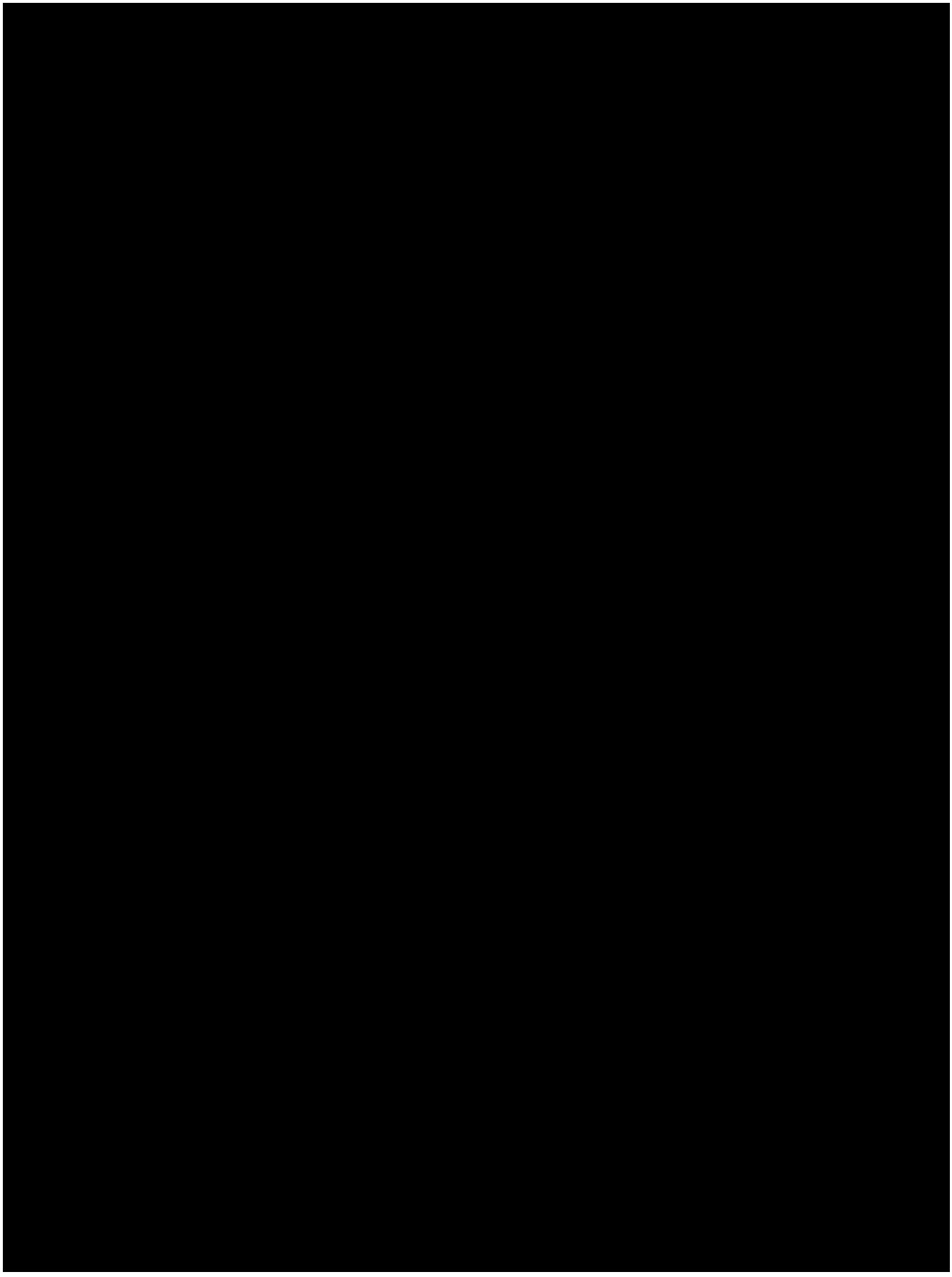


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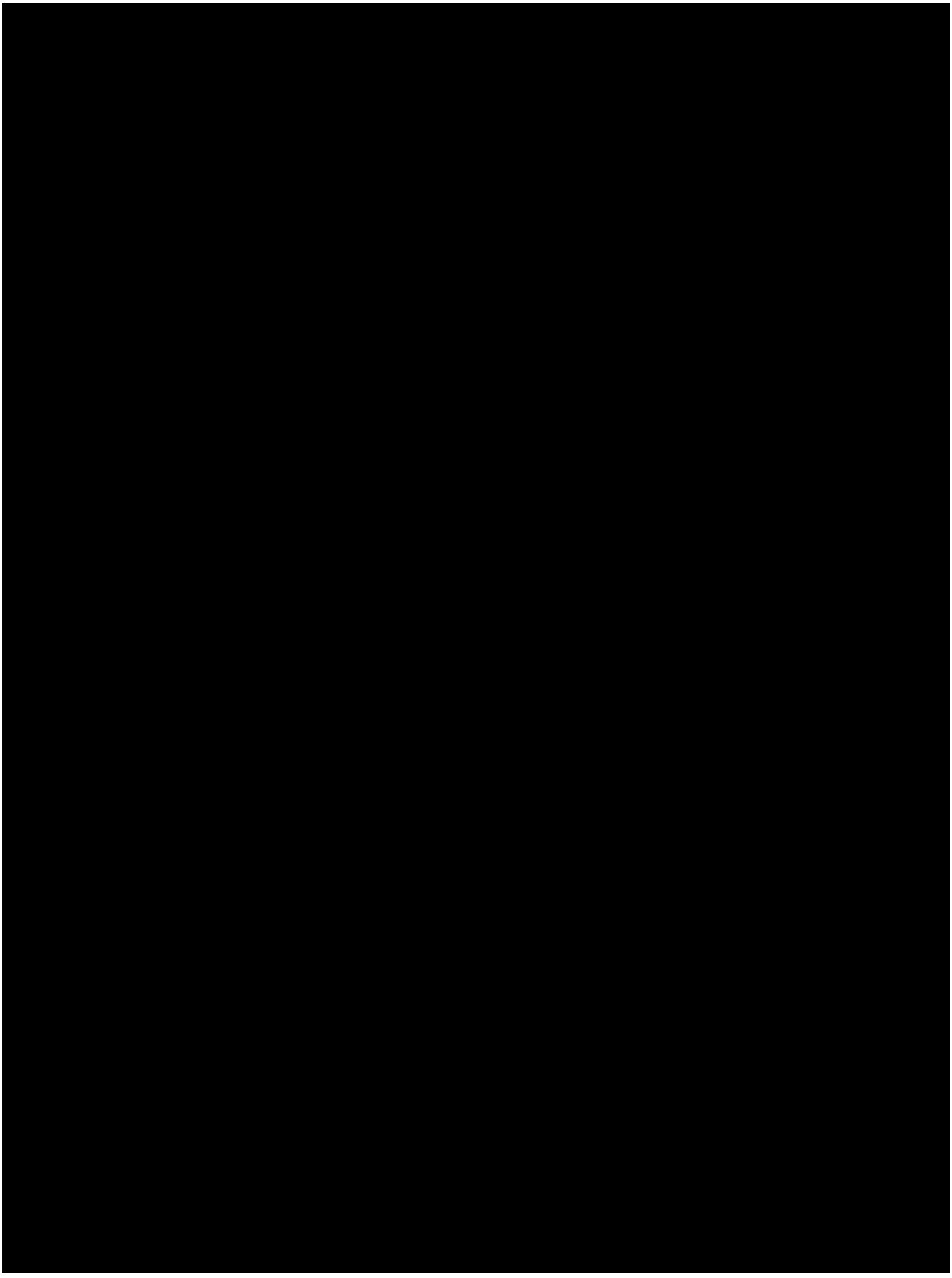


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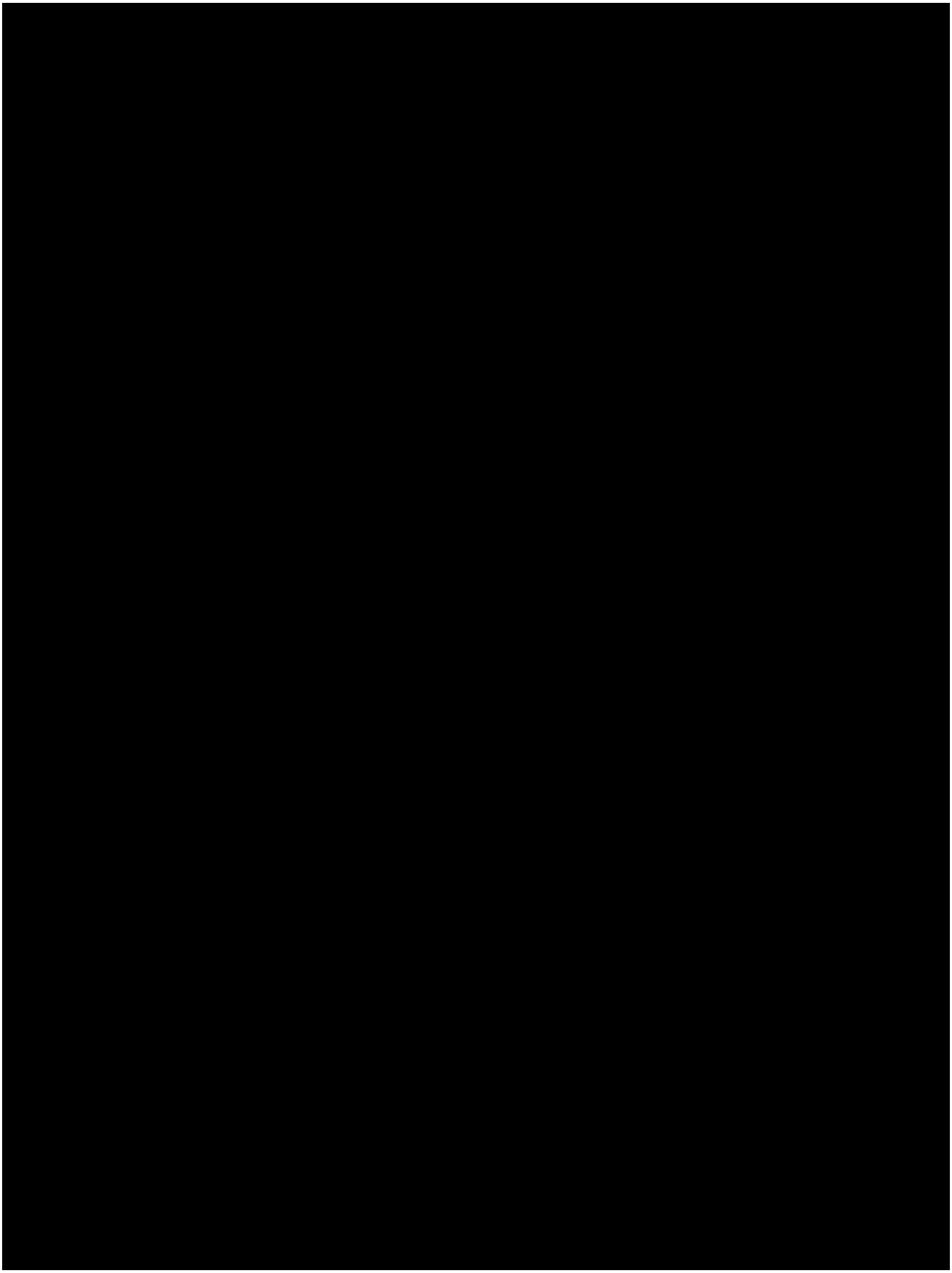


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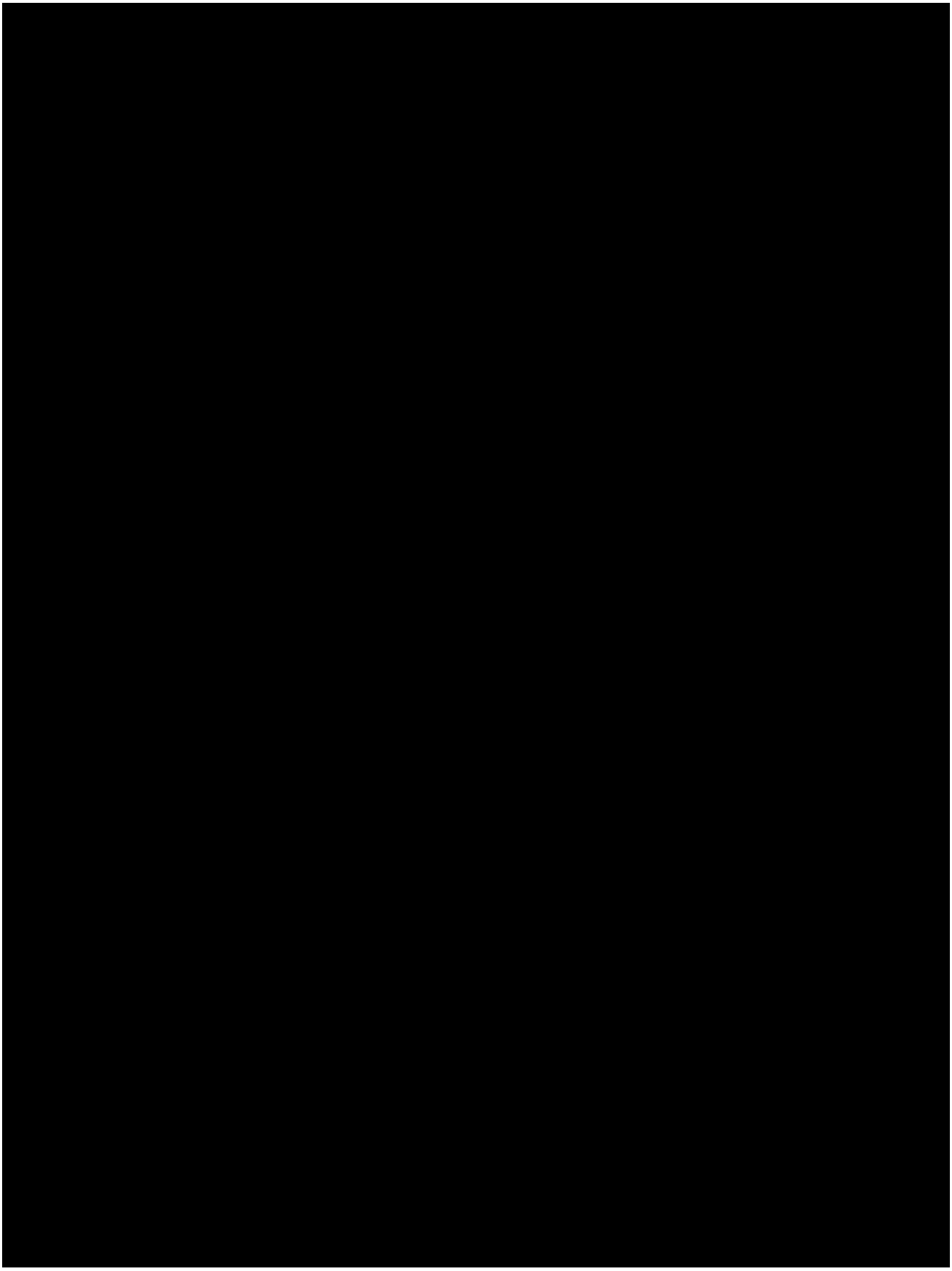


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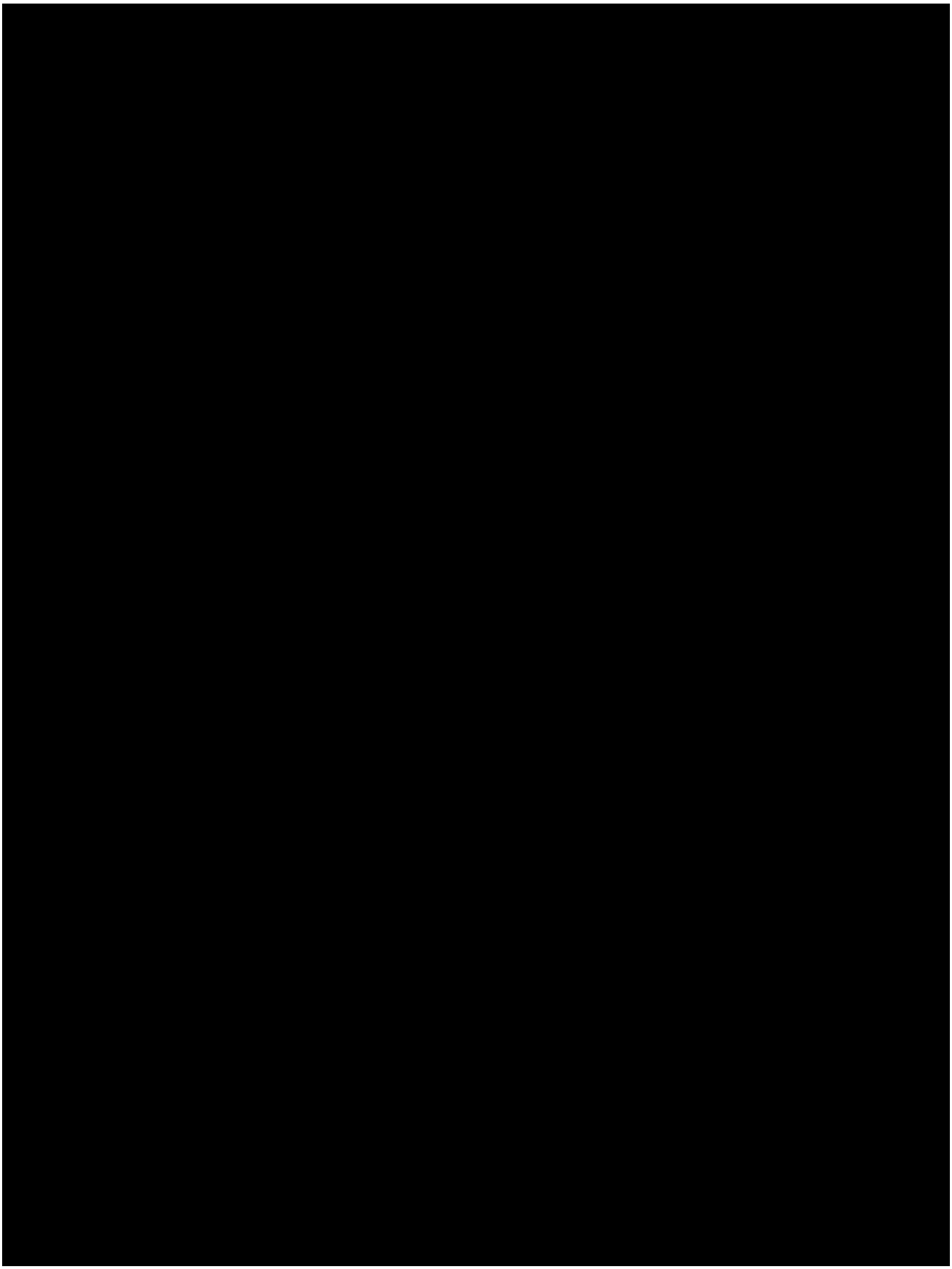


Kimley»Horn
1514 Broadway, Suite 301
Fort Myers, Florida 33901

CSWR Forest Utilities

Photograph Sheet

KHA Job No.: 160354009
KHA Rep.: Heather Ripley, P.E.
Date: January 2024

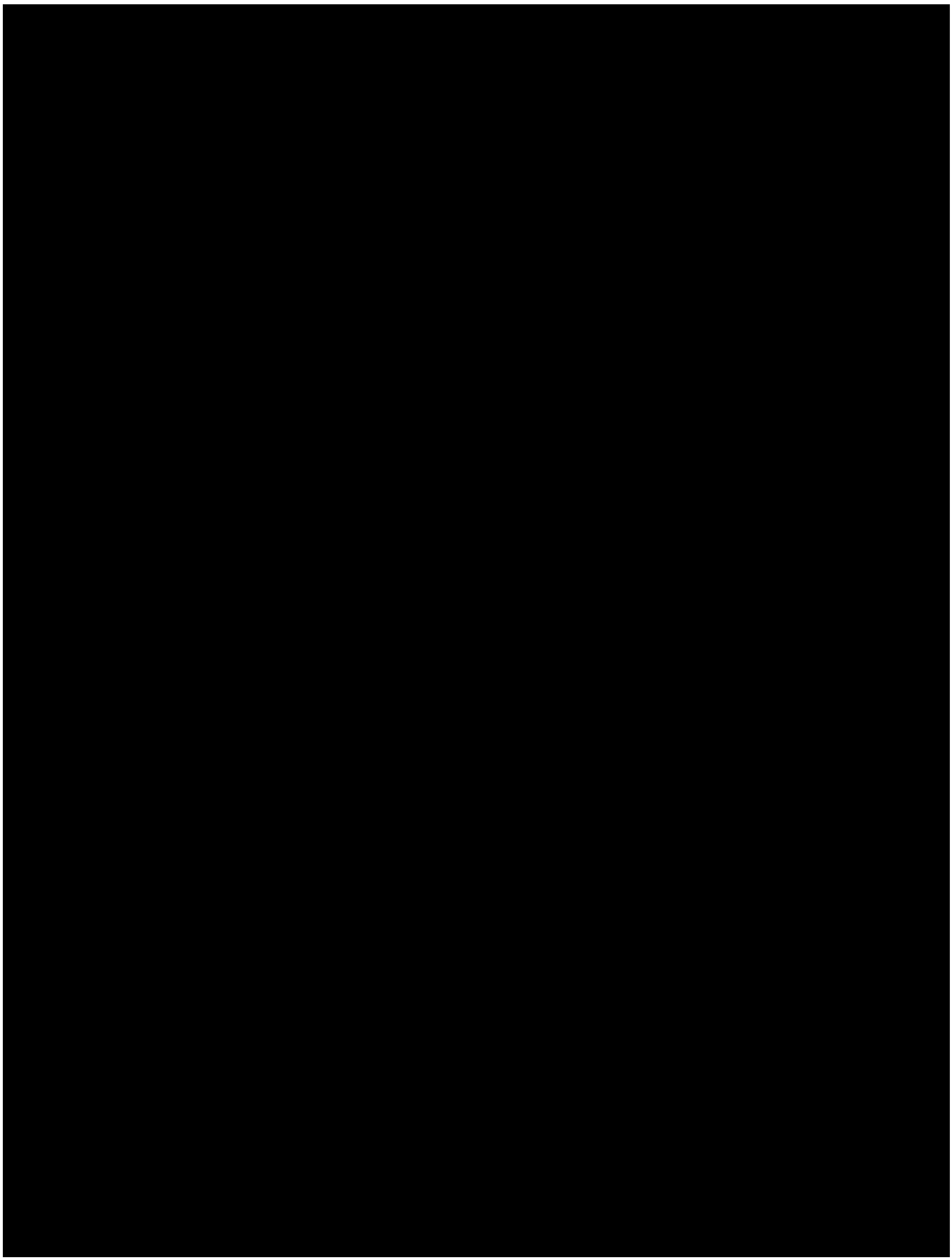


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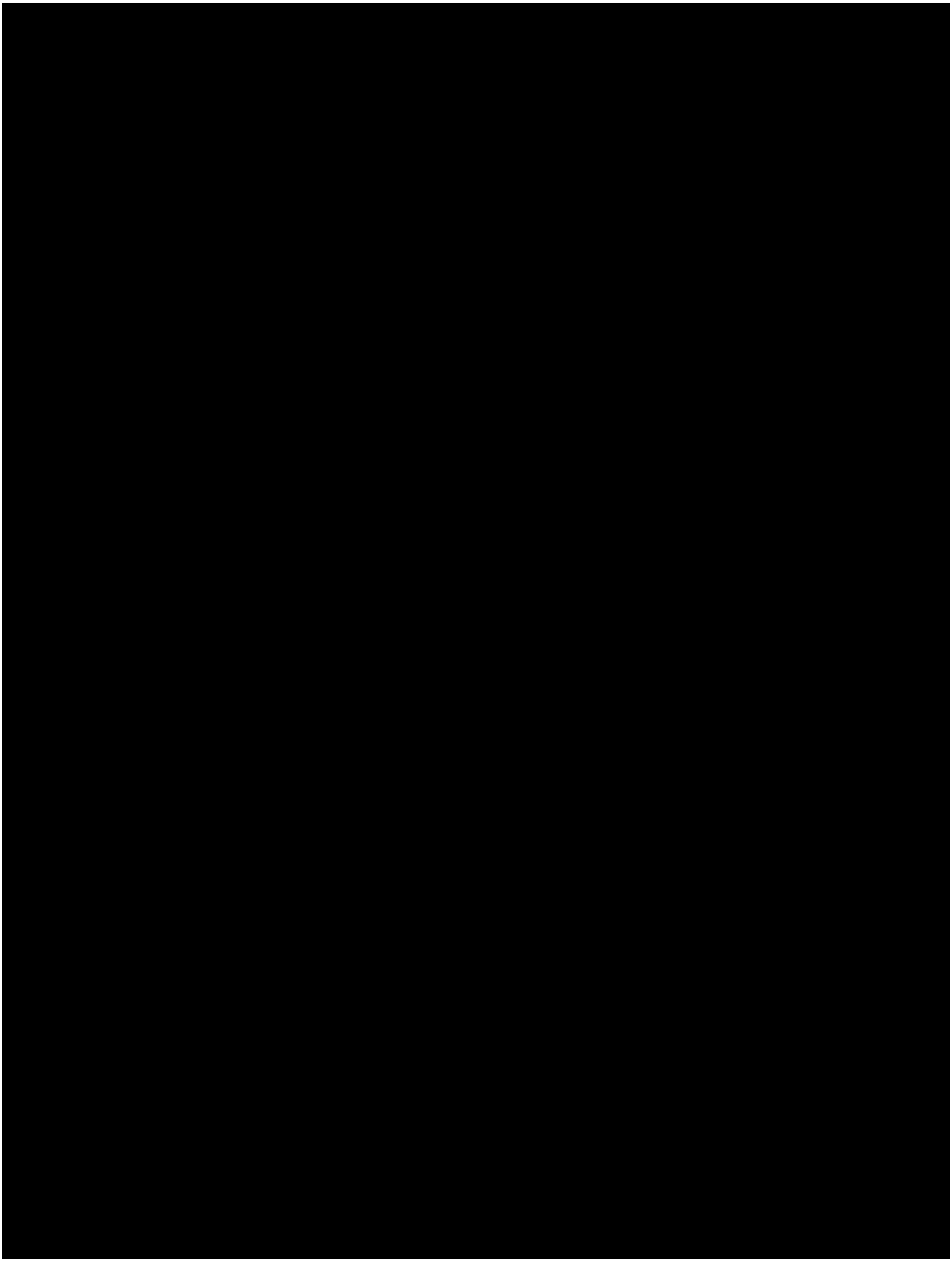


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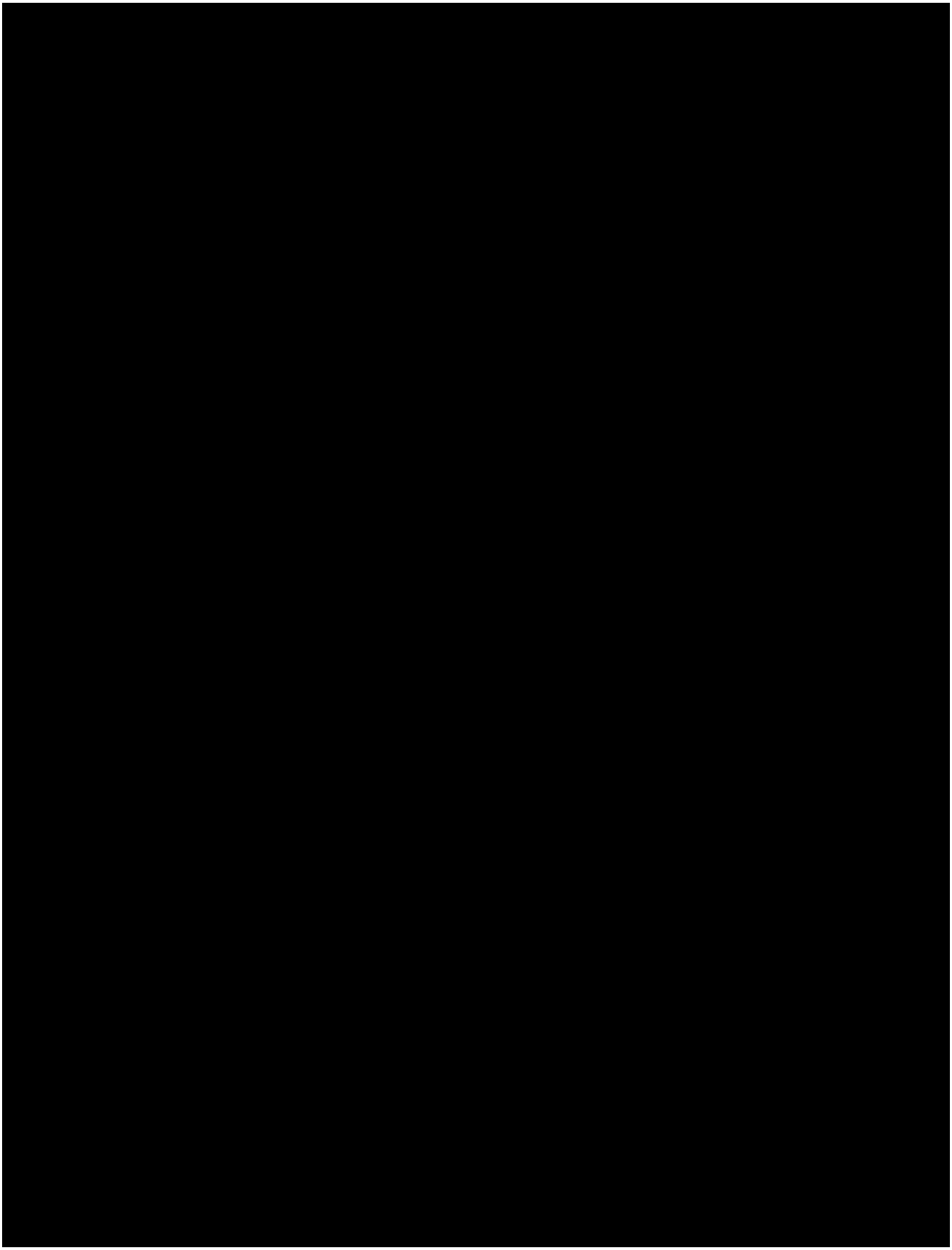


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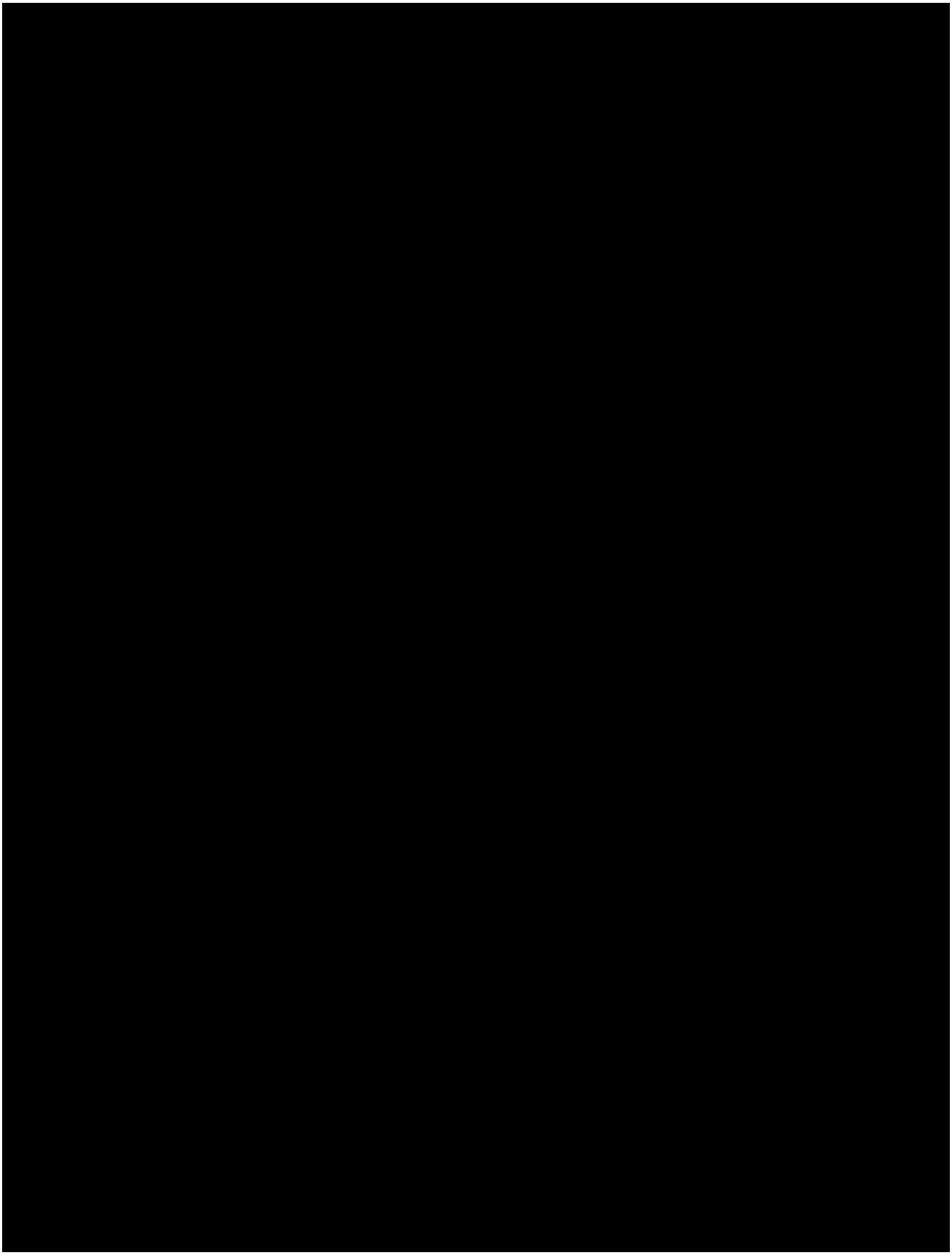


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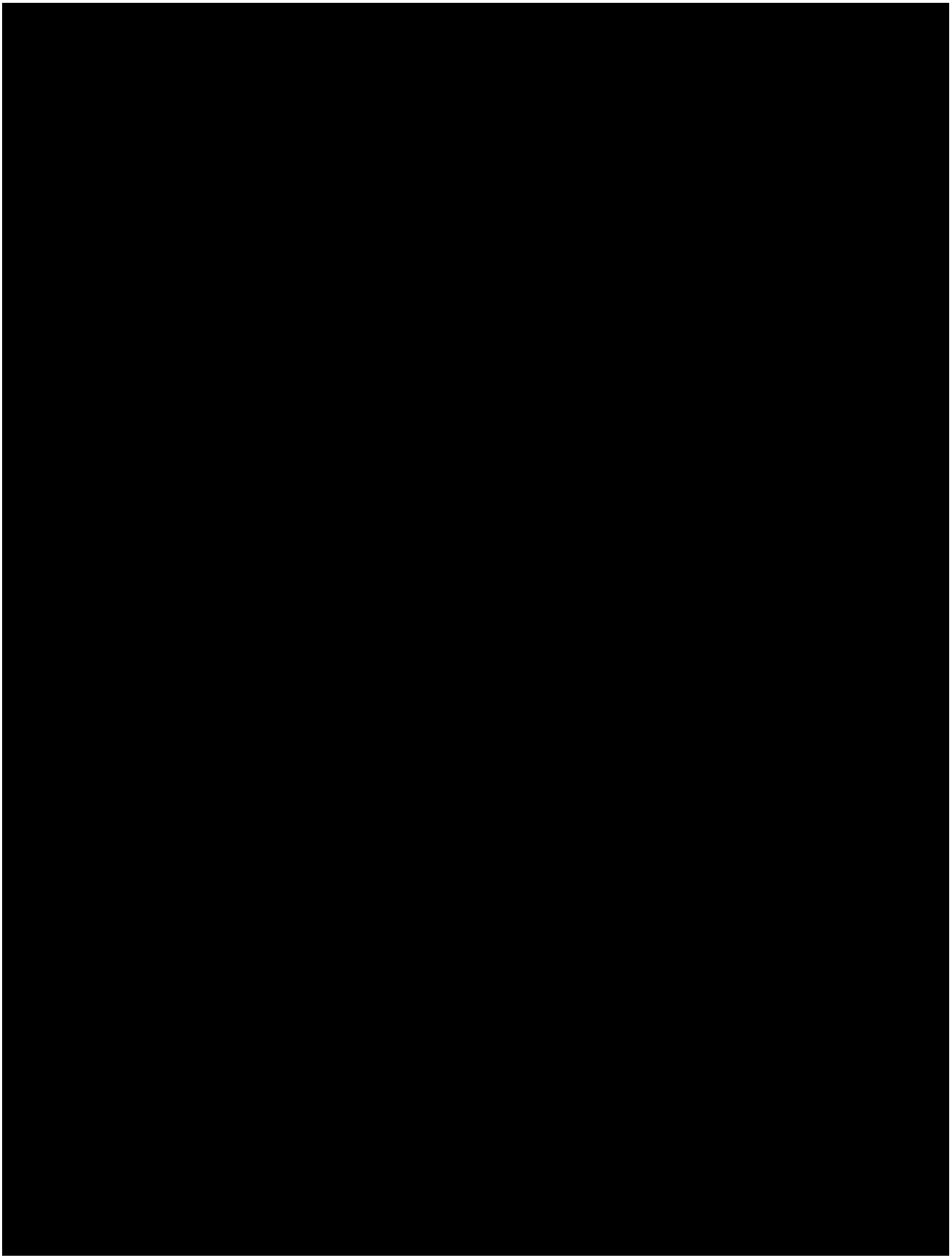


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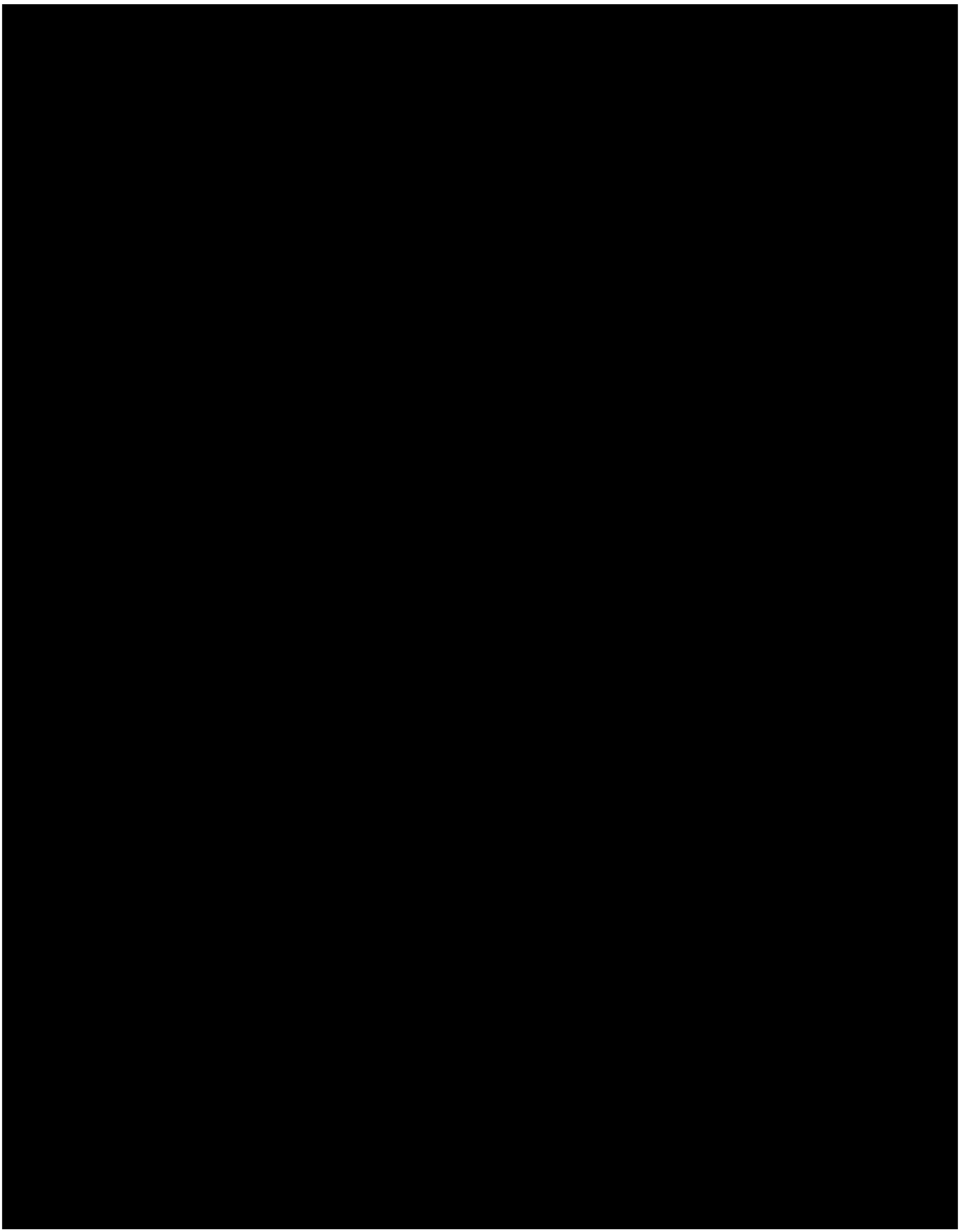


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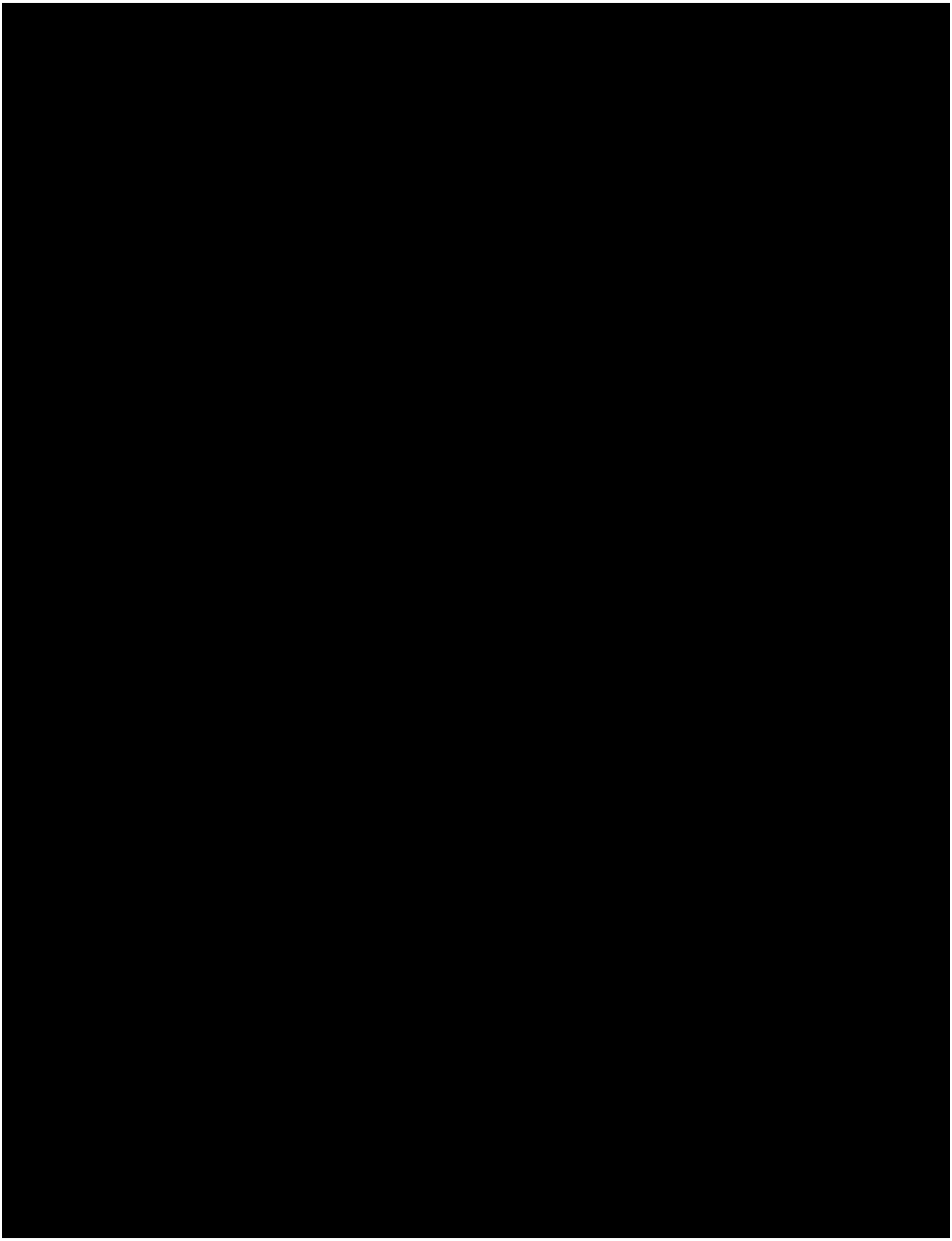


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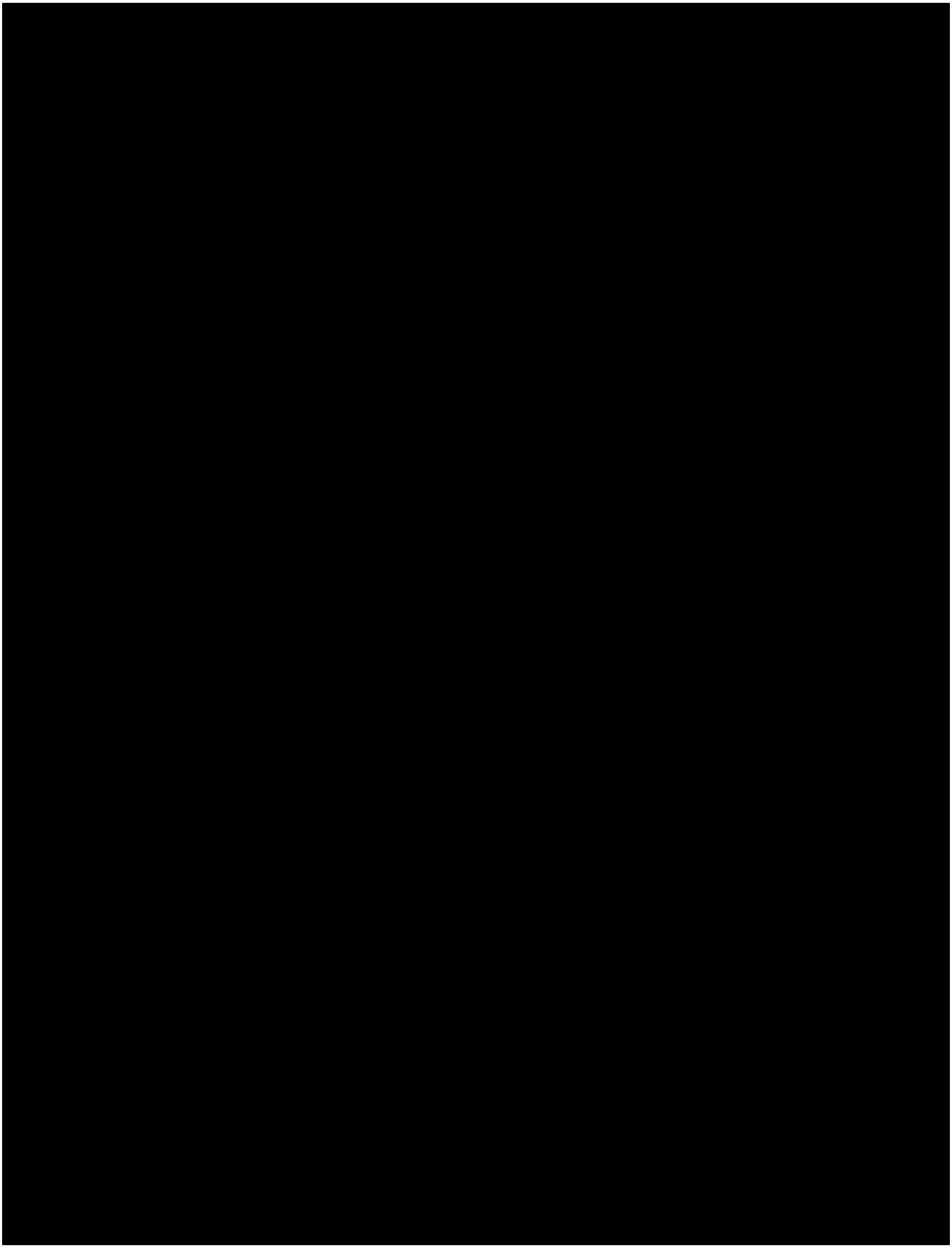


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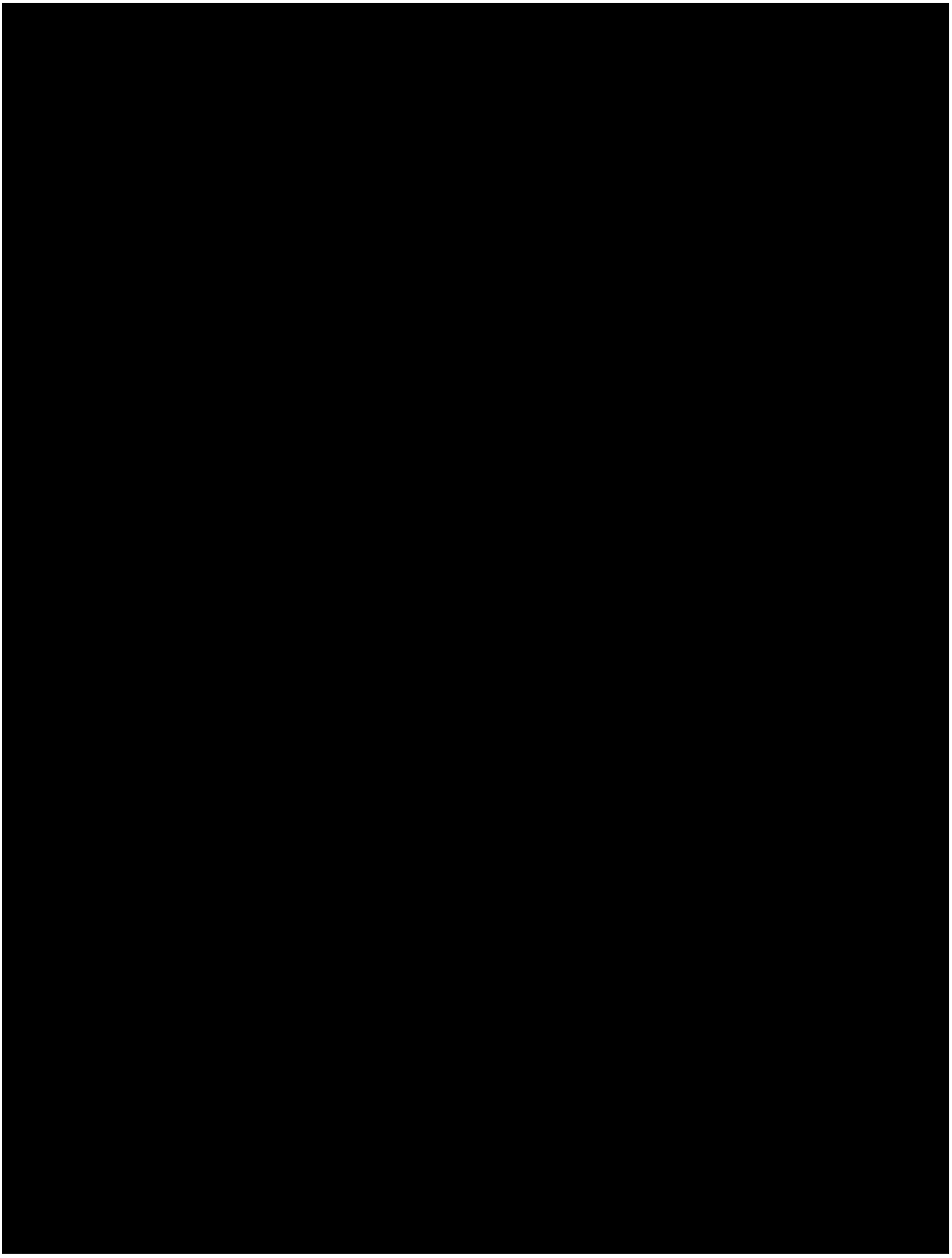


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Date: January 2024



Appendix C

System Information

CLASS "A" OR "B"

WATER AND/OR WASTEWATER UTILITIES
(Gross Revenue of More Than $200,000 Each)

ANNUAL REPORT

OF

SU293-22-AR
Forest Utilities, Inc.
Exact Legal Name of Respondent

300-S
Certificate Number(s)

Submitted To The

STATE OF FLORIDA

PUBLIC SERVICE COMMISSION

FOR THE

YEAR ENDED

31-Dec-22

Form PSC/WAW 3 (Rev. 12/99)

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GENERAL INSTRUCTIONS

1. Prepare this report in conformity with the 1996 National Association of Regulatory Utility Commissioners Uniform System of Accounts for Water and/or Wastewater Utilities (USOA).

2. Interpret all accounting words and phrases in accordance with the USOA.

3. Complete each question fully and accurately, even if it has been answered in a previous annual report. Enter the word "None" where it truly and completely states the fact.

4. For any question, section, or page which is not applicable to the respondent, enter the words "Not Applicable". Do not omit any pages.

5. Where dates are called for, the month and day should be stated as well as the year.

6. All schedules requiring dollar entries should be rounded to the nearest dollar unless otherwise specifically indicated.

7. Complete this report by means which result in a permanent record, such as by computer or typewriter.

8. If there is not enough room on any schedule, an additional page or pages may be added; provided the format of the added schedule matches the format of the schedule with not enough room. Such a schedule should reference the appropriate schedules, state the name of the utility, and state the year of the report.

9. If it is necessary or desirable to insert additional statements for the purpose of further explanation of schedules, such statement should be made at the bottom of the page or an additional page inserted. Any additional pages should state the name of the utility, the year of the report, and reference the appropriate schedule.

10. For water and wastewater utilities with more than one rate group and/or system, water and wastewater pages should be completed for each rate group and/or system group. These pages should be grouped together and tabbed by rate group and/or system.

11. All other water and wastewater operations not regulated by the Commission and other regulated industries should be reported as "Other than Reporting Systems".

12. Financial information for multiple systems charging rates which are covered under the same tariff should be reported as one system. However, the engineering data must be reported by individual system.

13. For water and wastewater utilities with more than one system, one (1) copy of workpapers showing the consolidation of systems for the operating sections, should be filed with the annual report.

14. The report should be filled out in quadruplicate and the original and two copies returned by March 31, of the year following the date of the report. The report should be returned to:

Florida Public Service Commission
Division of Water and Wastewater
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0873

The fourth copy should be retained by the utility.

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SCHEDULE	PAGE	SCHEDULE	PAGE
EXECUTIVE SUMMARY			
Certification	E-1	Business Contracts with Officers, Directors and Affiliates	E-7
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Company Profile	E-4	Business Transactions with Related Parties. Part I and II	E-10
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Compensation of Officers & Directors	E-6		
FINANCIAL SECTION			
Comparative Balance Sheet - Assets and Other Debits	F-1	Unamortized Debt Discount / Expense / Premium	F-13
Comparative Balance Sheet - Equity Capital and Liabilities	F-2	Extraordinary Property Losses	F-13
Comparative Operating Statement	F-3	Miscellaneous Deferred Debits	F-14
Schedule of Year End Rate Base	F-4	Capital Stock	F-15
Schedule of Year End Capital Structure	F-5	Bonds	F-15
Capital Structure Adjustments	F-6	Statement of Retained Earnings	F-16
Utility Plant	F-7	Advances from Associated Companies	F-17
Utility Plant Acquisition Adjustments	F-7	Long Term Debt	F-17
Accumulated Depreciation	F-8	Notes Payable	F-18
Accumulated Amortization	F-8	Accounts Payable to Associated Companies	F-18
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Accounts Receivable from Associated Companies	F-12	Accumulated Amortization of CIAC	F-23
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WATER OPERATION SECTION			
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Water Operating Statement	W-3	Water Utility Expense Accounts	W-10
Water Utility Plant Accounts	W-4	Pumping and Purchased Water Statistics, Source Supply	W-11
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Contributions In Aid of Construction	W-7	Other Water System Information	W-14
WASTEWATER OPERATION SECTION			
Listing of Wastewater System Groups	S-1	Contributions In Aid of Construction	S-7
Schedule of Year End Wastewater Rate Base	S-2	CIAC Additions / Amortization	S-8
Wastewater Operating Statement	S-3	Wastewater Utility Expense Accounts	S-9
Wastewater Utility Plant Accounts	S-4	Wastewater Operating Revenue	S-10
Basis for Wastewater Depreciation Charges	S-5	Calculation of ERC's	S-11
Analysis of Entries in Wastewater Depreciati Reserve	S-6	Wastewater Treatment Plant Information	S-12
		Other Wastewater System Information	S-13

EXECUTIVE SUMMARY

UTILITY NAME: Forest Utilities, Inc.

YEAR OF REPORT
December 31, 2022

CERTIFICATION OF ANNUAL REPORT

UTILITY NAME: Forest Utilities, Inc.

I HEREBY CERTIFY, to the best of my knowledge and belief:

YES	NO		
X		1.	The utility is in substantial compliance with the Uniform System of Accounts prescribed by the Florida Public Service Commission.
X		2.	The utility is in substantial compliance with all applicable rules and orders of the Florida Public Service Commission.
X		3.	There have been no communications from regulatory agencies concerning noncompliance with, or deficiencies in, financial reporting practices that could have a material effect on the the financial statement of the utility.
X		4.	The annual report fairly represents the financial condition and results of operations of the respondent for the period presented and other information and statements presented in the the report as to the business affairs of the respondent are true, correct and complete for the period for which it represents.

Items Certified

1.	2.	3.	4.
X	X	X	X



(Signature of Chief Executive Officer of the utility) *

1.	2.	3.	4.

N/A

(Signature of Chief Financial Officer of the utility) *

* Each of the four items must be certified YES or NO. Each item need not be certified by both officers. The items being certified by the officer should be indicated in the appropriate area to the left of the signature.

NOTICE: Section 837.06, Florida Statutes, provides that any person who knowingly makes a false statement in writing with the intent to mislead a public servant in the performance of his duty shall be guilty of a misdemeanor of the second degree.

ANNUAL REPORT OF

YEAR OF REPORT
31-Dec-22

Forest Utilities, Inc. County: **Lee**

(Exact Name of Utility)

List below the exact mailing address of the utility for which normal correspondence should be sent:

Doris Swor
3901 Red Rock Way
Sarasota, FL 34231

Telephone: (239)481-5333

E Mail Address: forestu@aol.com

WEB Site: N/A

Sunshine State One-Call of Florida, Inc. Member Number FU-1800

Name and address of person to whom correspondence concerning this report should be addressed:

Deborah Swain
2025 SW 32 Ave., Suite 110
Miami, FL 33145

Telephone: (305)441-0123

List below the address of where the utility's books and records are located:

6000 Forest Blvd
Fort Myers, Florida 33919

Telephone: (239) 481-5333

List below any groups auditing or reviewing the records and operations:

Date of original organization of the utility: 12/31/1980

Check the appropriate business entity of the utility as filed with the Internal Revenue Service

Individual	Partnership	Sub S Corporation	1120 Corporation
			X

List below every corporation or person owning or holding directly or indirectly 5% or more of the voting securities of the utility:

	Name	Percent Ownership
1.	Doris Swor	50%
2.	Doris Swor, Trustee, David Swor Trust UAD March 22, 1990 as amended	50%
3.		
4.		
5.		
6.		
7.		
8.		

UTILITY NAME: **Forest Utilities, Inc.**

YEAR OF REPORT
31-Dec-22

DIRECTORY OF PERSONNEL WHO CONTACT THE FLORIDA PUBLIC SERVICE COMMISSION

NAME OF COMPANY REPRESENTATIVE (1)	TITLE OR POSITION (2)	ORGANIZATIONAL UNIT TITLE (3)	USUAL PURPOSE FOR CONTACT WITH FPSC
Martin Friedman	Attorney	Dean Mead	Legal matters
Deborah Swain (305) 441-0123 Ext. 220	Consultant	Milian, Swain & Assoc. Inc.	Regulatory and accounting matters

UTILITY **Forest Utilities, Inc.**

YEAR OF REPORT
31-Dec-22

COMPANY PROFILE

Provide a brief narrative company profile which covers the following areas:

A. Brief company history.
B. Public services rendered.
C. Major goals and objectives.
D. Major operating divisions and functions.
E. Current and projected growth patterns.
F. Major transactions having a material effect on operations.

A. The Utility was organized December 31, 1980 to provide sewer service to the Forest Development. The Utility has experienced customer growth from other developments since its organization.

B. Sewer service only.

C. The Utility goal's are to provide quality sewer service and earn a fair return on its investment in Plant in Service.

D. Sewer service only.

E. The service area is essentially built-out

F. In June 2022, owner and president David Swor passed away. Thereafter, Doris Swor became sole owner and President

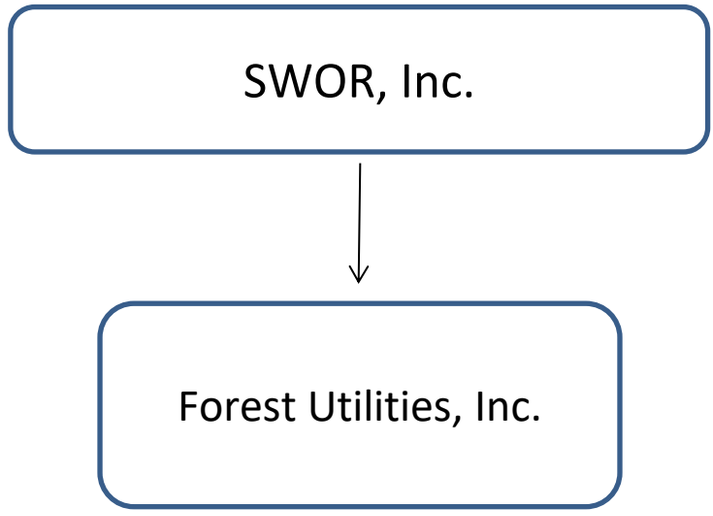
UTILITY NAME: **Forest Utilities, Inc.**

YEAR OF REPORT
31-Dec-22

PARENT / AFFILIATE ORGANIZATION CHART

Current as of **12/31/2022**

Complete below an organizational chart that show all parents, subsidiaries and affiliates of the utility.
The chart must also show the relationship between the utility and affiliates listed on E-7, E-10(a) and E-10(b).



The Utility has no parents or subsidiaries. The entities above are afifliated only through common ownership by the Utility's stockholders.

UTILITY NAME: **Forest Utilities, Inc.**

YEAR OF REPORT
31-Dec-22

COMPENSATION OF OFFICERS

For each officer, list the time spent on respondent as an officer compared to time spent on total business activities and the compensation received as an officer from the respondent.

NAME (a)	TITLE (b)	% OF TIME SPENT AS OFFICER OF THE UTILITY (c)	OFFICERS' COMPENSATION (d)
Doris Swor	President (May 2022) Vice President/Secretary	70%	$ 210,000
Judy Mallett (through December 31, 2022)	Treasurer	70%	$ 77,767

COMPENSATION OF DIRECTORS

For each director, list the number of director meetings attended by each director and the compensation received as a director from the respondent.

NAME (a)	TITLE (b)	NUMBER OF DIRECTORS' MEETINGS ATTENDED (c)	DIRECTORS' COMPENSATION (d)
Doris Swor	President	4	None
Judy Mallett	Treasurer	4	None

UTILITY NAME: **Forest Utilities, Inc.**

YEAR OF REPORT
31-Dec-22

BUSINESS CONTRACTS WITH OFFICERS, DIRECTORS AND AFFILIATES

List all contracts, agreements, or other business arrangements* entered into during the calendar year (other than compensation related to position with Respondents) between the Respondent and officer and director listed on page E-6. In addition, provide the same information with respect to professional services for each firm, partnership, or organization with which the officer or director is affiliated.

NAME OF OFFICER, DIRECTOR OR AFFILIATE (a)	IDENTIFICATION OF SERVICE OR PRODUCT (b)	AMOUNT (c)	NAME AND ADDRESS OF AFFILIATED ENTITY (d)
None		$	

* Business Agreement, for this schedule, shall mean any oral or written business deal which binds the concerned parties for products or services during the reporting year or future years. Although the Respondent and/or other companies will benefit from the arrangement, the officer or director is, however, acting on his behalf or for the benefit of other companies or persons.

UTILITY NAME: **Forest Utilities, Inc.**

YEAR OF REPORT
31-Dec-22

AFFILIATION OF OFFICERS AND DIRECTORS

For each of the officials listed on page E-6, list the principle occupation or business affiliations or connections with any other business or financial organizations, firms, or partnerships. For purposes of this part, an official will be considered to have an affiliation with any business or financial organization, firm or partnership in which he is an officer, director, trustee, partner, or a person exercising similar functions.

NAME (a)	PRINCIPLE OCCUPATION OR BUSINESS AFFILIATION (b)	AFFILIATION OR CONNECTION (c)	NAME AND ADDRESS OF AFFILIATION OR CONNECTION (d)
David W. Swor	Real Estate Sales	VP - Broker	Silver Key Realty Inc
Judy Mallett	Real Estate Sales	S - Controller	Silver Key Realty Inc
	Real Estate Sales	P - Broker	Silver Key Realty Inc

UTILITY NAME: **Forest Utilities, Inc.**

YEAR OF REPORT
31-Dec-22

BUSINESSES WHICH ARE A BY-PRODUCT, COPRODUCT OR JOINT-PRODUCT RESULT OF PROVIDING WATER OR WASTEWATER SERVICE

Complete the following for any business which is conducted as a byproduct, coproduct, or joint product as a result of providing water and / or wastewater service. This would include any business which requires the use of utility land and facilities. Examples of these types of businesses would be orange groves, nurseries, tree farms, fertilizer manufacturing, etc. This would not include any business for which the assets are properly included in Account 121 - Nonutility Property along with the associated

	ASSETS		REVENUES		EXPENSES	
BUSINESS OR SERVICE CONDUCTED (a)	BOOK COST OF ASSETS (b)	ACCOUNT NUMBER (c)	REVENUES GENERATED (d)	ACCOUNT NUMBER (e)	EXPENSES INCURRED (f)	ACCOUNT NUMBER (g)
None	$		$		$	

UTILITY NAME: **Forest Utilities, Inc.**

YEAR OF REPORT
31-Dec-22

BUSINESS TRANSACTIONS WITH RELATED PARTIES

List each contract, agreement, or other business transaction exceeding a cumulative amount of $500 in any one year, entered into between the Respondent and a business or financial organization, firm, or partnership named on pages E-2 and E-6, identifying the parties, amounts, dates and product, and asset, or service involved.

1. Enter in this part all transactions involving services and products received or provided.

2. Below are some types of transactions to include:

-management, legal and accounting services
-computer services
-engineering & construction services
-repairing and servicing of equipment
-material and supplies furnished
-leasing of structures, land, and equipment
-rental transactions
-sale, purchase or transfer of various products

NAME OF COMPANY OR RELATED PARTY (a)	DESCRIPTION SERVICE AND/OR NAME OF PRODUCT (b)	CONTRACT OR AGREEMENT EFFECTIVE DATES (c)	ANNUAL CHARGES (P)urchased (S)old (d)	AMOUNT (e)
None				

UTILITY NAME: **Forest Utilities, Inc.**

YEAR OF REPORT
31-Dec-22

BUSINESS TRANSACTIONS WITH RELATED PARTIES (Cont'd)

Part II. Specific Instructions: Sale, Purchase and Transfer of Assets

1. Enter in this part all transactions relating to the purchase, sale, or transfer of assets.

   Below are examples of some types of transactions to include:
   - -purchase, sale or transfer of equipment
   - -purchase, sale or transfer of land and structures
   - -purchase, sale or transfer of securities
   - -noncash transfers of assets
   - -noncash dividends other than stock dividends
   - -write-off of bad debts or loans

3. The columnar instructions follow:

   (a) Enter name of related party or company.
   (b) Describe briefly the type of assets purchased, sold or transferred.
   (c) Enter the total received or paid. Indicate purchase with "P" and sale with "S".
   (d) Enter the net book value for each item reported.
   (e) Enter the net profit or loss for each item reported. (column (c) - column (d))
   (f) Enter the fair market value for each item reported. In space below or in a supplemental schedule, describe the basis used to calculate fair market value.

NAME OF COMPANY OR RELATED PARTY (a)	DESCRIPTION OF ITEMS (b)	SALE OR PURCHASE PRICE (c)	NET BOOK VALUE (d)	GAIN OR LOSS (e)	FAIR MARKET VALUE (f)
None		$	$	$	$

FINANCIAL SECTION

UTILITY NAME: Forest Utilities, Inc.

YEAR OF REPORT
31-Dec-22

COMPARATIVE BALANCE SHEET
ASSETS AND OTHER DEBITS

ACCT. NO. (a)	ACCOUNT NAME (b)	REF. PAGE (c)	PREVIOUS YEAR (d)	CURRENT YEAR (e)
	UTILITY PLANT			
101-106	Utility Plant	F-7	$ 7,636,663	$ 7,774,395
	Less: Accumulated Depreciation and Amortization	F-8	(4,890,365)	(5,114,152)
	Net Plant		$ 2,746,298	$ 2,660,244
114-115	Utility Plant Acquisition adjustment (Net)	F-7	-	-
116 *	Other Utility Plant Adjustments			
	Total Net Utility Plant		$ 2,746,298	$ 2,660,244
	OTHER PROPERTY AND INVESTMENTS			
121	Nonutility Property	F-9	$ -	$ -
122	Less: Accumulated Depreciation and Amortization		-	-
	Net Nonutility Property		$	$
123	Investment In Associated Companies	F-10	-	-
124	Utility Investments	F-10	-	-
125	Other Investments	F-10	-	-
126-127	Special Funds	F-10	-	-
	Total Other Property & Investments		$ -	$ -
	CURRENT AND ACCRUED ASSETS			
131	Cash		$ 651,989	$ 442,092
132	Special Deposits	F-9	-	-
133	Other Special Deposits	F-9	-	-
134	Working Funds			
135	Temporary Cash Investments			
141-144	Accounts and Notes Receivable, Less Accumulated Provision for Uncollectible Accounts	F-11	42,569	114,876
145	Accounts Receivable from Associated Companies	F-12		
146	Notes Receivable from Associated Companies	F-12		
151-153	Material and Supplies			
161	Stores Expense			
162	Prepayments			
171	Accrued Interest and Dividends Receivable			
172 *	Rents Receivable			
173 *	Accrued Utility Revenues			
174	Misc. Current and Accrued Assets	F-12		
	Total Current and Accrued Assets		$ 694,559	$ 556,968

* Not Applicable for Class B Utilities

UTILITY NAME: **Forest Utilities, Inc.**

YEAR OF REPORT
31-Dec-22

COMPARATIVE BALANCE SHEET
ASSETS AND OTHER DEBITS

ACCT. NO. (a)	ACCOUNT NAME (b)	REF. PAGE (c)	PREVIOUS YEAR (d)	CURRENT YEAR (e)
	DEFERRED DEBITS			
181	Unamortized Debt Discount & Expense	F-13	$	$ -
	Extraordinary Property Losses	F-13		-
183	Preliminary Survey & Investigation Charges			
184	Clearing Accounts			
185 *	Temporary Facilities			
186	Misc. Deferred Debits	F-14	-	374,530
187 *	Research & Development Expenditures			
190	Accumulated Deferred Income Taxes		-	
	Total Deferred Debits		$ -	$ 374,530
	TOTAL ASSETS AND OTHER DEBITS		$ 3,440,858	$ 3,591,742

* Not Applicable for Class B Utilities

NOTES TO THE BALANCE SHEET

The space below is provided for important notes regarding the balance sheet.

UTILITY NAME: **Forest Utilities, Inc.**

YEAR OF REPORT
31-Dec-22

COMPARATIVE BALANCE SHEET
EQUITY CAPITAL AND LIABILITIES

ACCT. NO. (a)	ACCOUNT NAME (b)	REF. PAGE (c)	PREVIOUS YEAR (d)	CURRENT YEAR (e)
	EQUITY CAPITAL			
201	Common Stock Issued	F-15	$ 1,950	1,950
	Preferred Stock Issued	F-15		
202, 205 *	Capital Stock Subscribed			
203, 206 *	Capital Stock Liability for Conversion			
207 *	Premium on Capital Stock			
209 *	Reduction in Par or Stated Value of Capital Stock			
210 *	Gain on Resale or Cancellation of Reacquired Capital Stock			
211	Other Paid - In Capital		57,249	57,249
212	Discount On Capital Stock			
213	Capital Stock Expense			
214-215	Retained Earnings	F-16	797,636	631,418
216	Reacquired Capital Stock		(80,000)	(80,000)
218	Proprietary Capital (Proprietorship and Partnership Only)		-	-
	Total Equity Capital		$ 776,835	$ 610,617
	LONG TERM DEBT			
221	Bonds	F-15	-	-
222 *	Reacquired Bonds		-	-
223	Advances from Associated Companies	F-17		
224	Other Long Term Debt	F-17	100,000	300,000
	Total Long Term Debt		$ 100,000	300,000
	CURRENT AND ACCRUED LIABILITIES			
231	Accounts Payable		257,795	523,699
232	Notes Payable	F-18		-
233	Accounts Payable to Associated Companies	F-18	81,765	81,765
234	Notes Payable to Associated Companies	F-18		-
235	Customer Deposits			
236	Accrued Taxes		30,124	20,822
237	Accrued Interest	F-19		-
238	Accrued Dividends			
239	Matured Long Term Debt			
240	Matured Interest			
241	Miscellaneous Current & Accrued Liabilities	F-20	466,964	50,232
	Total Current & Accrued Liabilities		$ 836,650	676,519

* Not Applicable for Class B Utilities

UTILITY NAME: **Forest Utilities, Inc.**

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COMPARATIVE BALANCE SHEET
EQUITY CAPITAL AND LIABILITIES

ACCT. NO. (a)	ACCOUNT NAME (b)	REF. PAGE (c)	PREVIOUS YEAR (d)	CURRENT YEAR (e)
	DEFERRED CREDITS			
251	Unamortized Premium On Debt	F-13	$ -	$ -
	Advances For Construction	F-20		-
253	Other Deferred Credits	F-21	-	
255	Accumulated Deferred Investment Tax Credits		-	
	Total Deferred Credits		$ -	$ -
			-	
	OPERATING RESERVES			
261	Property Insurance Reserve		$ -	$
262	Injuries & Damages Reserve		-	
263	Pensions and Benefits Reserve		-	
265	Miscellaneous Operating Reserves		-	
	Total Operating Reserves		$ -	$ -
	CONTRIBUTIONS IN AID OF CONSTRUCTION			
271	Contributions in Aid of Construction	F-22	$ 5,426,623	$ 5,904,611
272	Accumulated Amortization of Contributions in Aid of Construction	F-22	(4,122,542)	(4,323,299)
	Total Net C.I.A.C.		$ 1,304,081	$ 1,581,312
	ACCUMULATED DEFERRED INCOME TAXES			
281	Accumulated Deferred Income Taxes - Accelerated Depreciation		$ 423,293	$ 423,293
282	Accumulated Deferred Income Taxes - Liberalized Depreciation			
283	Accumulated Deferred Income Taxes - Other			
	Total Accumulated Deferred Income Tax		$ 423,293	$ 423,293
	TOTAL EQUITY CAPITAL AND LIABILITIES		$ 3,440,858	$ 3,591,742

UTILITY NAME: **Forest Utilities, Inc.**

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COMPARATIVE OPERATING STATEMENT

ACCT. NO. (a)	ACCOUNT NAME (b)	REF. PAGE (c)	PREVIOUS YEAR (d)	CURRENT YEAR * (e)
	UTILITY OPERATING INCOME			
	Operating Revenues	F-3(b)	$ 1,424,645	$ 1,357,530
469, 530	Less: Guaranteed Revenue and AFPI	F-3(b)		-
	Net Operating Revenues		$ 1,424,645	$ 1,357,530
401	Operating Expenses	F-3(b)	$ 1,331,482	$ 1,392,000
403	Depreciation Expense:	F-3(b)	$ 209,411	$ 223,787
	Less: Amortization of CIAC	F-22	(149,890)	(200,757)
	Net Depreciation Expense		$ 59,522	$ 23,030
406	Amortization of Utility Plant Acquisition Adjustment	F-3(b)	-	-
407	Amortization Expense (Other than CIAC)	F-3(b)	-	-
408	Taxes Other Than Income	W/S-3	118,478	108,717
409	Current Income Taxes	W/S-3		-
410.10	Deferred Federal Income Taxes	W/S-3	-	-
410.11	Deferred State Income Taxes	W/S-3		-
411.10	Provision for Deferred Income Taxes - Credit	W/S-3	-	-
412.10	Investment Tax Credits Deferred to Future Periods	W/S-3	-	-
412.11	Investment Tax Credits Restored to Operating Income	W/S-3	-	-
	Utility Operating Expenses		$ 1,509,482	$ 1,523,747
	Net Utility Operating Income		$ (84,837)	$ (166,218)
469, 530	Add Back: Guaranteed Revenue and AFPI	F-3(b)		
413	Income From Utility Plant Leased to Others		-	-
414	Gains (losses) From Disposition of Utility Property		-	
420	Allowance for Funds Used During Construction			-
	Total Utility Operating Income [Enter here and on Page F-3(c)]		$ (84,837)	$ (166,218)

* For each account, Column e should agree with Cloumns f, g and h on F-3(b)

COMPARATIVE OPERATING STATEMENT (Cont'd)

WATER SCHEDULE W-3 * (f)	WASTEWATER SCHEDULE S-3 * (g)	OTHER THAN REPORTING SYSTEMS (h)
$	$ 1,357,530	$ -
	-	
$	$ 1,357,530	$ -
$	$ 1,392,000	$ -
	223,787	-
	(200,757)	
$	$ 23,030	$ -
	-	-
	-	-
	108,717	-
	-	-
	-	-
	-	-
	-	-
	-	-
	-	
$	$ 1,523,747	$ -
$	$ (166,218)	$ -
	-	-
	-	-
	-	-
	-	-
$	$ (166,218)	$ -

* Total of Schedules W-3 / S-3 for all rate groups.

UTILITY NAME: **Forest Utilities, Inc.**

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COMPARATIVE OPERATING STATEMENT (Cont'd)

ACCT. NO. (a)	ACCOUNT NAME (b)	REF. PAGE (c)	PREVIOUS YEAR (d)	CURRENT YEAR (e)
Total Utility Operating Income [from page F-3(a)]			$ (84,837)	$ (166,218)
	OTHER INCOME AND DEDUCTIONS			
415	Revenues-Merchandising, Jobbing, and Contract Deductions		$ -	$ -
416	Costs & Expenses of Merchandising Jobbing, and Contract Work		-	-
419	Interest and Dividend Income		-	
421	Nonutility Income		420	
426	Miscellaneous Nonutility Expenses			
Total Other Income and Deductions			$ 420	$ -
	TAXES APPLICABLE TO OTHER INCOME			
408.2	Taxes Other Than Income		$ -	$ -
409.2	Income Taxes		-	-
410.2	Provision for Deferred Income Taxes		-	
411.2	Provision for Deferred Income Taxes - Credit		-	-
412.2	Investment Tax Credits - Net		-	-
412.3	Investment Tax Credits Restored to Operating Income		-	-
Total Taxes Applicable To Other Income			$ -	$ -
	INTEREST EXPENSE			
427	Interest Expense	F-19	$	$ -
428	Amortization of Debt Discount & Expense	F-13		-
429	Amortization of Premium on Debt	F-13	-	-
Total Interest Expense			$ -	$ -
	EXTRAORDINARY ITEMS			
433	Extraordinary Income		$ -	$
434	Extraordinary Deductions		-	
409.3	Income Taxes, Extraordinary Items			
Total Extraordinary Items			$ -	$ -
NET INCOME			$ (84,417)	$ (166,218)

Explain Extraordinary Income:

TILITY NAME: **Forest Utilities, Inc.**

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SCHEDULE OF YEAR END RATE BASE

ACCT. NO. (a)	ACCOUNT NAME (b)	REF. PAGE (c)	WATER UTILITY (d)	WASTEWATER UTILITY (e)
	Utility Plant In Service	F-7	$	$ 7,774,395
	Less: Nonused and Useful Plant (1)			
108	Accumulated Depreciation	F-8	-	(5,114,152)
110	Accumulated Amortization	F-8	-	-
271	Contributions In Aid of Construction	F-22	-	(5,904,611)
252	Advances for Construction	F-20		-
	Subtotal		$	$ (3,244,368)
272	Add: Accumulated Amortization of Contributions in Aid of Construction	F-22	-	4,323,299
	Subtotal		$	$ 1,078,931
	Plus or Minus:			
114	Acquisition Adjustments (2)	F-7	-	-
115	Accumulated Amortization of Acquisition Adjustments (2)	F-7	-	-
	Working Capital Allowance (3)			336,744
	Other (Specify):			
	RATE BASE		$	$ 1,422,425
	NET UTILITY OPERATING INCOME		$	$ (166,218)
	ACHIEVED RATE OF RETURN (Operating Income / Rate Base)			-11.686%

NOTES :

(1) Estimate based on the methodology used in the last rate proceeding.

(2) Include only those Acquisition Adjustments that have been approved by the Commission.

(3) Calculation consistent with last rate proceeding.
In absence of a rate proceeding, Class A utilities will use the Balance Sheet Method and Class B Utilities will use the One-eighth Operating and Maintenance Expense Method.

UTILITY NAME: **Forest Utilities, Inc.**

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SCHEDULE OF CURRENT COST OF CAPITAL
CONSISTENT WITH THE METHODOLOGY USED IN THE LAST RATE PROCEEDING (1)

CLASS OF CAPITAL (a)	DOLLAR AMOUNT (2) (b)	PERCENTAGE OF CAPITAL (c)	ACTUAL COST RATES (3) (d)	WEIGHTED COST (c x d) (e)
Common Equity	$ 610,617	45.78%	9.54%	4.37%
Preferred Stock				
Long Term Debt	300,000	22.49%	4.00%	0.90%
Short Term Debt				
Customer Deposits	-	0.00%	2.00%	0.00%
Tax Credits - Zero Cost				
Tax Credits - Weighted Cost				
Deferred Income Taxes	423,293	31.73%		
Other - Note Payable- Assoc Company	-			0.00%
Total	$ 1,333,910	100.00%		5.27%

1 If the utility's capital structure is not used, explain which capital structure is used.

2 Should equal amounts on Schedule F-6, Column (f).

3 Mid-point of the last authorized Return On Equity or current leverage formula if none has been established.

Must be calculated using the same methodology used in the last rate proceeding using current annual report year end amounts and cost rates.

APPROVED RETURN ON EQUITY

Current Commission Return on Equity: 11.34%

Commission order approving Return on Equity: PSC-02-1239-PAA-SU

APPROVED AFUDC RATE
COMPLETION ONLY REQUIRED IF AFUDC WAS CHARGED DURING YEAR

Current Commission Approved AFUDC rate: 10.73%

Commission order approving AFUDC rate: PSC-02-1239-PAA-SU

If any utility capitalized any charge in lieu of AFUDC (such as interest only), state the basis of the charge, an explanation as to why AFUDC was not charged and the percentage capitalized.

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SCHEDULE OF CAPITAL STRUCTURE ADJUSTMENTS
CONSISTENT WITH THE METHODOLOGY USED IN THE LAST RATE PROCEEDING

CLASS OF CAPITAL (a)	PER BOOK BALANCE (b)	NON-UTILITY ADJUSTMENTS (c)	NON-JURISDICTIONAL ADJUSTMENTS (d)	OTHER (1) ADJUSTMENTS SPECIFIC (e)	OTHER (1) ADJUSTMENTS PRO RATA (f)	CAPITAL STRUCTURE (g)
Common Equity	$ 610,617	$			$	$ 610,617
Preferred Stock						
Long Term Debt	300,000					300,000
Short Term Debt					-	
Customer Deposits	-					-
Tax Credits - Zero Cost						
Tax Credits - Weighted Cost						
Deferred Inc. Taxes	423,293					423,293
Other - Notes Payable	-				-	-
Total	$ 1,333,910	$		0	$ -	$ 1,333,910

(1) Explain below all adjustments made in Columns (e) and (f):

UTILITY NAME: **Forest Utilities, Inc.**

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UTILITY PLANT
ACCOUNTS 101 - 106

ACCT. (a)	DESCRIPTION (b)	WATER (c)	WASTEWATER (d)	OTHER THAN REPORTING SYSTEMS (e)	TOTAL (f)
	Plant Accounts:				
101	Utility Plant In Service	$ -	$ 7,774,395	$ -	$ 7,774,395
102	Utility Plant Leased to Other	-	-	-	-
103	Property Held for Future Use	-	-	-	-
104	Utility Plant Purchased or Sold	-	-	-	-
105	Construction Work in Progress	-	-	-	-
106	Completed Construction Not Classified	-	-	-	-
	Total Utility Plant	$ -	$ 7,774,395	$ -	$ 7,774,395

UTILITY PLANT ACQUISITION ADJUSTMENTS
ACCOUNTS 114 AND 115

Report each acquisition adjustment and related accumulated amortization separately.
For any acquisition adjustments approved by the Commission, include the Order Number.

ACCT. (a)	DESCRIPTION (b)	WATER (c)	WASTEWATER (d)	OTHER THAN REPORTING SYSTEMS (e)	TOTAL (f)
114	Acquisition Adjustment	$ -	N/A	-	-
		-	-	-	-
		-	-	-	-
		-	-	-	-
Total Plant Acquisition Adjustments		$ -	$ -	$ -	$ -
115	Beginning Bal	$ -	$ -	$ -	$ -
	Accumulated Amortization	-	-	-	-
		-	-	-	-
		-	-	-	-
		-	-	-	-
Total Accumulated Amortization		$ -	$ -	$ -	$ -
Net Acquisition Adjustments		$ -	$ -	$ -	$ -

UTILITY NAME: **Forest Utilities, Inc.**

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ACCUMULATED DEPRECIATION (ACCT. 108) AND AMORTIZATION (ACCT. 110)

DESCRIPTION (a)	WATER (b)	WASTEWATER (c)	OTHER THAN REPORTING SYSTEMS (d)	TOTAL (e)
ACCUMULATED DEPRECIATION				
Account 108				
Balance first of year	$	$ 4,890,365	$ -	$ 4,890,365
Credit during year:				
Accruals charged to:				
Account 108.1 (1)	$	$ 223,787	$	$ 223,787
Account 108.2 (2)				-
Account 108.3 (2)				-
Other Accounts (specify):				-
Adjustment Accumulated Depreciation		-		-
				-
Salvage	-			-
Other Credits (Specify):				
Total Credits	$ -	$ 223,787	$ -	$ 223,787
Debits during year:				
Book cost of plant retired				-
Cost of Removal	-	-		-
Other Debits (specify):				
				-
Total Debits	$ -	$ -	$ -	$ -
Balance end of year	$ -	$ 5,114,152	$ -	$ 5,114,152
ACCUMULATED AMORTIZATION				
Account 110				
Balance first of year	$			
Credit during year:				
Accruals charged to:	$ -	$ -	$	$ -
Account 110.2 (2)				-
Other Accounts (specify):	-			-
Total credits	$ -	$ -	$ -	$ -
Debits during year:				
Book cost of plant retired				-
Other debits (specify):				-
Total Debits	$ -	$ -	$ -	$ -
Balance end of year	$ -	$ -	$ -	$ -

UTILITY NAME: **Forest Utilities, Inc.**

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REGULATORY COMMISSION EXPENSE
AMORTIZATION OF RATE CASE EXPENSE (ACCOUNTS 666 AND 766)

DESCRIPTION OF CASE (DOCKET NO.) (a)	EXPENSE INCURRED DURING YEAR (b)	CHARGED OFF DURING YEAR	
		ACCT. (d)	AMOUNT (e)
None	$ -		
Total	$ 0		$ 0

NONUTILITY PROPERTY (ACCOUNT 121)

Report separately each item of property with a book cost of $25,000 or more included in Account 121.
Other Items may be grouped by classes of property.

DESCRIPTION (a)	BEGINNING YEAR (b)	ADDITIONS (c)	REDUCTIONS (d)	ENDING YEAR BALANCE (e)
NONE	$	$	$	$ -
Total Nonutility Property	$	$	$	$ -

SPECIAL DEPOSITS (ACCOUNTS 132 AND 133)

Report hereunder all special deposits carried in Accounts 132 and 133.

DESCRIPTION OF SPECIAL DEPOSITS (a)	YEAR END BOOK COST (b)
SPECIAL DEPOSITS (Account 132):	
Total Special Deposits	$ -
OTHER SPECIAL DEPOSITS (Account 133):	
NONE	$ -
Total Other Special Deposits	$ -

UTILITY NAME: **Forest Utilities, Inc.**

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INVESTMENTS AND SPECIAL FUNDS
ACCOUNTS 123 - 127

Report hereunder all investments and special funds carried in Accounts 123 through 127.

DESCRIPTION OF SECURITY OR SPECIAL FUND (a)	FACE OR PAR VALUE (b)	YEAR END BOOK COST (c)
N/A	$	$
Total Investment in Associated Companies		$ -
UTILITY INVESTMENTS (Account 124):		
N/A	$	$ -
Total Utility Investment		$ -
OTHER INVESTMENTS (Account 125):		
N/A	$	$ -
Total Other Investment		$ -
SPECIAL FUNDS (Class A Utilities: Accounts 126 and 127; Class B Utilities: Account 127):		
N/A		$ -
Total Special Funds		$ -

UTILITY NAME: **Forest Utilities, Inc.**

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ACCOUNTS AND NOTES RECEIVABLE - NET
ACCOUNTS 141 - 144

Report hereunder all accounts and notes receivable included in Accounts 141, 142, and 144. Amounts included in Amounts included in Accounts 142 and 144 should be listed individually.

DESCRIPTION (a)		TOTAL (b)
CUSTOMER ACCOUNTS RECEIVABLE (Account 141):		
Wastewater	109,219	
Total Customer Accounts Receivable	109,219	$ 109,219
OTHER ACCOUNTS RECEIVABLE (Account 142):		
Other Miscellaneous	$ 5,657	
Total Other Accounts Receivable		$ 5,657
NOTES RECEIVABLE (Account 144):	$	
Total Notes Receivable		$ -
Total Accounts and Notes Receivable		$ 114,876
ACCUMULATED PROVISION FOR UNCOLLECTIBLE ACCOUNTS (Account 143)		
Balance first of year	$	
Add:	$	
Total Additions	$	
Deduct accounts written off during year:		
Utility Accounts		
Others		
Total accounts written off	$ -	
Balance end of year		$ -
TOTAL ACCOUNTS AND NOTES RECEIVABLE - NET		$ 114,876

UTILITY NAME: **Forest Utilities, Inc.**

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ACCOUNTS RECEIVABLE FROM ASSOCIATED COMPANIES
ACCOUNT 145

Report each account receivable from associated companies separately.

DESCRIPTION (a)	TOTAL (b)
NONE	$
Total	$ 0

NOTES RECEIVABLE FROM ASSOCIATED COMPANIES
ACCOUNT 146

Report each note receivable from associated companies separately.

DESCRIPTION (a)	INTEREST RATE (b)	TOTAL (c)
NONE	%	$ -
Total		$ -

MISCELLANEOUS CURRENT AND ACCRUED ASSETS
ACCOUNT 174

DESCRIPTION - Provide itemized listing (a)	BALANCE END OF YEAR (b)
	$
Total Miscellaneous Current and Accrued Assets	$ -

UTILITY NAME: **Forest Utilities, Inc.**

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UNAMORTIZED DEBT DISCOUNT AND EXPENSE AND PREMIUM ON DEBT
ACCOUNTS 181 AND 251

Report the net discount and expense or premium separately for each security issue.

DESCRIPTION (a)	AMOUNT WRITTEN OFF DURING YEAR (b)	YEAR END BALANCE (c)
UNAMORTIZED DEBT DISCOUNT AND EXPENSE (Account 181):		
	$	
		-
		-
Total Unamortized Debt Discount and Expense	$ -	$ -
UNAMORTIZED PREMIUM ON DEBT (Account 251):		
N/A	$	$ -
Total Unamortized Premium on Debt	$	$ -

EXTRAORDINARY PROPERTY LOSSES
ACCOUNT 182

Report each item separately.

DESCRIPTION (a)	TOTAL (b)
N/A	$ -
Total Extraordinary Property Losses	$ -

UTILITY NAME: **Forest Utilities, Inc.**

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MISCELLANEOUS DEFERRED DEBITS
ACCOUNT 186

DESCRIPTION - Provide itemized listing (a)	AMOUNT WRITTEN OFF DURING YEAR (b)	YEAR END BALANCE (c)
DEFERRED RATE CASE EXPENSE (Class A Utilities: Account 186.1)		
	$	$
Total Deferred Rate Case Expense	$ -	$ -
OTHER DEFERRED DEBITS (Class A Utilities: Account 186.2):		
Hurricane Expenses	$	$ 374,530
Total Other Deferred Debits	$ -	$ 374,530
REGULATORY ASSETS (Class A Utilities: Account. 186.3):		
None	$ -	$
Total Regulatory Assets	$ -	$ -
TOTAL MISCELLANEOUS DEFERRED DEBITS	$ -	$ 374,530

UTILITY NAME: **Forest Utilities, Inc.**

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CAPITAL STOCK
ACCOUNTS 201 AND 204*

DESCRIPTION (a)	RATE (b)	TOTAL (c)
COMMON STOCK		
Par or stated value per share	75.00	75.00
Shares authorized		26.00
Shares issued and outstanding		26.00
Total par value of stock issued	1,950.00	1,950.00
Dividends declared per share for year	None	None
PREFERRED STOCK		
Par or stated value per share		
Shares authorized		
Shares issued and outstanding		
Total par value of stock issued		
Dividends declared per share for year	None	None

* Account 204 not applicable for Class B utilities.

BONDS
ACCOUNT 221

DESCRIPTION OF OBLIGATION (INCLUDING DATE OF ISSUE AND DATE OF MATURITY) (a)	INTEREST: ANNUAL RATE (b)	INTEREST: FIXED OR VARIABLE * (c)	PRINCIPAL AMOUNT PER BALANCE SHEET (d)
N/A	%		$ -
	%		
	%		
	%		
	%		
	%		
	%		
	%		
	%		
Total			$ -

* For variable rate obligations, provide the basis for the rate. (i.e.. prime + 2%, etc.)

UTILITY NAME: **Forest Utilities, Inc.**

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STATEMENT OF RETAINED EARNINGS

1 Dividends should be shown for each class and series of capital stock. Show amounts as dividends per share.
2 Show separately the state and federal income tax effect of items shown in Account No. 439.

ACCT. NO. (a)	DESCRIPTION (b)	AMOUNTS (c)
215	Unappropriated Retained Earnings:	
	Balance Beginning of Year*	$ 797,636
	Changes to Account:	
439	Adjustments to Retained Earnings (requires Commission approval prior to use):	
	Credits:	$
	rounding	
	Total Credits:	$ -
	Prior Year Adjustment	$
	Total Debits:	$ -
435	Balance Transferred from Income {income/(loss)}	$ (166,218)
436	Appropriations of Retained Earnings:	
	Total Appropriations of Retained Earnings	$ -
	Dividends Declared:	
437	Preferred Stock Dividends Declared	
438	Common Stock Dividends Declared	
	Total Dividends Declared	$ -
215	Year end Balance	$ 631,418
214	Appropriated Retained Earnings (state balance and purpose of each appropriated amount at year end):	
214	Total Appropriated Retained Earnings	$ -
Total Retained Earnings		$ 631,418

Notes to Statement of Retained Earnings:
*Beginning Balance adjusted to reflect 8 months expense instead of the 12 months of 2014 Rate Case Amortization expense that was booked in 2017.

UTILITY NAME: **Forest Utilities, Inc.**

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ADVANCES FROM ASSOCIATED COMPANIES
ACCOUNT 223

Report each advance separately.

DESCRIPTION (a)	TOTAL (b)
NONE	$
Total	$ -

OTHER LONG-TERM DEBT
ACCOUNT 224

DESCRIPTION OF OBLIGATION INCLUDING DATE OF ISSUE AND DATE OF MATURITY (a)	INTEREST		PRINCIPAL AMOUNT PER BALANCE SHEET (d)
	ANNUAL RATE (b)	FIXED OR VARIABLE * (c)	
Loan - DWS	4 %	Fixed	$ 300,000
Total			$ 300,000

* For variable rate obligations, provide the basis for the rate. (i.e.. prime + 2%, etc.)

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NOTES PAYABLE
ACCOUNTS 232 AND 234

DESCRIPTION OF OBLIGATION (INCLUDING DATE OF ISSUE AND DATE OF MATURITY) (a)	INTEREST		PRINCIPAL AMOUNT PER BALANCE SHEET (d)
	ANNUAL RATE (b)	FIXED OR VARIABLE * (c)	
NOTES PAYABLE (Account 232):			
	%	F	$
	%		
	%		
	%		
	%		
	%		
	%		
	%		
Total Account 232			$ -
NOTES PAYABLE TO ASSOC. COMPANIES (Account 234):			
	%		$
	%		
	%		
	%		
	%		
	%		
	%		
	%		
	%		
Total Account 234			$ -

* For variable rate obligations, provide the basis for the rate. (i.e.. prime + 2%, etc.)

ACCOUNTS PAYABLE TO ASSOCIATED COMPANIES
ACCOUNT 233

Report each account payable separately.

DESCRIPTION (a)	TOTAL (b)
Swor	$ 45,765
Payable Swor - Lexus Trade	36,000
Total	$ 81,765

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ACCRUED INTEREST AND EXPENSE
ACCOUNTS 237 AND 427

DESCRIPTION OF DEBIT (a)	BALANCE BEGINNING OF YEAR (b)	INTEREST ACCRUED DURING YEAR: ACCT. DEBIT (c)	INTEREST ACCRUED DURING YEAR: AMOUNT (d)	INTEREST PAID DURING YEAR (e)	BALANCE END OF YEAR (f)
ACCOUNT NO. 237.1 - Accrued Interest on Long Term Debt					
	$		$	$ 0	$
					-
Total Account 237.1	$ -		$ -	$ -	$ -
ACCOUNT NO. 237.2 - Accrued Interest on Other Liabilities					
	$		$		$ -
					-
					-
Total Account 237.2	$ -	$ -	$ -	$ -	$ -
Total Account 237 (1)	$ -	$ -	$ -	$ -	$ -
INTEREST EXPENSED: Total accrual Account 237			$ -		
Net Interest Expensed to Account No. 427 (2)			$ -		

(1) Must agree to F-2 (a), Beginning and Ending Balance of Accrued Interest.

(2)

(2) Must agree to F-3 (c), Current Year Interest Expense

UTILITY NAME: **Forest Utilities, Inc.**

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MISCELLANEOUS CURRENT AND ACCRUED LIABILITIES
ACCOUNT 241

DESCRIPTION - Provide itemized listing (a)	BALANCE END OF YEAR (b)
Customer Accts. Pre-Paid	$ 50,232
Total Miscellaneous Current and Accrued Liabilities	$ 50,232

ADVANCES FOR CONSTRUCTION
ACCOUNT 252

NAME OF PAYOR * (a)	BALANCE BEGINNING OF YEAR (b)	DEBITS		CREDITS (e)	BALANCE END OF YEAR (f)
		ACCT. DEBIT (c)	AMOUNT (d)		
	$ 0		$	$	$ -
Total	$		$	$ -	$ -

* Report advances separately by reporting group, designating water or wastewater in column (a).

UTILITY NAME: **Forest Utilities, Inc.**

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OTHER DEFERRED CREDITS
ACCOUNT 253

DESCRIPTION - Provide itemized listing (a)	AMOUNT WRITTEN OFF DURING YEAR (b)	YEAR END BALANCE (c)
NONE	$	$ -
Total Regulatory Liabilities	$	$ -
OTHER DEFERRED LIABILITIES (Class A Utilities: Account 253.2):		
	$	$ -
Total Other Deferred Liabilities	$	$ -
TOTAL OTHER DEFERRED CREDITS	$	$ -

UTILITY NAME: **Forest Utilities, Inc.**

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CONTRIBUTIONS IN AID OF CONSTRUCTION
ACCOUNT 271

DESCRIPTION (a)	WATER (W-7) (b)	WASTEWATER (S-7) ** (c)	W & WW OTHER THAN SYSTEM REPORTING (d)	TOTAL (e)
Balance first of year	$ N/A	$ 5,426,623	$	$ 5,426,623
Add credits during year:	$	$ 477,988	$ -	$ 477,988
Less debit charged during the year	$	$ -	$ -	$ -
Total Contribution In Aid of Construction	$	$ 5,904,611	$ -	$ 5,904,611

ACCUMULATED AMORTIZATION OF CONTRIBUTIONS IN AID OF CONSTRUCTION
ACCOUNT 272

DESCRIPTION (a)	WATER (W-8(a)) (b)	WASTEWATER (S-8(a)) (c)	W & WW OTHER THAN SYSTEM REPORTING (d)	TOTAL (e)
Balance first of year	$ N/A	$ 4,122,542	$ -	$ 4,122,542
Debits during the year:	$	$ 200,757	$ -	$ 200,757
Credits during the year	$	$ -	$ -	$ -
Total Accumulated Amortization of Contributions In Aid of Construction	$	$ 4,323,299	$ -	$ 4,323,299

UTILITY NAME: **Forest Utilities, Inc.**

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RECONCILIATION OF REPORTED NET INCOME WITH TAXABLE INCOME FOR FEDERAL INCOME TAXES (UTILITY OPERATIONS)

1 The reconciliation should include the same detail as furnished on Schedule M-1 of the federal tax return for the year.
The reconciliation shall be submitted even though there is no taxable income for the year.
Descriptions should clearly indicate the nature of each reconciling amount and show the computations of all tax accruals.

2
taxable net income as if a separate return were to be filed, indicating intercompany amounts to be eliminated in such consolidated return. State names of group members, tax assigned to each group member, and basis of allocation, assignments or sharing of the consolidated tax among the group members.

DESCRIPTION (a)	(b)	AMOUNT (c)
Net income for the year	F-3(c)	$ (166,218)
Reconciling items for the year:		
Taxable income not reported on books:		
Deductions recorded on books not deducted for return:		
Income recorded on books not included in return:		
Deduction on return not charged against book income:		
Federal tax net income		$ (166,218)

Computation of tax :
The Company is taxed as a Subchapter - S Corp.; therefore this Schedule is not applicatble.

WATER OPERATION SECTION

The Company is a wastewater service only, therefore this section has been omitted.

WASTEWATER OPERATION SECTION

UTILITY NAME: **Forest Utilities, Inc.**

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WASTEWATER LISTING OF SYSTEM GROUPS

List below the name of each reporting system and its certificate number. Those systems which have been consolidated under the same tariff should be assigned a group number. Each individual system which has not been consolidated should be assigned its own group number.

The wastewater financial schedules (S-2 through S-10) should be filed for the group in total.

All of the following wastewater pages (S-2 through S-12) should be completed for each group and arranged by group number.

SYSTEM NAME / COUNTY	CERTIFICATE NUMBER	GROUP NUMBER
Forest Utilities, Inc. / Lee	300-S	1

UTILITY NAME: **Forest Utilities, Inc.**

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SYSTEM NAME / COUNTY : **Forest Utilities, Inc. / Lee**

SCHEDULE OF YEAR END WASTEWATER RATE BASE

ACCT. NO. (a)	ACCOUNT NAME (b)	REFERENCE PAGE (c)	WASTEWATER UTILITY (d)
101	Utility Plant In Service	S-4A	$ 7,774,395
	Less: Nonused and Useful Plant (1)		
108	Accumulated Depreciation	S-6B	5,107,402
110	Accumulated Amortization	F-8	-
271	Contributions In Aid of Construction	S-7	5,904,611
252	Advances for Construction	F-20	
	Subtotal		$ (3,237,618)
272	Add: Accumulated Amortization of Contributions in Aid of Construction	S-8A	$ 4,323,299
	Subtotal		$ 1,085,681
	Plus or Minus:		
114	Acquisition Adjustments (2)	F-7	-
115	Accumulated Amortization of Acquisition Adjustments (2)	F-7	-
	Working Capital Allowance (3)		336,744
	Other (Specify):		-
	WASTEWATER RATE BASE		$ 1,422,425
	WASTEWATER OPERATING INCOME	S-3	$ (166,218)
	ACHIEVED RATE OF RETURN (Wastewater Operating Income / Wastewater Rate Base)		-11.686%

NOTES (1) Estimate based on the methodology used in the last rate proceeding.

(2) Include only those Acquisition Adjustments that have been approved by the Commission.

(3) Calculation consistent with last rate proceeding.
In absence of a rate proceeding, Class A utilities will use the Balance Sheet Method and Class B Utilities will use the One-eighth Operating and Maintenance Expense Method.

UTILITY NAME: **Forest Utilities, Inc.**

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SYSTEM NAME / COUNTY : **Forest Utilities, Inc. / Lee**

WASTEWATER OPERATING STATEMENT

ACCT. NO.	ACCOUNT NAME (b)	REFERENCE PAGE (c)	WASTEWATER UTILITY (d)
	UTILITY OPERATING INCOME		
400	Operating Revenues	S-9B	$ 1,357,530
530	Less: Guaranteed Revenue (and AFPI)	S-9A	
	Net Operating Revenues		$ 1,357,530
401	Operating Expenses	S-10A	$ 1,392,000
403	Depreciation Expense	S-6A	223,787
	Less: Amortization of CIAC	S-8A	(200,757)
	Net Depreciation Expense		$ 23,030
406	Amortization of Utility Plant Acquisition Adjustment	F-7	-
407	Amortization Expense (Other than CIAC)	F-8	-
	Taxes Other Than Income		
408.1	Utility Regulatory Assessment Fee		61,905
408.11	Property Taxes		
408.12	Payroll Taxes		31,625
408.13	Other Taxes and Licenses		15,187
408	Total Taxes Other Than Income		$ 108,717
409.1	Income Taxes		
410.1	Deferred Federal Income Taxes		
410.11	Deferred State Income Taxes		
411.1	Provision for Deferred Income Taxes - Credit		-
412.1	Investment Tax Credits Deferred to Future Periods		
412.11	Investment Tax Credits Restored to Operating Income		-
	Utility Operating Expenses		$ 1,523,747
	Utility Operating Income		$ (166,218)
	Add Back:		
530	Guaranteed Revenue (and AFPI)	S-9A	$
413	Income From Utility Plant Leased to Others		-
414	Gains (losses) From Disposition of Utility Property		
420	Allowance for Funds Used During Construction		
	Total Utility Operating Income		$ (166,218)

UTILITY NAME: **Forest Utilities, Inc.**

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SYSTEM NAME / COUNTY : **Forest Utilities, Inc. / Lee**

WASTEWATER UTILITY PLANT ACCOUNTS

ACCT. NO. (a)	ACCOUNT NAME (b)	PREVIOUS YEAR (c)	ADDITIONS (d)	RETIREMENTS** (e)	CURRENT YEAR (f)
351	Organization	$			
352	Franchises	17,331			17,331
353	Land and Land Rights	26,822			26,822
354	Structures and Improvements	791,413	113,432		904,845
355	Power Generation Equipment	262,748			262,748
360	Collection Sewers - Force	1,935,831			1,935,831
361	Collection Sewers - Gravity	1,826,106			1,826,106
362	Special Collecting Structures	122,728			122,728
363	Services to Customers	12,628			12,628
364	Flow Measuring Devices	29,424			29,424
365	Flow Measuring Installations				-
366	Reuse Services				
367	Reuse Meters and Meter Installations				
370	Receiving Wells				-
371	Pumping Equipment	352,256	31,050		383,306
374	Reuse Distribution Reservoirs	391,052			391,052
375	Reuse Transmission and Distribution System				-
380	Treatment and Disposal Equipment	1,576,834			1,576,834
381	Plant Sewers				-
382	Outfall Sewer Lines				
389	Other Plant Miscellaneous Equipment				-
390	Office Furniture and Equipment	25,641			25,641
391	Transportation Equipment	206,330		(6,750)	199,580
392	Stores Equipment				-
393	Tools, Shop and Garage Equipment				-
394	Laboratory Equipment	23,700			23,700
395	Power Operated Equipment	35,819			35,819
396	Communication Equipment				
397	Miscellaneous Equipment				
398	Other Tangible Plant				
	Total Wastewater Plant	$ 7,636,663	$ 144,482	$ (6,750)	$ 7,774,395

UTILITY NAME: **Forest Utilities, Inc.**

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SYSTEM NAME / COUNTY : **Forest Utilities, Inc. / Lee**

WASTEWATER UTILITY PLANT MATRIX

ACCT. NO. (b)	ACCOUNT NAME	.1 INTANGIBLE PLANT (g)	.2 COLLECTION PLANT (h)	.3 SYSTEM PUMPING PLANT (i)	.4 TREATMENT AND DISPOSAL (j)	.5 RECLAIMED WASTEWATER TREATMENT PLANT (i)	.6 RECLAIMED WASTEWATER DISTRIBUTION PLANT (j)	.7 GENERAL PLANT (k)
351	Organization	$ -	$	$	$	$	$	$
352	Franchises	17,331						
353	Land and Land Rights				26,822	-	-	-
354	Structures and Improvements			904,845				
355	Power Generation Equipment				262,748			
360	Collection Sewers - Force		1,935,831					
361	Collection Sewers - Gravity		1,826,106					
362	Special Collecting Structures		122,728					
363	Services to Customers		12,628					
364	Flow Measuring Devices		29,424					
365	Flow Measuring Installations							
366	Reuse Services							
367	Reuse Meters and Meter Installations							
370	Receiving Wells			-				
371	Pumping Equipment			383,306				
374	Reuse Distribution Reservoirs					391,052		
375	Reuse Transmission and Distribution System						-	
380	Treatment and Disposal Equipment				1,576,834			
381	Plant Sewers							
382	Outfall Sewer Lines							
389	Other Plant Miscellaneous Equipment	-						
390	Office Furniture and Equipment							25,641
391	Transportation Equipment							199,580
392	Stores Equipment							-
393	Tools, Shop and Garage Equipment							-
394	Laboratory Equipment							23,700
395	Power Operated Equipment							35,819
396	Communication Equipment							-
397	Miscellaneous Equipment							-
398	Other Tangible Plant							
	Total Wastewater Plant	$ 17,331	$ 3,926,717	$ 1,288,151	$ 1,866,404	$ 391,052	$ -	$ 284,740

NOTE: Any adjustments made to reclassify property from one account to another must be footnoted.

UTILITY NAME: **Forest Utilities, Inc.**

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SYSTEM NAME / COUNTY : **Forest Utilities, Inc. / Lee**

BASIS FOR WASTEWATER DEPRECIATION CHARGES

ACCT. NO. (a)	ACCOUNT NAME (b)	AVERAGE SERVICE LIFE IN YEARS (c)	AVERAGE NET SALVAGE IN PERCENT (d)	DEPRECIATION RATE APPLIED IN PERCENT (100% - d) / c (e)
351	Organization			
352	Franchises	40		2.50%
354	Structures and Improvements	30		3.33%
355	Power Generation Equipment	20		5.00%
360	Collection Sewers - Force	30		3.33%
361	Collection Sewers - Gravity	30		3.33%
362	Special Collecting Structures	25		4.00%
363	Services to Customers	38		2.63%
364	Flow Measuring Devices	5		20.00%
365	Flow Measuring Installations			
366	Reuse Services			
367	Reuse Meters and Meter Installations			
370	Receiving Wells			
371	Pumping Equipment	18		5.56%
374	Reuse Distribution Reservoirs	37		2.70%
375	Reuse Transmission and Distribution System			
380	Treatment and Disposal Equipment	27		3.70%
381	Plant Sewers			
382	Outfall Sewer Lines			
389	Other Plant Miscellaneous Equipment			
390	Office Furniture and Equipment	6		16.67%
391	Transportation Equipment	6		16.67%
392	Stores Equipment			
393	Tools, Shop and Garage Equipment			
394	Laboratory Equipment	15		6.67%
395	Power Operated Equipment	15		6.67%
396	Communication Equipment			
397	Miscellaneous Equipment			
398	Other Tangible Plant			
Wastewater Plant Composite Depreciation Rate *				

* If depreciation rates prescribed by this Commission are on a total composite basis, entries should be made on this line only.

UTILITY NAME: **Forest Utilities, Inc.**

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SYSTEM NAME / COUNTY : Forest Utilities, Inc. / Lee

ANALYSIS OF ENTRIES IN WASTEWATER ACCUMULATED DEPRECIATION

ACCT. NO. (a)	ACCOUNT NAME (b)	BALANCE AT BEGINNING OF YEAR (c)	ACCRUALS (d)	OTHER CREDITS ** (e)	TOTAL CREDITS (d + e) (f)
301	Organization	$	$		
352	Franchises	11,475	433		433
354	Structures and Improvements	421,576	28,271		28,271
355	Power Generation Equipment	157,644	13,137		13,137
360	Collection Sewers - Force	295,848	64,528		64,528
361	Collection Sewers - Gravity	1,749,853	60,870		60,870
362	Special Collecting Structures	122,728			-
363	Services to Customers	9,326	332		332
364	Flow Measuring Devices	19,640	5,885		5,885
365	Flow Measuring Installations				
366	Reuse Services				
367	Reuse Meters and Meter Installations				
370	Receiving Wells				
371	Pumping Equipment	103,723	20,432		20,432
374	Reuse Distribution Reservoirs	149,555	10,569		10,569
375	Reuse Transmission and Distribution System				
380	Treatment and Disposal Equipment	1,557,505	19,329		19,329
381	Plant Sewers				
382	Outfall Sewer Lines				
389	Other Plant Miscellaneous Equipment				
390	Office Furniture and Equipment	25,641			-
391	Transportation Equipment	206,330			-
392	Stores Equipment				
393	Tools, Shop and Garage Equipment				
394	Laboratory Equipment	23,700			-
395	Power Operated Equipment	35,819			-
396	Communication Equipment				
397	Miscellaneous Equipment				
398	Other Tangible Plant				
	Total Depreciable Wastewater Plant in Service	$ 4,890,365	$ 223,787	$ -	$ 223,787

UTILITY NAME: **Forest Utilities, Inc.**

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SYSTEM NAME / COUNTY : **Forest Utilities, Inc. / Lee**

ANALYSIS OF ENTRIES IN WASTEWATER ACCUMULATED DEPRECIATION

ACCT. NO. (a)	ACCOUNT NAME (b)	PLANT RETIRED (g)	SALVAGE AND INSURANCE (h)	COST OF REMOVAL AND OTHER CHARGES (i)	TOTAL CHARGES (g-h+i) (j)	BALANCE AT END OF YEAR (c+f-j) (k)
	Organization	$				
352	Franchises					11,908
354	Structures and Improvements				-	449,847
355	Power Generation Equipment				-	170,781
360	Collection Sewers - Force					360,376
361	Collection Sewers - Gravity					1,810,723
362	Special Collecting Structures					122,728
363	Services to Customers					9,658
364	Flow Measuring Devices					25,525
365	Flow Measuring Installations					
366	Reuse Services					
367	Reuse Meters and Meter Installations					
370	Receiving Wells					
371	Pumping Equipment	-			-	124,155
374	Reuse Distribution Reservoirs					160,124
375	Reuse Transmission and Distribution System					-
380	Treatment and Disposal Equipment				-	1,576,834
381	Plant Sewers					-
382	Outfall Sewer Lines					
389	Other Plant Miscellaneous Equipment					-
390	Office Furniture and Equipment					25,641
391	Transportation Equipment	(6,750)			(6,750)	199,580
392	Stores Equipment					-
393	Tools, Shop and Garage Equipment					-
394	Laboratory Equipment					23,700
395	Power Operated Equipment				-	35,819
396	Communication Equipment					
397	Miscellaneous Equipment					
398	Other Tangible Plant					
Total Depreciable Wastewater Plant in Service		$ (6,750)	$ -	$ -	$ (6,750)	$ 5,107,402

UTILITY NAME: **Forest Utilities, Inc.**

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SYSTEM NAME / COUNTY : **Forest Utilities, Inc. / Lee**

CONTRIBUTIONS IN AID OF CONSTRUCTION
ACCOUNT 271

DESCRIPTION (a)	REFERENCE (b)	WASTEWATER (c)
Balance first of year		$ 5,426,623
Add credits during year:		
Contributions received from Capacity, Main Extension and Customer Connection Charges	S-8A	$ -
Contributions received from Developer or Contractor Agreements in cash or property	S-8B	477,988
Total Credits		$ 477,988
Less debits charged during the year (All debits charged during the year must be explained below)		
Total Debits		$ -
Total Contributions In Aid of Construction		$ 5,904,611

Explain all debits charged to Account 271 during the year below:

UTILITY NAME: **Forest Utilities, Inc.**

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SYSTEM NAME / COUNTY : **Forest Utilities, Inc. / Lee**

WASTEWATER CIAC SCHEDULE "A"

ADDITIONS TO CONTRIBUTIONS IN AID OF CONSTRUCTION RECEIVED FROM CAPACITY, MAIN EXTENSION AND CUSTOMER CONNECTION CHARGES RECEIVED DURING THE YEAR

DESCRIPTION OF CHARGE	NUMBER OF CONNECTIONS (b)	CHARGE PER CONNECTION (c)	AMOUNT (d)
Total Credits			$ -

ACCUMULATED AMORTIZATION OF WASTEWATER CONTRIBUTIONS IN AID OF CONSTRUCTION

DESCRIPTION (a)	WASTEWATER (b)
Balance first of year	$ 4,122,542
Debits during the year:	
Accruals charged to Account 272	$ 200,757
Other debits (specify) :	
Total debits	$ 200,757
Total credits	$ -
Balance end of year	$ 4,323,299

UTILITY NAME: **Forest Utilities, Inc.**

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SYSTEM NAME / COUNTY : **Forest Utilities, Inc. / Lee**

WASTEWATER CIAC SCHEDULE "B"
ADDITIONS TO CONTRIBUTIONS IN AID OF CONSTRUCTION
RECEIVED FROM ALL DEVELOPERS OR CONTRACTORS AGREEMENTS
WHICH CASH OR PROPERTY WAS RECEIVED DURING THE YEAR

DESCRIPTION (a)	INDICATE CASH OR PROPERTY (b)	AMOUNT (c)
KB Homes	Cash	61,256
Forest CC Reuse Pond	Cash	75,000
Laurel Oaks	Cash	100,000
South Florida Water Management	Cash	241,732

UTILITY NAME: **Forest Utilities, Inc.**

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SYSTEM NAME / COUNTY : **Forest Utilities, Inc. / Lee**

WASTEWATER OPERATING REVENUE

ACCT. NO.	DESCRIPTION (b)	BEGINNING YEAR NO. CUSTOMERS * (c)	YEAR END NUMBER OF CUSTOMERS * (d)	AMOUNTS (e)
	WASTEWATER SALES			
	Flat Rate Revenues:			
521.1	Residential Revenues	860	860	$ 301,254
521.2	Commercial Revenues			
521.3	Industrial Revenues			
521.4	Revenues From Public Authorities			
521.5	Multiple Family Dwelling Revenues	1,184	1,184	420,415
521.6	Other Revenues			
521	Total Flat Rate Revenues	2,044	2,044	$ 721,669
	Measured Revenues:			
522.1	Residential Revenues			
522.2	Commercial Revenues	41	41	161,682
522.3	Industrial Revenues			
522.4	Revenues From Public Authorities			
522.5	Multiple Family Dwelling Revenues	1,903	1,903	434,839
522	Total Measured Revenues	1,944	1,944	$ 596,522
523	Revenues From Public Authorities			
524	Revenues From Other Systems			
525	Interdepartmental Revenues			
	Total Wastewater Sales	3,988	3,988	$ 1,318,190
	OTHER WASTEWATER REVENUES			
530	Guaranteed Revenues			$
531	Sale of Sludge			
532	Forfeited Discounts			
534	Rents From Wastewater Property			
535	Interdepartmental Rents			
536	Other Wastewater Revenues (Including Allowance for Funds Prudently Invested or AFPI)			13,200
	Total Other Wastewater Revenues			$ 13,200

* Customer is defined by Rule 25-30.210(1), Florida Administrative Code.

UTILITY NAME: **Forest Utilities, Inc.**

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SYSTEM NAME / COUNTY **Forest Utilities, Inc. / Lee**

WASTEWATER OPERATING REVENUE

ACCT. NO.	DESCRIPTION (b)	BEGINNING YEAR NO. CUSTOMERS * (c)	YEAR END NUMBER OF CUSTOMERS * (d)	AMOUNTS (e)
	RECLAIMED WATER SALES			
	Flat Rate Reuse Revenues:			
540.1	Residential Reuse Revenues			$
540.2	Commercial Reuse Revenues			
540.3	Industrial Reuse Revenues			
540.4	Reuse Revenues From Public Authorities			
542	Discounts / Refunds			
540	Total Flat Rate Reuse Revenues			$ -
	Measured Reuse Revenues:			
541.1	Residential Reuse Revenues			
541.2	Commercial Reuse Revenues	1		26,139
541.3	Industrial Reuse Revenues			
541.4	Reuse Revenues From Public Authorities			
541	Total Measured Reuse Revenues	1	-	$ 26,139
544	Reuse Revenues From Other Systems			
	Total Reclaimed Water Sales			$ 26,139
	Total Wastewater Operating Revenues			$ 1,357,530

* Customer is defined by Rule 25-30.210(1), Florida Administrative Code.

UTILITY NAME: **Forest Utilities, Inc.**

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SYSTEM NAME / COUNTY : **Forest Utilities, Inc. / Lee**

WASTEWATER UTILITY EXPENSE ACCOUNT MATRIX

ACCT. NO. (a)	ACCOUNT NAME (b)	CURRENT YEAR (c)	.1 COLLECTION EXPENSES-OPERATIONS (d)	.2 COLLECTION EXPENSES-MAINTENANCE (e)	.3 PUMPING EXPENSES - OPERATIONS (f)	.4 PUMPING EXPENSES - MAINTENANCE (g)	.5 TREATMENT & DISPOSAL EXPENSES - OPERATIONS (h)	.6 TREATMENT & DISPOSAL EXPENSES - MAINTENANCE (i)
701	Salaries and Wages - Employees	$ 132,882	$				132,882	
703	Salaries and Wages - Officers, Directors and Majority Stockholders	317,767						
704	Employee Pensions and Benefits	39,545						
710	Purchased Sewage Treatment							
711	Sludge Removal Expense	133,489					133,489	
715	Purchased Power	109,033						
716	Fuel for Power Purchased							
718	Chemicals	37,584					37,584	
720	Materials and Supplies	141,590						141,590
731	Contractual Services-Engineering	7,263						
732	Contractual Services - Accounting	15,760						
733	Contractual Services - Legal	2,600						
734	Contractual Services - Mgt. Fees	207,724						
735	Contractual Services - Testing	21,183					21,183	
736	Contractual Services - Plant Maint.	96,435						96,435
736	Contractual Services - Other	4,980						
741	Rental of Building/Real Property							
742	Rental of Equipment							
750	Transportation Expenses	5,677						
756	Insurance - Vehicle	18,356						
757	Insurance - General Liability	35,201						
758	Insurance - Workman's Comp.	3,363						
759	Insurance - Other	5,392						
760	Advertising Expense							
766	Regulatory Commission Expenses - Amortization of Rate Case Expense							
767	Regulatory Commission Exp.-Other							
770	Bad Debt Expense							
775	Miscellaneous Expenses	56,176						
Total Wastewater Utility Expenses		$ 1,392,000	$ -	$ -	$ -	$ -	$ 325,138	$ 238,025

UTILITY NAME: **Forest Utilities, Inc.**

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SYSTEM NAME / COUNTY : **Forest Utilities, Inc. / Lee**

WASTEWATER UTILITY EXPENSE ACCOUNT MATRIX

ACCT. NO. (a)	ACCOUNT NAME (b)	.7 CUSTOMER ACCOUNTS EXPENSE (j)	.8 ADMIN. & GENERAL EXPENSES (k)	.9 RECLAIMED WATER TREATMENT EXPENSES-OPERATIONS (l)	.10 RECLAIMED WATER TREATMENT EXPENSES-MAINTENANCE (m)	.11 RECLAIMED WATER DISTRIBUTION EXPENSES-OPERATIONS (n)	.12 RECLAIMED WATER DISTRIBUTION EXPENSES-MAINTENANCE (o)
701	Salaries and Wages - Employees	$		$			
703	Salaries and Wages - Officers, Directors and Majority Stockholders		317,767				
704	Employee Pensions and Benefits		39,545				
710	Purchased Sewage Treatment						
711	Sludge Removal Expense						
715	Purchased Power		109,033				
716	Fuel for Power Purchased						
718	Chemicals						
720	Materials and Supplies						
731	Contractual Services-Engineering		7,263				
732	Contractual Services - Accounting		15,760				
733	Contractual Services - Legal		2,600				
734	Contractual Services - Mgt. Fees		207,724				
735	Contractual Services - Testing						
736	Contractual Services - Plant Maint						
736	Contractual Services - Other		4,980				
741	Rental of Building/Real Property						
742	Rental of Equipment						
750	Transportation Expenses		5,677				
756	Insurance - Vehicle		18,356				
757	Insurance - General Liability		35,201				
758	Insurance - Workman's Comp.		3,363				
759	Insurance - Other		5,392				
760	Advertising Expense						
766	Regulatory Commission Expenses - Amortization of Rate Case Expense						
767	Regulatory Commission Exp.-Other						
770	Bad Debt Expense	-					
775	Miscellaneous Expenses		56,176				
	Total Wastewater Utility Expenses	$ -	$ 828,837	$ -	$ -	$ -	$ -

UTILITY NAME: **Forest Utilities, Inc**

YEAR OF REPORT
31-Dec-22

SYSTEM NAME / COUNTY : **Forest Utilities / Lee**

CALCULATION OF THE WASTEWATER SYSTEM METER EQUIVALENTS

METER SIZE (a)	TYPE OF METER (b)	EQUIVALENT FACTOR (c)	NUMBER OF METERS (d)	TOTAL NUMBER OF METER EQUIVALENTS (c x d) (e)
All Residential		1.0	2,763	2,763
5/8"	Displacement	1.0		
3/4"	Displacement	1.5	17	26
1"	Displacement	2.5	27	68
1 1/2"	Displacement or Turbine	5.0	25	125
2"	Displacement, Compound or Turbine	8.0	14	112
3"	Displacement	15.0	2	30
3"	Compound	16.0		
3"	Turbine	17.5		
4"	Displacement or Compound	25.0		0
4"	Turbine	30.0		
6"	Displacement or Compound	50.0		0
6"	Turbine	62.5		
8"	Compound	80.0		0
8"	Turbine	90.0		0
10"	Compound	115.0		
10"	Turbine	145.0	2	290
12"	Turbine	215.0		
Total Wastewater System Meter Equivalents				3,413

CALCULATION OF THE WASTEWATER SYSTEM EQUIVALENT RESIDENTIAL CONNECTIONS

Provide a calculation used to determine the value of one wastewater equivalent residential connection (ERC).
Use one of the following methods:

(a) If actual flow data are available from the preceding 12 months, divide the total annual single family residence (SFR) gallons sold by the average number of single family residence customers for the same period and divide the result by 365 days.

(b) If no historical flow data are available, use:

ERC = (Total SFR gallons treated (Omit 000) / 365 days / 280 gallons per day)

For wastewater only utilities:

Subtract all general use and other non residential customer gallons from the total gallons treated.
Divide the remainder (SFR customers) by 365 days to reveal single family residence customer gallons per day.

NOTE: Total gallons treated includes both treated and purchased treatment.

ERC Calculation:

Note
The Utility's single family customers are flat rate customers. No data is available to calculate ERC.
ERCs based on total flow: 186,540,000/365/280 = 1825

UTILITY NAME: **Forest Utilities, Inc**

YEAR OF REPORT
31-Dec-22

SYSTEM NAME / COUNTY **Forest Utilities / Lee**

WASTEWATER TREATMENT PLANT INFORMATION

Provide a separate sheet for each wastewater treatment facility

Permitted Capacity	800,000		
Basis of Permit Capacity (1)	AADF		
Manufacturer	Custom		
Type (2)	Extended Air		
Hydraulic Capacity	1,300,000		
Average Daily Flow	511,068		
Total Gallons of Wastewater Treated	186,540,000		
Method of Effluent Disposal	Golf Course Irrigation		

(1) Basis of permitted capacity as stated on the Florida DEP WWTP Operating Permit (i.e. average annual daily flow, etc.)

(2) Contact stabilization, advanced treatment, etc.

UTILITY NAME: **Forest Utilities, Inc**

YEAR OF REPORT
31-Dec-22

SYSTEM NAME / COUNTY **Forest Utilities / Lee**

OTHER WASTEWATER SYSTEM INFORMATION

Furnish information below for each system. A separate page should be supplied where necessary.

1. Present number of ERCs* now being served 4,705

2. Maximum number of ERCs* which can be served 4,705

3. Present system connection capacity (in ERCs*) using existing lines 4,705

4. Future connection capacity (in ERCs*) upon service area buildout 4,705

5. Estimated annual increase in ERCs* Service area is essentially built-out

6. Describe any plans and estimated completion dates for any enlargements or improvements of this system.
None

7. If the utility uses reuse as a means of effluent disposal, attach a list of the reuse end users and the amount of reuse provided to each, if known.
Forest Country Club 185.505,000

8. If the utility does not engage in reuse, has a reuse feasibility study been completed? No

If so, when? N/A

9. Has the utility been required by the DEP or water management district to implement reuse? No

If so, what are the utility's plans to comply with this requirement? N/A

10. When did the company last file a capacity analysis report with the DEP 2019

11. If the present system does not meet the requirements of DEP rules:
    a. Attach a description of the plant upgrade necessary to meet the DEP rules.
    b. Have these plans been approved by DEP? N/A
    c. When will construction begin? N/A
    d. Attach plans for funding the required upgrading.
    e. Is this system under any Consent Order with DEP? No

12. Department of Environmental Protection ID # FLA014478

* An ERC is determined based on the calculation on S-11.

Reconciliation of Revenue to
Regulatory Assessment Fee Revenue
Wastewater Operations

YEAR OF REPORT
31-Dec-22

UTILITY NAME: **Forest Utilities, Inc.**

(A)	(B)	(C)	(D)
Accounts	Gross Wastewater Revenues per Sch S-9	Gross Wastewater Revenues per RAF Return	Difference (B)-(C)
		***Amended 4/27/2023)**	
Gross Revenues:			
Total Flat-Rate Revenues	721,668.68	721,668.68	-
Total Measured Revenues	596,521.58	596,521.58	-
Revenues from Public Authorities			
Revenues from Other Systems			
Interdepartmental Revenues			
Total Other Wastewater Revenues	13,200.00	13,200.00	-
Reclaimed Water Sales	26,139.36	26,139.36	-
Total Wastewater Operating Revenue	1,357,529.62	1,357,529.62	-
Less: Expense for Purchased Wastewater from FPSC Regulated Utility			
Net Wastewater Operating Revenues	1,357,529.62	1,357,529.62	-

Reconciliation:		
Revenues overstated on RAF Return	$	-
Rounding		-
		-

Instructions:
For the current year, reconcile the gross wastewater revenues reported on Schedule F-3 with the gross wastewater revenues reported on the company's regulatory assessment fee return. Explain any differences reported in column (d).

FLORIDA DEPARTMENT OF Environmental Protection

South District
PO Box 2549
Fort Myers FL 33902-2549
SouthDistrict@FloridaDEP.gov

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

January 18, 2024

Ivory Mitchell Gilbert
15275 Collier BLVD
Naples, FL 34119-6750
Email: mitchgilbert@floridautilitysolutions.com

Re: Warning Letter
Forest Utilities WWTP
Facility ID No. FLA014478
Lee County - DW

Dear Mr. Gilbert:

A Compliance Evaluation Inspection and a Sanitary Sewer Overflow Preventive Inspection were conducted at your facility on December 20, 2023. During these inspections, possible violations of Chapter 403, Florida Statutes, and Chapters 62-160, 62-520, 62-600, 62-610, and 62-620 of the Florida Administrative Code, were observed.

During these inspections, Department personnel noted the following:

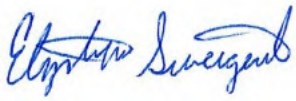
- The Facility did not have a NIST certified thermometer for composite sampling.
- A review of the Discharge Monitoring Reports revealed transcription and calculation issues.
- The Facility did not submit their monitoring results for Giardia and Cryptosporidium.
- The Facility had one inoperable surge blower and pump along with one inoperable aeration blower.
- There were multiple cracks, spalling and leaks on the tank walls.
- The digesters contained excessive foam.
- The surge tanks contained excessive foam and were turning septic.
- There were chronic effluent exceedances.
- The reclaimed water piping was not color-coded Pantone Purple.
- There were Groundwater exceedances.
- The Groundwater Monitoring Wells did not meet DEP requirements.

Violations of Florida Statutes or administrative rules may result in liability for damages and restoration, and the judicial imposition of civil penalties, pursuant to sections 403.121, Florida Statutes.

Please contact Alex McSurley, at (239) 344-5679, within **15 days** of receipt of this Warning Letter to arrange a meeting. The Department is interested in receiving any facts you may have that will assist in determining whether any violations have occurred. Any document submittals can be made to our email mailbox at SD-WWinspect@FloridaDEP.gov or may be mailed to the above address. You may bring anyone with you to the meeting that you feel could help resolve this matter.

Please be advised that this Warning Letter is part of an agency investigation, preliminary to agency action in accordance with Section 120.57(5), Florida Statutes. We look forward to your cooperation in completing the investigation and resolving this matter.

Sincerely,



Elizabeth A. Sweigert
Assistant Director of District Management
South District Office
Florida Department of Environmental Protection

Enclosure: Inspection Report

ec: Burke Young (burke@floridautilitysolutions.com)
Matt Gillispie (matt@floridautilitysolutions.com)

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
WASTEWATER COMPLIANCE INSPECTION REPORT

Facility Details

Facility Name	Forest Utilities WWTP			**WAFR ID**	FLA014478		
Physical Address	6341 Deer Run Rd. SW			**City, State, Zip**	Fort Myers, FL 33908-4318		
County	Lee			**Facility Phone #**	(239) 513-0445		
Permit Issued:	5/5/2021			**Permit Expiration:**	5/4/2026		
Facility Type	Domestic Wastewater			**Is the Facility NPDES (Y/N)**	No		
Latitude	**Degrees °**	26	**Minutes ‘**	29	**Seconds “**	49.7586	
Longitude	**Degrees °**	-81	**Minutes ‘**	52	**Seconds “**	11.9426	

Inspection Details

Inspection Type	**Entry Date**	**Exit Date**
CEI	12/20/2023	12/20/2023
	Entry Time (HH:MM AM/PM)	**Exit Time (HH:MM AM/PM)**
SSOP	12:00 PM	1:30 PM

Sampling Taken (Y/N)	No	**RQ#**	NA	**QA Conducted (Y/N)**	No

Name(s) and Title of Field Representatives(s)	**Operator Certification**	**Email**	**Phone Number**
Burke A. Young	WWC - 0020213	burke@floridautilitysolutions.com	(239) 825-7818
Name(s) and address of Permittee / Designated Rep.	**Title**	**Email**	**Phone Number**
Ivory Mitchell Gilbert 15275 Collier BLVD Naples, FL 34119-6750	President	mitchgilbert@floridautilitysolutions.com	(239) 513-0445

Inspector Information

Name(s) and Signature(s) of Inspectors(s)	**District Office/Phone Number**	**Date**
Alex McSurley	SD / (239) 344-5679	1/17/2024
Name and Signature of Reviewer	**District Office/Phone Number**	**Date**
Deanna Newburg	SD / (239) 344-5677	1/18/2024

Facility Compliance Eval Areas

***IC** = In Compliance; **MC** = Minor Out of Compliance; **NC** = Out of Compliance; **SC** = Significant Out of Compliance; **NA** = Not Applicable; **NE** = Not Evaluated*

Significant Non-Compliance Criteria Should be Reviewed when Out of Compliance Ratings Are Given in Areas Marked by a “”*

Overall Compliance Determination	Significant Out of Compliance						
IC	*Permit	IC	Laboratory	NC	Facility Site Review	SC	*Effluent Quality
NA	*Compliance Schedules	SC	Sampling	IC	Flow Measurement	NC	*Effluent Disposal
SC	*Records & Reports	IC	Biosolids	IC	*Operation & Maintenance	NC	*Groundwater
IC	SSO Survey	NE	Other	NA	Nutrient Management Plan	NA	Access Control
NA	Site Restrictions & Setbacks	NA	Odor/Nuisance	NA	Site Monitoring	NA	MLPW Disposal
NA	Manure Solids						

Clear Report | **Hide/Unhide Placeholders** | **Generate Blank Rows (for field paper setup)** | **Generate Deficiency & Observation Rows** | **Finish Inspection Report Form**

Single Event Violations ("∗" SNC SEVs)

Check for Yes	Evaluation Area	Description	Finding Description	Finding ID
☐	Permit	Effluent Violations - Unapproved Bypass	Wastewater was diverted from a portion of the treatment process without department approval.	UNBY
☐	∗Permit	Permit Violations - Discharge Without a Valid Permit	The facility was operating without a permit or with an expired permit.	UPHI
☐	Permit	Permit Violations - Failure to Submit Timely Permit Renewal Application	The permittee failed to submit an application to renew the existing permit at least 180 days prior to expiration.	PFSA
☐	Laboratory	Management Practice Violations - Laboratory Not Certified	The laboratory was not certified by the National Environmental Laboratory Accreditation Conference (NELAC).	LNCE
☒	Sampling	Monitoring Violations - Analysis not Conducted	The facility failed to collect and/or analyze samples as required by permit or enforcement action.	ANCV
☐	Sampling	Monitoring Violations - Failure to Monitor for Toxicity Requirements	The facility failed to collect and/or analyze routine or follow-up toxicity samples.	FTOX
☐	Records and Reports	Management Practice Violations - Failure to Develop Adequate SPCC Plan	The facility failed to develop or maintain their Spill Prevention Control and Countermeasures (SPCC) plan.	FSPC
☐	Records and Reports	Management Practice Violations - Failure to Maintain Records	The facility failed to maintain records for the required retention period.	FMRR
☐	Records and Reports	Reporting Violations - Failure to Notify	The permittee failed to notify the department of any event or activity that requires notification as required by permit or rule.	RSWP
☒	Records and Reports	Reporting Violations - Failure to Submit DMRs	The permittee failed to submit any DMR required by rule, permit, or enforcement action in a timely manner.	FDMR
☒	Records and Reports	Reporting Violations - Failure to submit required report (non-DMR, non-pretreatment)	The facility failed to submit any report required by rule, permit, enforcement action or inspection activity except for DMRs.	FRPT
☐	Facility Site Review	Management Practice Violations - Improper Land Application (non-503, non-CAFO)	The land application system was not being maintained.	LASN
☐	Flow Measurement	Monitoring Violations - No Flow Measurement Device	The facility failed to install a flow measurement device, an approved flow measurement device, or a working flow measurement device.	NOFL
☐	Operation and Maintenance	Management Practice Violations - Improper Operation and Maintenance	The facility failed to follow their operation and maintenance plan/manual.	IONM
☐	Operation and Maintenance	Management Practice Violations - Inflow/Infiltration (I/I)	The facility had an inflow and infiltration problem causing collection system issues and/or operational issues.	ININ
☐	Operation and Maintenance	Management Practice Violations - No Licensed/Certified Operator	The facility was being operated without a certified operator or by an operator that is not licensed for the size of plant.	ONCO
☐	∗Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent acute toxicity has been documented through follow-up tests.	EATX
☐	∗Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent chronic toxicity has been documented through follow-up tests.	ECTX
☐	∗Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent acute or chronic toxicity has been documented in the effluent through the use of routine and follow-up tests.	ETOX
☐	Effluent Quality	Effluent Violations - Narrative Effluent Violation	The facility violated a permit or enforcement narrative effluent limit.	XNEV
☐	Effluent Quality	Effluent Violations - Reported Fish Kill	The facility had a discharge of wastewater that resulted in a fish kill.	XFSH
☐	Sanitary Sewer Overflow Survey	WW SSO - Discharge to Waters	A sewage spill from any components of a collection/transmission system or from a treatment plant reached surface waters including stormwater conveyance system or drainage ditch.	SSO1
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to Maintain Records or Meet Record Keeping Requirements	The facility failed to keep routine documentation and reporting records of spills, and/or operation and maintenance activities on the collection/transmission system.	SSO2
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to monitor	The facility failed to collect and/or analyze bacteriological samples for sewage spills that reached surface waters.	SSO3
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to report violation that may endanger public health 122.41(l)(7)	The facility failed to report a sewage spill within 24 hours of discovery.	SSO4
☐	Sanitary Sewer Overflow Survey	WW SSO - Improper Operation and Maintenance	The facility failed to perform routine preventative maintenance to keep the collection/transmission system in good working order.	SSO5
☐	Sanitary Sewer Overflow Survey	WW SSO - Overflow to Dry Land	A sewage spill from any part of a collection/transmission system or treatment plant that did not make it to surface waters, i.e., stormwater collection system, drainage ditch, stream, pond, or lake.	SSO6

Permit

Compliance Rating	In Compliance
Does this section apply to the facility?	◉ **Yes** ○ **No**
Questions	
*Is the permit current?	**Yes**
Is a copy of the permit available onsite?	**Yes**
Is the facility operated in accordance with the permit?	**Yes**
*Was the facility constructed or modified with an appropriate or valid permit issued by the Department?	**Yes**
Has the facility submitted the permit renewal application 180 days prior to the expiration date?	**N/A**
If the permittee for the facility has changed did the department receive notification of this change?	**N/A**
If the permit is accompanied by a Consent Order or Administrative Order, are they abiding by the conditions of the order?	**N/A**
Is wastewater from a portion of the treatment process diverted with Department approval?	**N/A**
*Is the facility discharging to waters of the state with an appropriate FDEP permit?	**N/A**
*Was the facility free from unpermitted discharge, bypass, collection system, or residuals with a high potential for water quality or health impacts?	**Yes**
Is the facility free from any Permit violation not listed above that needs to be addressed?	**Yes**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Observations:

Department records indicate that the current operating permit will expire on May 4, 2026. F.A.C. Rule 62-620.335 (1) states that a Permittee shall submit an application to renew the existing permit at least 180 days before the expiration date of the existing permit. Timely and sufficient submittal of the renewal application and permit processing fee is important (and in your best interest) as it automatically extends the expiration date on the existing permit until the Department takes final action on the renewal application. A tardy application could result in non-compliance. Your renewal application and permit processing fee must be submitted no later than November 5, 2025.

Compliance Schedule

Compliance Rating	Not Applicable
Does this section apply to the facility?	○ **Yes** ◉ **No**
Questions	
If the facility has a compliance schedule in a permit, Administrative Order or Enforcement Action are they in compliance with the schedule?	**N/A**
*Are the Compliance Date(s), Construction Milestone(s), Enforcement Order Schedule(s) or Final Compliance Date started/completed within 90 days of the due date?	**N/A**
Has the facility completed construction and submitted a Notification of Completion of Construction for Wastewater Facilities or Activities (Form 62-620.910 (12)), if required?	**N/A**
Has the Notification of Availability of Record Drawings and Final Operation and Maintenance Manuals (Form 62-620.910 (13)) been submitted as required?	**N/A**
If the facility is under a Toxicity Corrective Action Plan, are they in compliance with the plan?	**N/A**
Is the facility free from any Compliance Schedule violation not listed above that needs to be addressed?	**N/A**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Observations:

Not applicable. This Facility does not currently have any compliance schedules in their permit.

Laboratory

Compliance Rating	In Compliance
Does this section apply to the facility?	◉ **Yes** ○ **No**

Questions	
Is there a current copy of the laboratory certification onsite?	**Yes**
If the facility has an onsite laboratory does it have a Florida Department of Health Environmental Laboratory Certification Program certification?	**N/A**
Facility DOH Certification #	N/A **N/A**
Contract Lab Name and DOH Certification #	Sanders Laboratory Inc. – E84380 **Yes**
Does the onsite laboratory use sample analysis methods prescribed in 40 CFR part 136 or a test method that has gone through the EPA alternative method approval process?	**N/A**
Does the facility have standard operating procedures that follow the methods set in 62-620.10 (18) F.A.C. including 40 CFR Part 136; including required instrumentation, glassware cleaning, reagent/standard use, and troubleshooting procedures?	**N/A**
Does the facility have a QA/QC program with a written QA/QC manual as required by 40 CFR 122.41 that is up to date and available for review?	**N/A**
Does the facility follow the procedures set in the QA/QC manual; including instrument calibration/maintenance, checks on standard solutions, sample analysis precision/accuracy limits on a prescribed bases and QC samples (duplicate, spiked, blank in at least 10%)?	**N/A**
Is the detailed record complete and available for review for each set of analyses performed including the order of calibration, QA/QC, bracketing, and samples analyzed?	**N/A**
Does the facility have QA/QC records on the reagent preparation, instrument calibration/maintenance, incubator temperature and purchase of laboratory supplies?	**N/A**
Does the facility's laboratory documentation of the sample results use qualifier codes when sample QA/QC fall outside acceptable precision and accuracy limits set in the QA/QC manual?	**N/A**
Does the facility's laboratory take and record corrective actions or trouble shooting steps when data falls out of the precision and accuracy limits?	**N/A**
Are records of standard(s) and reagent(s) preparation maintained at the laboratory?	**N/A**
Is the laboratory maintaining adequate records for reagent preparation(s)?	**N/A**
Does the laboratory have a system for uniformly recording, correcting, processing and reporting data; including formulas, significant figures, rounding rules, units, cross-checking calculations?	**N/A**
Is the facility's laboratory adequate for analyzing samples; including pure water, clean bench space for instrument use/storage free of contamination, necessary equipment, vibration free area, ventilation, humidity and temperature control?	**N/A**
Does the Laboratory meet NELAC and EPA standards including dry and clean sample storage locations, sample custodian(s) to ensure upon receipt of samples, proper sample storage, preservation and custody documentation?	**N/A**

Does the facility use appropriate standards that are prepared in volumetric glassware, checked against reliable primary standards, labeled properly, stored in clean containers, and discarded when expired or degraded?	**N/A**
Does the facility's laboratory analyst(s) demonstrate competency and appropriate training; including ability to follow procedures, ability to meet precision and accuracy limits, knowledge of equipment and analytical methods.	**N/A**
If the facility test requires temperature measurement, is there a thermometer present that is routinely calibrated against NIST thermometer within calibration date range?	**N/A**
Is the sample refrigerator temperature correct to meet the preservation requirements for the samples stored within?	**N/A**
Is the facility free from any Laboratory violation not listed above that needs to be addressed?	**Yes**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Observations:

The Facility's contracted laboratories' DOH certification will expire on June 30, 2024.

Sampling

Compliance Rating	Significant Out of Compliance
Does this section apply to the facility?	(•) **Yes** ( ) **No**
Questions	
In facility logbooks or other documentation, are the daily records appropriately recorded, including composite sampler or other temperatures, and daily calibration of meters.	**Yes**
Does the facility maintain records of their daily calibration of their pH meter, Chlorine meter, Dissolved Oxygen meter?	**Yes**
Does the facility maintain records of their daily checks of their in-line meter(s) with their field meter(s)?	**Yes**
Do field sheets document that the collection and analysis of field tests were analyzed within the 15-minute holding time.	**Yes**
Are meters calibrated and sample analysis conducted at the facility done in accordance with DEP SOP and NELAC guidelines? (Calibration frequency and sample bracketing for pH, Total Residual Chlorine (TRC), Turbidity, DO)	**Yes**
Are all the primary and secondary standards used to calibrate and verify meters, used prior to expiration dates and verified against primary standards appropriate for pH, TRC, Turbidity, DO?	**Yes**
Are the inline meters reading within established limits compared to the bench meters? (TRC ≤ 20%, Turbidity ≤ 20%, pH 0.2 SU)	**Yes**
Were safe access points for obtaining representative influent/effluent samples available?	**Yes**
Are influent sampling points put prior to internal facility return lines including supernatant, filter backwash and return activated sludge (RAS)?	**Yes**
Are samples being collected and analyzed as required by the permit or enforcement action; including location, type (grab/composite), time, and frequency?	**No**
Are samples being collected in the proper containers, preserved and analyzed in appropriate hold times in accordance with 40 CFR Part 136, Table II?	**Yes**
If the facility has a composite sampler with cooling system at the influent/effluent sampling location is there a thermometer present in the sampler that is annually checked against NIST thermometers?	**N/A**

Is composite sampling being conducted appropriately; including purging, sampling velocity at least 2fps, clean tubing, individual sample volume of at least 100 mL, sample storage of <6°C preservation, hold times and representative samples?	**No**
Did the facility have their Chain of Custody records?	**Yes**
If sampling was conducted and observed during the inspection did the sampling follow DEP SOP requirements?	**N/A**
Did the facility collect and/or analyze routine or follow-up toxicity samples as required by permit or enforcement action?	**N/A**
Is the facility free from any Sampling violation not listed above that needs to be addressed?	**Yes**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Deficiencies & Corrective Actions:

The facility failed to collect and/or analyze samples as required by permit or enforcement action. [62-600.650 (1) F.A.C., 62-620.610 (18) F.A.C., 62-160.210 (1) F.A.C., 62-600.660 (1) F.A.C., DEP SOP FS 2400, ANCV]	Deficiency: (Narrative) A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. *[62-610.463(4)]* If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020. October – December 2022 Groundwater DMR stated that the Background monitoring well MWB-21302 was "MNR" – monitoring not required. This well is required to be sampled by the permit.
	Corrective Action(s): (Narrative) Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future. Please provide documentation to the Department on why "MNR" was used for MWB-21302 well.
Is composite sampling being conducted appropriately; including purging, sampling velocity at least 2fps, clean tubing, individual sample volume of at least 100 mL, sample storage of =6°C preservation, hold times and representative samples? [62-160.210 (1) F.A.C., 62-160.800 (1)(a) F.A.C., DEP SOP FS 2400, 62-160.300	Deficiency: (Narrative) At the time of the inspection, the Facility did not have a NIST thermometer certification for the composite sampler.
	Corrective Action(s): (Narrative) During the inspection, the operator indicated that the composite sampler is not refrigerated. Please explain how samples are stored at <6°C, and how this temperature is verified.

F.A.C., 40 C.F.R. 136 Table II]	

Observations:

Please refer to Table A of the Appendix for additional details regarding lot numbers and expiration dates of buffers, standards and reagents. Please resend the Turbidity expiration date – record received was unreadable.

Records and Reports

Compliance Rating	Significant Out of Compliance
Does this section apply to the facility?	◉ **Yes** ○ **No**

Questions	
Are the entries in the operator logbook clear, concise, informative and relevant?	**Yes**
Was copy of the current O&M manual available at the time of the inspection?	**Yes**
Is there a current operator license?	**Yes**
Is there a current RPZ certification?	**N/A**
Is there a copy of the current Operating Protocol for Part 3 Reuse?	**Yes**
Does the facility have and maintain their Spill Prevention Control and Counter measurement (SPCC) Plan?	**N/A**
Are all required documents and reports available at the plant well organized and complete?	**Yes**
Does the facility maintain the records onsite for the required retention period?	**Yes**
Discharge Monitoring Reports (DMRs) Review Period	11/1/2020 – 11/30/2023 **Yes**
Are the discharge monitoring reports completed properly?	**No**
Are the DMRs submitted on the proper form?	**Yes**
Is an authorized representative signing the DMRs?	**Yes**
Has the permittee submitted an annual Reclaimed Water and/or Effluent Analysis Report?	**Yes**
Does the facility submit their monitoring results for Giardia and Cryptosporidium in a timely manner?	**No**
A review of the last toxicity test did not reveal any deficiencies?	**N/A**
Has the facility submitted all report(s) during the review period that are required by rule, permit, enforcement action or inspection activity, other than DMRs?	**No**
*Has the facility timely submitted DMRs as required by rule, permit, or enforcement action? (If either reports are >30 days late meets SNC criteria)	**No**
Has the facility submitted all final compliance schedule reports as required by rule, permit, or enforcement action?	**N/A**
Has the permittee notified the Department of any event or activity that requires notification as required by permit or rule?	**Yes**
*Are records or reports free from falsified data?	**Yes**
Is the facility free from any Records and Reports violation not listed above that needs to be addressed?	**Yes**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Deficiencies & Corrective Actions:

	Deficiency: (Narrative)

Are the discharge monitoring reports completed properly? [403.161(1)(b) F.S., 62-600.680 F.A.C.]	A review of the Discharge Monitoring Reports revealed deficiencies. Please refer to Table C in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please correct and resubmit all DMRs with noted calculation and/or transcription errors.
Does the facility submit their monitoring results for Giardia and Cryptosporidium in a timely manner? [62-610.463 (4) F.A.C., 62-600.680 F.A.C.]	Deficiency: (Narrative) A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. *[62-610.463(4)]* If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020.
	Corrective Action(s): (Narrative) Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future.
The facility failed to submit any report required by rule, permit, enforcement action or inspection activity except for DMRs. [62-610.870 (3) F.A.C., 62-610.865 (11) F.A.C., 62-600.405 F.A.C., 403.161(1)(b) F.S., FRPT]	Deficiency: (Narrative) A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. *[62-610.463(4)]* If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020.
	Corrective Action(s): (Narrative) Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future.
The permittee failed to submit any DMR required by rule, permit, or enforcement action in a timely manner. [403.161(1)(b)) F.S., 62-600.680 F.A.C., 62-620.610 (18)(a) F.A.C., FDMR]	Deficiency: (Narrative) A timeliness review of the DMRs revealed there was one late submission in April 2021. Please refer to Table E in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please ensure all DMRs are submitted timely going forward. No further action required at this time.
Observations:	
Please refer to Table B of the Appendix for additional details regarding operator licenses maintained onsite.	

Facility Site Review

Compliance Rating	Out of Compliance				
Does this section apply to the facility?	◉	**Yes**	○	**No**	
Questions					
The headworks was free from excessive corrosion.					**Yes**
The headwork is free from evidence of recent overflows.					**Yes**
Is the odor control system operational at the headworks?					**N/A**

Is the comminutor operational at the headworks?	**N/A**
Is the grit separator operational at the headworks?	**N/A**
Is the bar screen cleaned on a routine basis?	**N/A**
Is the mechanical bar screen functioning as intended?	**N/A**
Are screenings and grit being collected from the headworks in suitable containers?	**Yes**
Rags, grit and/or screening are being disposed of properly.	**Yes**
Are screenings and grit from the headworks being disposed at a Class I Landfill?	**Yes**
Are records of the disposal of the screenings and grit collected at the headworks available?	**N/A**
The leachate from the screening dumpster(s) is piped to the headworks and not onto the ground.	**Yes**
Is the clarifier free from solids discharging over the weir(s)?	**Yes**
Is the clarifier free from excessive sand and/or grit accumulation?	**Yes**
Is the clarifier free from excessive scum, algae and/or trash overflowing the weir?	**Yes**
Does the skimmer appear to be functional in the clarifier?	**Yes**
Is the sludge collector and pump functional in the clarifier?	**Yes**
Are the clarifier weir(s) level?	**Yes**
Is the clarifier free from short circuiting with loss over the weir?	**Yes**
Are the aeration basins diffusers free from clogs and providing adequate mixing?	**Yes**
Was the time clock or manual controls for the aeration system operational at the time of the inspection?	**Yes**
Is the RAS line properly located?	**Yes**
The RAS line was free from excessive splashing that could cause solids to be discharged outside the tank.	**Yes**
The mixed liquor (MLSS) in the oxidation ditch was appropriately colored with no black coloring.	**Yes**
Is even distribution of air observed in the aeration basin?	**Yes**
Are the air line(s) to the aeration basin(s) free from leaks?	**Yes**
The brushes and paddles in the oxidation ditch were all in good working order.	**N/A**
Is the velocity in the oxidation ditch sufficient to prevent settling of solids?	**N/A**
Are dual blower motors present as required by rule?	**Yes**
Are the blower motors equipped with belt guards?	**Yes**
The blower motors are free from excessive noise.	**Yes**
Are all the blower motors present and operational at the time of the inspection?	**No**
Are spare parts and a second standby blower motors stored onsite?	**Yes**
Is the electrical box wiring for the blower motors adequately protected?	**Yes**
Were the tank contents in the aerobic digester(s) well mixed?	**Yes**
Are the digester(s) free from excessive odors and/or foaming?	**No**
Is the digester at the appropriate operational capacity?	**Yes**
Are there two functioning pumps in the surge tank(s)?	**No**
What was the biomass color of the trickling filter at the time of the inspection?	N/A **N/A**
Is trickling filter media free from excessive ponding?	**N/A**
Are center columns and distribution arms of the trickling filter free from leaks?	**N/A**
Are the distribution arm orifices free from clogs, trash and/or scum resulting in uneven distribution of flow on the trickling filter media?	**N/A**
Is the RBC free from black biomass indicating solids and/or BOD loading?	**N/A**
Is the RBC free from white biomass indicating the presence of bacteria, which feed on sulfur compounds?	**N/A**

Is the RBC free from excessive grinding/whining noise(s) from the motor, drive shaft, and bearings?	**N/A**
Are all RBC rotating disks and/or paddles present and in good working?	**N/A**
Is the RBC unit drive shaft free from excessive vibration?	**N/A**
Are all the aerators in the lagoon operational at the time of the inspection?	**N/A**
Is the base of the lagoon free from lateral seepage at the time of the inspection?	**N/A**
Does the treatment lagoon have adequate freeboard space?	**N/A**
Is the treatment lagoon properly secured to prevent unauthorized access?	**N/A**
Is the treatment lagoon free from excessive foaming?	**N/A**
Are the treatment lagoon berms properly stabilized?	**N/A**
Is the Chlorine Contact Chamber (CCC) effluent clear and free from scum, solids accumulation and debris?	**Yes**
Are the baffles in the CCC functioning as intended?	**Yes**
Does the Chlorine injection point provide optimal mixing to occur in the CCC?	**Yes**
Is the CCC Chlorine pump operational, providing adequate Chlorine supply for disinfection and at the permitted location?	**Yes**
Is the Chlorine storage area protected from the elements?	**Yes**
Is the alarm indicator for the Chlorine system operational?	**N/A**
Is the Chlorine supply covered in frost indicating an issue with the system?	**N/A**
Is the fan inside the Chlorine room operational?	**N/A**
Are the Chlorine scales operational?	**N/A**
Is an operational Self-Contained Breathing Apparatus (SCBA) available for the Chlorine room?	**N/A**
Are the Chlorine gas cylinders properly secured?	**N/A**
Is a fresh supply of ammonia available to test for leaks in the gas chlorination system?	**N/A**
Do the UV ballast control boxes have adequate ventilation?	**N/A**
Does the plant staff have access to UV protective eyeglasses?	**N/A**
Is the facility maintaining adequate records of UV lamp operating hours?	**N/A**
Are the UV lamps and ballast being cleaned in accordance with the manufacturer's recommendation?	**N/A**
Does the facility have an adequate inventory of spare parts for the UV system?	**N/A**
Is the facility conducting routine performance checks on the UV system?	**N/A**
Is the UV intensity monitoring equipment operational?	**N/A**
Is the stilling well free from a thick layer of sludge and/or trash?	**Yes**
Is the Chlorine contact chamber providing a minimum contact time of 15 minutes?	**Yes**
Chlorine and SO2 cylinders marked with empty/full tags?	**N/A**
Is the automatic SO2 feed operational within de-chlorination process?	**N/A**
Is the SO2 system free from frost within de-chlorination process?	**N/A**
Are the bisulfite (SO2) gas cylinders properly secured for de-chlorination?	**N/A**
Was there adequate ventilation in the SO2 room?	**N/A**
Is the filter media free from solids that could cause plugging and/or overflow?	**Yes**
Is the land application system being maintained?	**Yes**
If an injection well was plugged or abandoned, was it completed appropriately with DEP approval?	**N/A**
If a well was constructed, was it permitted prior to beginning construction and constructed as required by permit?	**N/A**
Is the injection well Operation and Maintenance done satisfactorily?	**N/A**
Is there adequate access to all monitoring locations?	**Yes**

Is the exterior of the tanks, wall, and/or pipes of the facility free from leaks?	**No**
Are the facility grounds clean and well maintained?	**Yes**
Is the required signage adequate?	**Yes**
The facility was free from odors emanating from the facility.	**Yes**
The facility was free from excessive noise which could be heard beyond the boundaries of the facility.	**Yes**
Is the facility providing safety measures at all times including adequate lighting?	**Yes**
The facility is disposing of sludge appropriately, with no sludge being disposed of on the facility grounds.	**Yes**
Was an alternative power source available at the facility?	**Yes**
Is the onsite generator tested under load on a monthly basis?	**Yes**
Are records available for the testing of the generator?	**Yes**
Is the area around the lift station(s) maintained?	**Yes**
Are there warning signs with emergency contact information on and/or around the lift station(s)?	**Yes**
Does the facility have a fence around their lift station(s)?	**N/A**
Is the gate around the lift station and the cover to the lift station locked?	**Yes**
Is the cover to the lift station(s) free from safety hazards?	**Yes**
Are there two functioning pumps that alternate?	**Yes**
Is the electrical panel in good working order and free from needed repair and/or replacement?	**Yes**
Was the collection system or lift station free from offsite objectionable odors?	**Yes**
The lift station visual and audio alarm operating satisfactory?	**Yes**
Are the potable water supply lines and the facility free from cross connections?	**N/A**
Is an RPZ in place and free of leaks on all potable water supply lines?	**N/A**
Is there a record of testing available on the RPZ?	**N/A**
Is the facility free from any Facility Site Review violation not listed above that needs to be addressed?	**No**

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Deficiencies & Corrective Actions:

Are all the blower motors present and operational at the time of the inspection? [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, one of the surge blowers was not operational, and one of the aeration blowers was not operational.
	Corrective Action(s): (Narrative) Please submit documentation to the Department demonstrating that the non-operational blowers have been repaired and are functioning as intended.
Are the digester(s) free from excessive odors and/or foaming? [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, the digesters contained an excessive amount of foaming.
	Corrective Action(s): (Narrative) Please submit photos to the Department demonstrating that the digesters are free from excessive foam.
Are there two functioning pumps in the surge tank(s)? [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, it was noted that one of the transfer pumps from the surge tanks was not operational.
	Corrective Action(s): (Narrative) Please submit documentation to the Department demonstrating that the transfer pump has been repaired and is functioning as intended.

Is the exterior of the tanks, wall, and/or pipes of the facility free from leaks? [62-600.410 F.A.C., 62-620.300 (5) F.A.C., 62-620.610 (7) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, there were several cracks noted on the tank walls on the aerator and digester basins. There were also a couple of small leaks noted. Please refer to Photos 16, 17 and 18 in the Photo Log.
	Corrective Action(s): (Narrative) Please repair any areas of the tank walls with cracking, spalling, or leaking. Please submit documentation of these repairs to the Department.
Is the facility free from any Facility Site Review violation not listed above that needs to be addressed? [See Deficiency Narrative for Specific Rule Violated]	Deficiency: (Narrative) At the time of the inspection, the surge tanks contained excessive foam and appeared to be turning septic. It was also noted that one of the blowers for the surge tanks was inoperable, which may have caused these conditions. [Rules 62-600.410 and 62-620.300 (5), F.A.C.]
	Corrective Action(s): (Narrative) Please submit photos to the Department demonstrating that the surge tanks are operating as designed without excessive foaming.
Observations:	
Please note that the clarifier has a significant amount of pin floc, but it is not discharging over the weir. See photos 9 and 10.	

Flow Measurement

Compliance Rating	In Compliance			
Does this section apply to the facility?	◉	**Yes**	○	**No**
Questions				
Is there easy access to flow meter?	**Yes**			
Is the flow meter in the correct location?	**Yes**			
Is the flow measuring device installed properly?	**Yes**			
Is the flow meter calibrated at least annually and is it current?	**Yes**			
When was the flow meter last calibrated?	11-8-2023 **Yes**			
Is the flow measurement device operating within +/- 10% of the actual flow?	**Yes**			
Is the flow meter operating properly at the time of the inspection?	**Yes**			
The chart recorder and/or totalizer for the flow meter was operational at the time of the inspection.	**Yes**			
The elapsed time meters on the lift station pumps were functioning.	**Yes**			
The flow entering the convergence section of the Parshall Flume was free of excessive turbulence.	**Yes**			
Is the facility free from any Flow Measurement violation not listed above that needs to be addressed?	**Yes**			

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Observations:

The Facility's flow meter was last calibrated on 11/8/2023.

Operations and Maintenance

Compliance Rating	In Compliance
Does this section apply to the facility?	◉ **Yes** ○ **No**
Questions	
Does the facility have adequate plant staffing?	**Yes**
Is a certified operator operating the wastewater treatment facility with the appropriate license level for the size of the plant?	**Yes**
Is the operator performing treatment plant operation and maintenance duties in a responsible and professional manner?	**Yes**
Is the plant O&M log maintained in a hard-bound book with consecutive page numbering, or another approved format?	**Yes**
Does the facility have an O&M manual, and does the facility's O&M manual reflect the current configuration of the facility?	**Yes**
*Is the facility operated in accordance with the O & M Manual? (If there is a high potential for water quality or health impacts meets SNC criteria)	**Yes**
Is the facility maintaining a log that documents routine equipment maintenance?	**Yes**
Is the plant free of any treatment components that are in disrepair that would provide for unsafe operation?	**Yes**
Is the facility without an inflow and infiltration problem which would cause collection system and/or operational issues?	**Yes**
*Does the facility replace malfunctioning equipment, which can result in a high potential for water supply quality or health impacts?	**Yes**
Dike berms appeared to be in satisfactory condition.	**N/A**
Handrails/catwalks/ladders were in good working order providing for safe conditions.	**Yes**
The liner(s) in the containment pond(s) appeared to be functioning as intended.	**N/A**
The plant operator is fulfilling the minimum site requirements as required by the Permit.	**Yes**
Preventative maintenance is being performed in the accordance with the manufacturer's recommendations.	**Yes**
The facility maintains an adequate spare parts inventory.	**Yes**
Swales were being maintained.	**N/A**
Is the facility free from any Operations and Maintenance violation not listed above that needs to be addressed?	**Yes**

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- *Questions with "N/A" responses do not apply to the facility*

Observations:

No additional observations or deficiencies noted.

Effluent Quality

Compliance Rating	Significant Out of Compliance
Does this section apply to the facility?	○ **Yes** ○ **No**
Questions	
DMR review period:	11/01/2020 – 11/30/2023 **Yes**

A review of the Discharge Monitoring Reports revealed the following effluent exceedance(s).	Please refer to Table E in the Appendix for additional details. **No**
*Did the effluent limits exceed the Technical Review Criteria less than two times in six months?	**N/A**
*Are the effluent limits without exceedances four out of six months (chronic criteria)?	**No**
*Did the total residual Chlorine levels meet disinfection limits? (If below required minimum 10% or more of the time in a rolling 6-month period, meets SNC criteria)	**Yes**
Was the facility free of a discharge of wastewater that resulted in a fish kill?	**Yes**
*Is persistent acute toxicity documented through follow-up tests?	**N/A**
*Is persistent chronic toxicity documented through follow-up tests?	**N/A**
*Is persistent acute or chronic toxicity documented in the effluent through the use of routine and follow-up tests?	**N/A**
Does the facility meet the permit or enforcement narrative effluent limitation(s)? (Non-DMR visible sheen defined as iridescence present so as to cause taste or odor, or otherwise interfere with the beneficial use of the receiving water)	**Yes**
Is the effluent free from excessive (suspended solids, foam, grease, scum) in the discharge stream?	**Yes**
*Was the facility free from any other violation with a high potential for water quality or health impacts?	**Yes**
Is the facility free from any Effluent Quality violation not listed above that needs to be addressed?	**Yes**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "**"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Deficiencies & Corrective Actions:

A review of the Discharge Monitoring Reports revealed the following effluent exceedance(s).	Deficiency: (Narrative) Please refer to Table F in the Appendix for additional details regarding effluent exceedances. [Rule 62-600 and 62-610, F.A.C.]
	Corrective Action(s): (Narrative) Please explain how the Facility plans to address the effluent exceedances and prevent them going forward.
*Are the effluent limits without exceedances four out of six months (chronic criteria)? [40 CFR Part 123.45]	Deficiency: (Narrative) A review of the effluent exceedances revealed chronic exceedances.
	Corrective Action(s): (Narrative) Please explain how the Facility plans to address the effluent exceedances and prevent them going forward.

Observations:

The Fecal Coliform limit for the groundwater compliance wells at this Facility is 0.0 #/100ml. Because the laboratory has an MDL of 1.0 #/100ml, the Facility is being given an exceedance for Fecal Coliform samples even when they are undetectable because those results must be reported as "<1.0 #/100ml". Please contact the Department to have this issue on the permit corrected.

The Total Residual Chlorine was found to be 10 mg/L from the facility's inline Chlorine meter.

Effluent Disposal

Compliance Rating	Out of Compliance
Does this section apply to the facility?	(•) **Yes** ( ) **No**
Questions	
Are discharge location(s) as per permit?	**Yes**
What type of reuse is the facility approved for?	Part 4 Public Access Reuse **Yes**
Has a cross connection control program been implemented within the areas where reclaimed water is provided for use (Part III, VII)?	**Yes**
Is all reclaimed water piping and equipment color-coded Pantone purple (522C)?	**No**
Hose bibbs met access restrictions and other requirements.	**Yes**
Reclaimed water valves and outlets were appropriately tagged and /or labeled.	**Yes**
Are advisory signs posted in English and Spanish in areas where non-potable Public Access Reuse water is being applied (Part III, VII)?	**Yes**
Is the reclaimed water retained on the application site?	**Yes**
No significant ponding was observed on the reclaimed water application site.	**Yes**
There was no aerosol mist leaving the boundaries of the land application?	**Yes**
There was no evidence of solids loss in the treatment process or from the plant?	**Yes**
The RIBs and/or percolation ponds were free from excessive vegetation and sludge?	**N/A**
The percolation ponds were free from accumulated sludge.	**N/A**
Does the percolation ponds have at least 3 ft of freeboard?	**N/A**
The absorption field was free from excessive vegetation.	**N/A**
Do the reclaimed water storage ponds have adequate freeboard?	**Yes**
Are RIBs well maintained and free from excessive vegetation?	**N/A**
There was no evidence of a bypass or failure at the effluent storage and/or disposal site(s)?	**Yes**
Are all effluent disposal areas such as RIBs, ponds, and sprayfields being loaded and rested per permit conditions?	**Yes**
The disposal pond berms were free from excessive growth or vegetation.	**N/A**
There was no evidence of a bypass or failure from the storage ponds observed during the inspection.	**Yes**
No unauthorized discharge to waters of the state was observed during the inspection.	**Yes**
Are the sprinklers functioning as intended for the absorption field(s) or sprayfield(s)?	**N/A**
The facility is meeting the minimum setback distances.	**Yes**
Does the facility maintain a supply of spare parts for the absorption field(s) or sprayfield(s)?	**N/A**
The effluent disposal and/or storage area was free from sinkholes.	**Yes**
Are the sprayfields free from grazing dairy cattle?	**N/A**
The sprayfield was free from ponding.	**N/A**
The sprayfield was free from excessive vegetation.	**N/A**
Edible food crops were being properly irrigated with reclaimed water.	**N/A**
What cover crop and/or vegetation is planted on the reclaimed water area(s)?	N/A **N/A**
*The disposal system was being operated as designed with a low potential for water quality or health impacts.	**Yes**
*There was no unauthorized operation or modification of the disposal system.	**Yes**
Fencing around the effluent disposal site for access control was complete and in good repair.	**N/A**
There were no dead animals observed in the discharge stream.	**Yes**

Is the facility free from any Effluent Disposal violation not listed above that needs to be addressed?	**Yes**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "**"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Deficiencies & Corrective Actions:	
Is all reclaimed water piping and equipment color-coded Pantone purple (522C)? [62-610.469 (7)(f) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, it was noted that the piping at one of the reuse pumping stations was not Pantone Purple.
	Corrective Action(s): (Narrative) Please submit photos to the Department demonstrating that the reuse piping has been appropriately color-coded Pantone Purple.

Observations:

No additional observations or deficiencies noted.

Biosolids

Compliance Rating	In Compliance
Does this section apply to the facility?	◉ **Yes** ○ **No**
Questions	
Does the facility's method of biosolids use or disposal match what is allowed in the facility permit (i.e., landfill, land application, distribution and marketing, transfer to another facility, biofuel/bioenergy)?	**Yes**
Does the permittee keep records of biosolids quantities for five years, as applicable (quantities generated, received from source facilities, treated, distributed and marketed, land applied, used as a biofuel or for bioenergy, transferred to another facility, or landfilled?	**Yes**
Are biosolids quantities reported on the facility RMP-Q DMR?	**Yes**
Are the biosolids quantities reported on the RMP - Q DMRs correct and accurate?	**Yes**
The facility's treatment, management, transportation, use, land application, or disposal of biosolids does not result in objectionable odors, i.e., does not result in a violation of the odor prohibition in subsection 62-296.320(2)	**N/A**
If there is an objectionable odor, please describe the odors characteristics, frequency, duration, and migration, etc.	N/A **N/A**
Is the storage of biosolids or other solids at this facility in accordance with the Facility Biosolids Storage Plan?	**N/A**
Does the treatment facility ensure no biosolids are spilled from or tracked off the treatment facility property by the hauling vehicle?	**N/A**
The biosolids for this facility are classified as_____: (AA, A, and/or B)	N/A **N/A**
Does the class of biosolids produced for beneficial use match the authorized class in the facility permit (Class AA, A, or B)?	**N/A**
Does the facility use the biosolids pathogen reduction alternative option identified in the permit?	**N/A**
Are all the operational and process parameters monitored to demonstrate compliance for pathogen reduction?	**N/A**
Do the biosolids meet the treatment requirements for pathogen reduction option used?	**N/A**
Does the facility use the biosolids vector attraction reduction option identified in the permit?	**N/A**

Are all the operational and process parameters monitored to demonstrate compliance for vector attraction reduction?	**N/A**
Do the biosolids satisfactorily meet the treatment requirements for vector attraction reduction?	**N/A**
If the Specific Oxygen Uptake Rate (SOUR) test is used for vector attraction reduction, is it conducted within 15 minutes of sample collection by a certified laboratory or under the direction of an operator certified in accordance with Chapter 62-602, F.A.C?	**N/A**
Does treatment of biosolids or septage for the purpose of meeting pathogen reduction or vector attraction reduction requirements take place at the permitted facility (e.g., not in the tank of a hauling vehicle)?	**N/A**
Are the biosolids monitored at the frequency required by the permit?	**N/A**
Are the biosolids monitoring results reported on the facility DMR (RMP-AA, RMP-A, or RMP-B)?	**N/A**
Are the biosolids monitored for all the required parameters for the class of biosolids?	**N/A**
Do the Class AA, A, or B biosolids comply with the ceiling pollutant limits?	**N/A**
Are the correct analysis methods used for biosolids?	**N/A**
Is a certified laboratory used for the analysis of the biosolids?	**N/A**
Are all biosolids samples representative and taken after final treatment of the biosolids but before land application or distribution and marketing, unless otherwise approved?	**N/A**
Are all biosolids samples taken at the location specified in the facility permit?	**N/A**
Are the correct sample types properly taken for the type of biosolids (POTW Sludge Sampling Manual)?	**N/A**
Are the Class AA biosolids monitored monthly?	**N/A**
Do the Class AA biosolids meet the Class AA parameter limits?	**N/A**
Are Class AA biosolids that are stored for more than 45 days re-sampled for fecal coliform or Salmonella sp. at the frequency specified in the permit, if required?	**N/A**
For distribution and marketing, does the facility have a fertilizer license, sell or given-away to someone with a fertilizer license, or is enrolled in the US Composting Council's Seal to Testing Assurance program (USCC STA program does not apply in the Lake Okeechobee, St. Lucie River, and Caloosahatchee River watersheds)?	**N/A**
If the facility discovered that distributed and marketed biosolids did not meet Class AA standards, did the facility notify, within 24 hours, the Department and all persons to whom they delivered or distributed and marketed the Class AA biosolids?	**N/A**
Does the facility make available to users by product labels or other means the following information - fertilizer label or equivalent information; name and address of the facility; statement that the biosolids meet subsection 62-640.700 (5), F.A.C.; recommend application rates; and recommendations for storage (including the more than one dry ton/seven-day provision)?	**N/A**
Are all the sites where biosolids are land applied listed on the Treatment Facility Biosolids Plan form (DEP Form 62-640.219(2)(a))?	**N/A**
If a permitted site not listed in the Treatment Facility Biosolids Plan was used, did the permittee notify DEP at least 24 hours prior to land application at the site and submit a revised form within 30 days after using the site?	**N/A**
Did the facility only used permitted sites - i.e., no unpermitted sites were used for land application (i.e., the site did not have a valid DEP permit)?	**N/A**
Does the permittee maintain hauling records for shipments to land application sites and do they contain the required information?	**N/A**
Does the permittee provide a copy of the hauling records to the biosolids site manager, were records free of any discrepancies regarding the quantities delivered, and any discrepancies were reported to DEP within 24 hours of discovery?	**N/A**

Did all biosolids sent to sites meet pathogen reduction, vector attraction reduction, and pollutant limits?	**N/A**
If biosolids not meeting standards were sent to a site, did the permittee notify DEP, the site manager, the site permittee within 24 hours of discovery?	**N/A**
Does the permittee maintain copies for each site used of the Biosolids Application Site Annual Summary forms received from the site permittees indefinitely?	**N/A**
Has the permittee submitted Treatment Facility Biosolids Annual Summary reports to DEP by February 19 each year?	**N/A**
Was the information in the Treatment Facility Biosolids Annual Summary accurate?	**N/A**
Is any incineration or use of biosolids as a biofuel or for bioenergy in accordance with DEP's air regulations and RCRA?	**N/A**
Does the permittee keep the required hauling records to track transport of biosolids between facilities?	**Yes**
If the facility receives biosolids from a source facility, did the permittee report any discrepancies in the quantities of biosolids to DEP within 24 hours of discovery?	**N/A**
If the facility is a source facility and sends biosolids to another facility, does the permittee provide a copy of their hauling records for each shipment to the receiving facility?	**N/A**
If the facility receives biosolids from a source facility, does the receiving facility permit allow receipt of biosolids from other facilities?	**N/A**
Does the facility have copies of the required written agreement(s) between the receiving and source facility?	**N/A**
Did the permittee (source or receiving facility) submit all new written agreements to DEP within 30 days before transporting biosolids (unless approval given otherwise)?	**N/A**
Is operator staffing requirements met?	**N/A**
Are the biosolids receiving and handling operations satisfactory?	**N/A**
Are grit and screenings, etc., from the headworks properly disposed of in a landfill?	**N/A**
Is the facility free from any Biosolids violation not listed above that needs to be addressed?	**N/A**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*****"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Observations:

The Facility last hauled 18,000 gallons of biosolids on December 13, 2023, by Karle Environmental, Inc.

Biosolids generated by this facility may be disposed of in a Class I solid waste landfill.

Groundwater

Compliance Rating	Out of Compliance
Does this section apply to the facility?	○ **Yes** ○ **No**
Questions	
DMRs review period	12/01/2022 – 11/30/2023 **Yes**
Are the groundwater monitoring results sent to the Department on Discharge Monitoring Report, Form 62-620.910 (10), F.A.C. and submitted by the DMR due date?	**Yes**
After a review of the Discharge Monitoring Reports, are the compliance well parameters meeting the groundwater standards in the time period reviewed (12 months or greater)?	**No**

A review of the Discharge Monitoring Reports revealed the following effluent exceedance(s).	Please refer to Table F in the Appendix for additional details. **No**
Do the facilities purging logs on DEP Form FD 9000-24 indicate that purging was done properly; including sufficient volume, purge rate, depth to water, and stability criteria (pH, Temperature, Conductivity, Dissolved Oxygen, Turbidity)?	**Yes**
Is the groundwater monitoring report complete and accurate, including analysis method, laboratory method detection limits, static water level, purging logs, sample collection procedures and treatment?	**No**
Do the groundwater monitoring wells meet DEP requirements including tamper-proof locks, unique well label(s), concrete well pad with protective bumpers not containing numerous cracks, and is free of clutter for sampling purposes?	**No**
If or when new well construction was completed did the facility plug and properly abandoned the existing well and submit Monitoring well completion Report, Form 62-520.900 (3) to DEP within 60 days?	**N/A**
If a monitoring well became damaged or inoperable was maintenance conducted and notification sent to DEP within 2 days of discovery?	**N/A**
Is the well(s) that the facility is sampling at part of the approved groundwater monitoring plan?	**Yes**
Are the monitoring wells operable to the extent that sampling is possible?	**Yes**
Are groundwater samples being collected and analyzed as required by the permit or enforcement action; including location, well type, sample type (grab/composite), time, and frequency?	**Yes**
If sampling was observed were the sample collection activities being performed in accordance with DEP SOP FS 2200?	**N/A**
If sampling was observed was equipment in satisfactory condition?	**N/A**
If sampling was not observed is the description of sample collection activities being performed in accordance with DEP SOP FS 2200?	**N/A**
Is the facility free from any Groundwater violation not listed above that needs to be addressed?	**Yes**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Deficiencies & Corrective Actions:

After a review of the Discharge Monitoring Reports, are the compliance well parameters meeting the groundwater standards in the time period reviewed (12 months or greater)? [62-520.420 F.A.C.]	Deficiency: (Narrative) A review of the Discharge Monitoring Reports revealed Groundwater Exceedances. Please refer to Table F in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please indicate to the Department how the Facility will prevent exceedances in the groundwater going forward.
Is the groundwater monitoring report complete and accurate, including analysis method,	Deficiency: (Narrative) October – December 2022 Groundwater DMR stated that the Background monitoring well MWB-21302 was "MNR" – monitoring not required. This well is required to be sampled by the permit.
	Corrective Action(s): (Narrative)

laboratory method detection limits, static water level, purging logs, sample collection procedures and treatment? [62-520.900 (2) F.A.C.]	Please provide documentation to the Department on why "MNR" was used for MWB-21302 well.
Do the groundwater monitoring wells meet DEP requirements including tamper-proof locks, unique well label(s), concrete well pad with protective bumpers not containing numerous cracks, and is free of clutter for sampling purposes? [62-520.600(6)(e) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, it was noted that there were deficiencies at each of the Facility's five Groundwater Monitoring Wells. Please refer to Table G in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please submit documentation to the Department demonstrating that each of the noted Groundwater Monitoring Well deficiencies have been corrected.
Observations:	
No additional observations or deficiencies noted.	

SSO Survey

Compliance Rating	In Compliance				
Does this section apply to the facility?	◉	**Yes**	○	**No**	
Questions					
Does the facility have an Operation and Maintenance Manual for their collection system?	**Yes**				
How often is the Operation and Maintenance Manual updated?	As needed. **Yes**				
Does the O&M manual reflect the current collection system configuration?	**Yes**				
Are procedures available for minimizing spills in either the Operation and Maintenance Manual or in a separate document?	**Yes**				
Does the facility have a Sewer Overflow Response Plan/procedures for minimizing spills?	**Yes**				
Did the facility collect and/or analyze bacteriological samples as outlined in their SORP?	**N/A**				
Does the facility have a map of its collection system?	**Yes**				
Are the SORP and collection system maps immediately available to SSO response staff, including during power failures?	**Yes**				
Did the facility collect and/or analyze bacteriological samples for sewage spills that reached surface waters?	**N/A**				
Does the facility perform routine preventative maintenance to keep the collection/transmission system in good working order?	**Yes**				
Does the facility maintain a ready-to-use supply of equipment, tools and materials for responding to SSOs?	**Yes**				
How many lift stations have permanent emergency back-up power generators?	N/A **N/A**				

In the last 12 months, was the facility free from sewage spills or abnormal event from any part of a collection/transmission system or treatment plant that discharged to the ground or did not make it to surface waters, i.e., stormwater collection system, drainage ditch, stream, pond, or lake?	**N/A**
Does the facility report the spill(s) to the Department within 24 hours of discovery?	**Yes**
Does the facility follow up on spills?	**Yes**
Does the facility keep routine documentation and reporting records of spills, and/or operation and maintenance activities on the collection/transmission system(s)?	**Yes**
In the last 12 months, was the facility free from sewage spills or abnormal events from any components of a collection/transmission system or from a treatment plant that reached surface waters including stormwater conveyance system or drainage ditch?	**Yes**
Is the facility free from any SSO violation not listed above that needs to be addressed?	**Yes**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Observations:

The Facility reported one spills within the past 12 months. Please refer to Table H of the appendix for additional details.

The Department has developed new guidance on how Sanitary Sewer Overflows (SSOs) are addressed statewide, which was implemented July 1, 2019. According to the guidance each SSO incident is evaluated and rated, and the appropriate document is filed/issued. Either a Memo-to-File, a Compliance Assistance Offer Letter, or Warning Letter is sent for each incident. A Memo-to-File was sent for the June 2023 SSO: https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1208936.1]&[profile=Discovery_Compliance]

No further action required at this time, but The Department may require formal enforcement on the SSOs, pursuant to your permit conditions, Chapter 62-620, Fla. Admin. Code, and Chapter 403, Fla. Stat.

Other

Compliance Rating	Not Evaluated
Does this section apply to the facility?	(•) **Yes** ( ) **No**
Questions	
*Is the facility free from any violation not listed above, or pattern of noncompliance, resulting in a high potential for water quality or health impacts *(Any violations considered significant by the Secretary, Deputy Secretary, Director of District Management, or the Division Director meet SNC criteria)*	**N/A**
Please describe any potential non-wastewater violations (i.e. Hazardous Waste, Stormwater, SLERP, Air and Storage Tanks) that were referred.	**N/A** **N/A**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Observations:

Not Evaluated.

Deficiencies Summary

Evaluation Area: Sampling	
The facility failed to collect and/or analyze samples as required by permit or enforcement action. [62-600.650 (1) F.A.C., 62-620.610 (18) F.A.C., 62-160.210 (1) F.A.C., 62-600.660 (1) F.A.C., DEP SOP FS 2400, ANCV]	Deficiency: (Narrative) A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. *[62-610.463(4)]* If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020. October – December 2022 Groundwater DMR stated that the Background monitoring well MWB-21302 was "MNR" – monitoring not required. This well is required to be sampled by the permit.
	Corrective Action(s): (Narrative) Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future. Please provide documentation to the Department on why "MNR" was used for MWB-21302 well.
Is composite sampling being conducted appropriately; including purging, sampling velocity at least 2fps, clean tubing, individual sample volume of at least 100 mL, sample storage of =6°C preservation, hold times and representative samples? [62-160.210 (1) F.A.C., 62-160.800 (1)(a) F.A.C., DEP SOP FS 2400, 62-160.300 F.A.C., 40 C.F.R. 136 Table II]	Deficiency: (Narrative) At the time of the inspection, the Facility did not have a NIST thermometer certification for the composite sampler.
	Corrective Action(s): (Narrative) During the inspection, the operator indicated that the composite sampler is not refrigerated. Please explain how samples are stored at <6°C, and how this temperature is verified.

Evaluation Area: Records and Reports	
Are the discharge monitoring reports completed properly? [403.161(1)(b) F.S., 62-600.680 F.A.C.]	Deficiency: (Narrative) A review of the Discharge Monitoring Reports revealed deficiencies. Please refer to Table C in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please correct and resubmit all DMRs with noted calculation and/or transcription errors.
	Deficiency: (Narrative)

Does the facility submit their monitoring results for Giardia and Cryptosporidium in a timely manner? [62-610.463 (4) F.A.C., 62-600.680 F.A.C.]	A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. *[62-610.463(4)]* If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020.
	Corrective Action(s): (Narrative) Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future.
The facility failed to submit any report required by rule, permit, enforcement action or inspection activity except for DMRs. [62-610.870 (3) F.A.C., 62-610.865 (11) F.A.C., 62-600.405 F.A.C., 403.161(1)(b) F.S., FRPT]	Deficiency: (Narrative) A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. *[62-610.463(4)]* If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020.
	Corrective Action(s): (Narrative) Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future.
The permittee failed to submit any DMR required by rule, permit, or enforcement action in a timely manner. [403.161(1)(b) F.S., 62-600.680 F.A.C., 62-620.610 (18)(a) F.A.C., FDMR]	Deficiency: (Narrative) A timeliness review of the DMRs revealed there was one late submission in April 2021. Please refer to Table E in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please ensure all DMRs are submitted timely going forward. No further action required at this time.

Evaluation Area: Facility Site Review	
Are all the blower motors present and operational at the time of the inspection? [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, one of the surge blowers was not operational, and one of the aeration blowers was not operational.
	Corrective Action(s): (Narrative) Please submit documentation to the Department demonstrating that the non-operational blowers have been repaired and are functioning as intended.
Are the digester(s) free from excessive odors and/or foaming? [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, the digesters contained an excessive amount of foaming.
	Corrective Action(s): (Narrative) Please submit photos to the Department demonstrating that the digesters are free from excessive foam.
Are there two functioning pumps in the surge tank(s)? [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, it was noted that one of the transfer pumps from the surge tanks was not operational.
	Corrective Action(s): (Narrative)

	Please submit documentation to the Department demonstrating that the transfer pump has been repaired and is functioning as intended.
Is the exterior of the tanks, wall, and/or pipes of the facility free from leaks? [62-600.410 F.A.C., 62-620.300 (5) F.A.C., 62-620.610 (7) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, there were several cracks noted on the tank walls on the aerator and digester basins. There were also a couple of small leaks noted. Please refer to Photos 16, 17 and 18 in the Photo Log.
	Corrective Action(s): (Narrative) Please repair any areas of the tank walls with cracking, spalling, or leaking. Please submit documentation of these repairs to the Department.
Is the facility free from any Facility Site Review violation not listed above that needs to be addressed? [See Deficiency Narrative for Specific Rule Violated]	Deficiency: (Narrative) At the time of the inspection, the surge tanks contained excessive foam and appeared to be turning septic. It was also noted that one of the blowers for the surge tanks was inoperable, which may have caused these conditions. [Rules 62-600.410 and 62-620.300 (5), F.A.C.]
	Corrective Action(s): (Narrative) Please submit photos to the Department demonstrating that the surge tanks are operating as designed without excessive foaming.

Evaluation Area: Effluent Quality	
A review of the Discharge Monitoring Reports revealed the following effluent exceedance(s).	Deficiency: (Narrative) Please refer to Table F in the Appendix for additional details regarding effluent exceedances.
	Corrective Action(s): (Narrative) Please explain how the Facility plans to address the effluent exceedances and prevent them going forward.
*Are the effluent limits without exceedances four out of six months (chronic criteria)? [40 CFR Part 123.45]	Deficiency: (Narrative) A review of the effluent exceedances revealed chronic exceedances.
	Corrective Action(s): (Narrative) Please explain how the Facility plans to address the effluent exceedances and prevent them going forward.

Evaluation Area: Effluent Disposal	
Is all reclaimed water piping and equipment color-coded Pantone purple (522C)? [62-610.469 (7)(f) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, it was noted that the piping at one of the reuse pumping stations was not Pantone Purple.
	Corrective Action(s): (Narrative) Please submit photos to the Department demonstrating that the reuse piping has been appropriately color-coded Pantone Purple.

Evaluation Area: Groundwater	
After a review of the Discharge Monitoring Reports, are the compliance well parameters meeting the groundwater standards in the time period reviewed (12 months or greater)? [62-520.420 F.A.C.]	Deficiency: (Narrative) A review of the Discharge Monitoring Reports revealed Groundwater Exceedances. Please refer to Table F in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please indicate to the Department how the Facility will prevent exceedances in the groundwater going forward.
	Deficiency: (Narrative)

Is the groundwater monitoring report complete and accurate, including analysis method, laboratory method detection limits, static water level, purging logs, sample collection procedures and treatment? [62-520.900 (2) F.A.C.]	October – December 2022 Groundwater DMR stated that the Background monitoring well MWB-21302 was "MNR" – monitoring not required. This well is required to be sampled by the permit.
	Corrective Action(s): (Narrative) Please provide documentation to the Department on why "MNR" was used for MWB-21302 well.
Do the groundwater monitoring wells meet DEP requirements including tamper-proof locks, unique well label(s), concrete well pad with protective bumpers not containing numerous cracks, and is free of clutter for sampling purposes? [62-520.600 (6)(e) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, it was noted that there were deficiencies at each of the Facility's five Groundwater Monitoring Wells. Please refer to Table G in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please submit documentation to the Department demonstrating that each of the noted Groundwater Monitoring Well deficiencies have been corrected.

Appendix for FLA014478 Inspection Conducted on December 20, 2023

Table A – Buffer, Reagent, and Standard Lot Numbers and Expiration Dates

Standard/Buffer	Lot No.	Expiration Date
pH 4.00 s.u.	H3123B	8/31/2025
pH 7.00 s.u.	L3023A	11/30/2025
pH 10.00 s.u.	K1323D	4/13/2025
Chlorine Standards	A3320	November 2025
Turbidity 0-10 NTU	A2117	* Unreadable and awaiting info

Table B – Operator Names and License Numbers

Operator Name	License Class and Number	Expiration Date
Burke Young	WWC 0014943	04-30-2025
Adrian Charlton	WWA 0014895	04-30-2025

Table C – Discharge Monitoring Report Deficiencies
12/01/2022 – 11/30/2023

Monitoring Period	DMR (R-001) Deficiencies
December 2022 – November 2023	• The Facility is required to report the annual average for Flow from monitoring site FLW-02. Flow from FLW-02 is required to be monitored 5 days/week. There is not, however, a column for this parameter on Part B. Because of this, the annual averages cannot be verified.
November 2023	• A review of the DMR revealed the following calculation errors: o The Percent Capacity was reported as 62.46 %. The calculated value was 61.71%
October 2023	• A review of the DMR revealed the following calculation errors: o The annual average for CBOD (EFA-01) was reported as 2.94 mg/L. The calculated value was 2.69 mg/L. o The monthly average for CBOD (EFA-01) was reported as 7 mg/L. The calculated value was 2.9 mg/L. o The monthly average for Flow (FLW-01) was reported as 0.549 MGD. The Calculated value was 0.531 MGD. o The Percent Capacity was reported as 68.625 %. The calculated value was 59.38%
September 2023	• A review of the DMR revealed the following calculation errors: o The annual average for CBOD (EFA-01) was reported as 2.76 mg/L. The calculated value was 2.70 mg/L. o The monthly average for CBOD (EFA-01) was reported as 7 mg/L. The calculated value was 3.9 mg/L. o The Percent Capacity was reported as 86.11 %. The calculated value was 55%
August 2023	• A review of the DMR revealed the following calculation errors: o The annual average for CBOD (EFA-01) was reported as 2.77 mg/L. The calculated value was 2.87 mg/L. o The Percent Capacity was reported as 94.17 %. The calculated value was 54.46%
July 2023	• A review of the DMR revealed the following transcription errors: o The monthly minimum for Chlorine (EFA-01) was reported as 5.1 mg/L, however, a review of Part B indicates the correct value is 3.8 mg/L. • A review of the DMR revealed the following calculation errors: o The annual average for CBOD (EFA-01) was reported as 2.64 mg/L. The calculated value was 2.86 mg/L. o The monthly average for CBOD (EFA-01) was reported as 7 mg/L. The calculated value was 3.4 mg/L.
June 2023	• A review of the DMR revealed the following calculation errors: o The annual average for CBOD (EFA-01) was reported as 2.52 mg/L. The calculated value was 2.75 mg/L. o The monthly average for CBOD (EFA-01) was reported as 6 mg/L. The calculated value was 3.1 mg/L. o The Fecal Coliform % less than detection (EFA-02) was reported as 100%. The calculated value was 87%.
May 2023	• A review of the DMR revealed the following transcription errors: o The monthly average for CBOD (EFA-01) was reported as 0.476 mg/L, however, Part B indicates that the laboratory MDL is 2 mg/L, so this should be recorded as "<2 mg/L". • A review of the DMR revealed the following calculation errors: • The annual average for CBOD (EFA-01) was reported as 2.39 mg/L. The calculated value was 2.62 mg/L.
April 2023	• A review of the DMR revealed the following calculation errors: • The annual average for CBOD (EFA-01) was reported as 2.47 mg/L. The calculated value was 2.70 mg/L. • The Percent Capacity was reported as 61.75 %. The calculated value was 62.58%
March 2023	• A review of the DMR revealed the following transcription errors:

	○ The annual average for CBOD (EFA-01) was reported as NOD on Part A, however, calculations indicated this was 2.70 mg/L . ○ The annual average for CBOD (EFA-02) was reported as 2.4 mg/L on Part A, however, a review of Part B indicated this was NOD.
February 2023	• A review of the DMR revealed the following transcription errors: ○ The annual average for CBOD (EFA-02) was reported as 2.38 mg/L on Part A, however, a review of Part B indicated this was NOD. ○ The monthly maximum for TSS (EFB-01) was reported as NOD, however, a review of Part B indicates the correct value is <1 mg/L. ○ The monthly minimum for Chlorine (EFA-01) was reported as NOD, however, a review of Part B indicates the correct value is <1 mg/L ○ The Fecal Coliform % less than detection (EFA-02) was reported as 100%, however, a review of Part B indicates that this was NOD. • A review of the DMR revealed the following calculation errors: • The annual average for CBOD (EFA-01) was reported as 2.38 mg/L. The calculated value was 2.70 mg/L.
January 2023	• A review of the DMR revealed the following calculation errors: • The annual average for CBOD (EFA-01) was reported as 2.45 mg/L. The calculated value was 2.75 mg/L. • The Percent Capacity was reported as 57.875 %. The calculated value was 55.7%
December 2022	• A review of the DMR revealed the following transcription errors: ○ The monthly average for CBOD (EFA-01) was reported as 1.75 mg/L, however, Part B indicates that the laboratory MDL is 2 mg/L, so this should be recorded as "<2 mg/L". ○ The monthly maximum for TSS (EFB-01) was reported as 0.548 mg/L, however, a review of Part B indicates the correct value is 1.50 mg/L. ○ The monthly minimum for Chlorine (EFA-01) was reported as 5.0 mg/L, however, a review of Part B indicates the correct value is 3.8 mg/L. • A review of the DMR revealed the following calculation errors: • The annual average for CBOD (EFA-01) was reported as 2.45 mg/L. The calculated value was 2.95 mg/L.

Groundwater Monitoring Report Deficiencies
12/01/2022 – 9/30/2023

Monitoring Period	GW Monitoring Wells Deficiencies
Oct – Dec 2022	• The results for Monitoring Well MWB-21302 are listed as MNR with no explanation provided.

Table E – Late or Missing DMRs
11/1/2020 – 11/30/2023

Monitoring Period	Date Due	Date Received	Days Late
April 2021	5/28/2021	6/4/2021	7

Table F – Effluent Exceedances
11/01/2020 – 11/30/2023

Date	Monitoring Group	Monitoring Location	Parameter	Description	Result	Limit	Units	Statistical Base	Explanation
11/30/2023	R-001	EFA-01	P 51005	Coliform, Fecal, % less than detection	70	75.0	percent	TM - Minimum Total Monthly	None Provided
9/30/2023	R-001	EFA-01	P 74055	Coliform, Fecal	200	25.0	#/100mL	MB - Maximum	None Provided
8/31/2023	R-001	EFA-01	P 74055	Coliform, Fecal	200	25.0	#/100mL	MB - Maximum	
8/31/2023	R-001	EFA-01	P 51005	Coliform, Fecal, % less than detection	70.97	75.0	percent	TM - Minimum Total Monthly	None Provided
7/31/2023	R-001	EFA-01	P 74055	Coliform, Fecal	200	25.0	#/100mL	MB - Maximum	
7/31/2023	R-001	EFA-01	P 51005	Coliform, Fecal, % less than detection	74.19	75.0	percent	TM - Minimum Total Monthly	None Provided
6/30/2023	R-001	EFA-01	P 74055	Coliform, Fecal	200	25.0	#/100mL	MB - Maximum	None Provided

Appendix for FLA014478 Inspection Conducted on December 20, 2023

5/31/2023	R-001	EFA-01	P 74055	Coliform, Fecal	200	25.0	#/100mL	MB - Maximum	May 27th 1530 received a fail fecal coliform; immediately went to reject May 29th 1230 passed fecal set plant back to normal operation Total reject: 0.558mg
5/31/2023	R-001	EFA-01	P 51005	Coliform, Fecal, % less than detection	64.5	75.0	percent	TM - Minimum Total Monthly	
4/30/2023	R-001	EFA-01	P 51005	Coliform, Fecal, % less than detection	60	75.0	percent	TM - Minimum Total Monthly	None Provided
3/31/2022	R-001	EFB-01	P 00530	Solids, Total Suspended	7.4	5.0	mg/L	MB - Maximum	None Provided
2/28/2022	R-001	EFA-02	P 51005	Coliform, Fecal, % less than detection	0	75.0	percent	TM - Minimum Total Monthly	None Provided
2/28/2022	R-001	EFA-02	P 00400	pH	0	6.0	s.u.	ME - Minimum	
2/28/2022	R-001	EFA-02	P 50060	Chlorine, Total Residual	0	1.0	mg/L	ME - Minimum	
10/31/2021	R-001	EFA-01	P 74055		40	25.0	#/100mL	MB - Maximum	None Provided
6/30/2021	R-001	EFA-01	P 74055	Coliform, Fecal	36	25.0	#/100mL	MB - Maximum	Just started operations at this plant. Working to bring plant back into compliance.
5/31/2021	R-001	EFA-01	P 74055	Coliform, Fecal	200	25.0	#/100mL	MB - Maximum	Just started operations at this plant. Working to bring plant back into compliance.

Table G – Groundwater Monitoring Exceedances

Date	<Compliance Well(s)>	<Background Well(s) Limit> MWB-21302	Permit Limit(s)	DMR Comments
Jul – Sept 2023	MWC-21304: Fecal Coliform = 1.0 #/100ml MWC-80020: Fecal Coliform = 2.0 #/100ml	<1 #/100ml	0.0 #/100ml	Resampled 9/20/23 12:45PM Results yield <1 Resampled 9/20/23 11:44 AM Results yield <1
Apr – Jun 2023	MWC-80020: Nitrogen, Nitrate, Total = 17.7 mg/L	0.0 mg/L	10.0 mg/L	None Provided
Jan – Mar 2023	MWC-80019: Fecal Coliform = 1.0 #/100ml	<1 #/100ml	0.0 #/100ml	None Provided
Oct – Dec 2022	MWC-21304: Fecal Coliform = <1.0 #/100ml MWC-80020: Fecal Coliform = <1.0 #/100ml MWC-80019: Fecal Coliform = <1.0 #/100ml	MNR	0.0 #/100ml	None Provided
Jul – Sept 2022	MWC-80020: Fecal Coliform = 5.0 #/100ml	4.0 #/100ml	0.0 #/100ml	Resampled on 9/20/22 and the result was < 1
Apr - Jun 2022	MWC-21304: pH = 6.44 s.u.	6.92 s.u.	6.5 – 8.5 s.u.	None Provided
Apr - Jun 2022	MWC-80020: Nitrogen, Nitrate, Total = 24.5 mg/L	<0.01 mg/L	10.0 mg/L	None Provided
Jan – Mar 2022	MWC-21304: pH = 6.41 s.u.	7.09 s.u.	6.5 – 8.5 s.u.	None Provided
Jan – Mar 2022	MWC-80020: Nitrogen, Nitrate, Total = 18 mg/L	<0.01 mg/L	10.0 mg/L	None Provided
Oct – Dec 2021	MWC-21304: pH = 6.11 s.u. MWC-80020: pH = 6.3 s.u.	6.89 s.u.	6.5 – 8.5 s.u.	None Provided
Oct – Dec 2021	MWC-80020: Nitrogen, Nitrate, Total = 10.8 mg/L	NOD	10.0 mg/L	None Provided
Jul – Sept 2021	MWC-21304: pH = 6.37 s.u.	6.9 s.u.	6.5 – 8.5 s.u.	Heavy rain
Jul – Sept 2021	MWC-80020: Fecal Coliform = 2.0 #/100ml	1.0 #/100ml	0.0 #/100ml	< 2.00 ND= Not detected at the reporting limit
Apr - Jun 2021	MWC-21304: pH = 6.29 s.u.	6.82 s.u.	6.5 – 8.5 s.u.	Just started operations of plant. Working to bring plant back into compliance.
Apr - Jun 2021	MWC-80020: Nitrogen, Nitrate, Total = 15 mg/L	0.01 mg/L	10.0 mg/L	Just started operations of plant. Working to bring plant back into compliance.
Jan – Mar 2021	MWC-21304: Total Dissolved Solids = 1240 mg/L MWC-80019: Total Dissolved Solids = 668 mg/L	388 mg/L	500 mg/L	None Provided

Jan – Mar 2021	MWC-21304: Chloride as (Cl) = 394 mg/L MWC-80020: Chloride as (Cl) = 324 mg/L	15.8 mg/L	250 mg/L	None Provided
Jan – Mar 2021	MWC-21304: pH = 6.44 s.u.	7.15 s.u.	6.5 – 8.5 s.u.	None Provided
Jan – Mar 2021	MWC-80020: Nitrogen, Nitrate, Total = 55.1 mg/L	<0.01 mg/L	10.0 mg/L	None Provided
Oct – Dec 2020	MWC-21304: Chloride as (Cl) = 970 mg/L	220 mg/L	500 mg/L	None Provided
Oct – Dec 2020	MWC-21304: Chloride as (Cl) = 295 mg/L	13.9 mg/L	250 mg/L	None Provided

Table H – Groundwater Monitoring Well Deficiencies

Groundwater Monitoring Well Deficiencies	
Well Description	**Deficiencies**
F1	• The well label does not match the Monitoring Well ID on the Permit. • The well pad is severely cracked.
F2	• The well label does not match the Monitoring Well ID on the Permit. • The well was not locked. • There was water inside the protective casing. • There was no cap on the well inside the protective casing.
F3	• The well label does not match the Monitoring Well ID on the Permit. • The well was not locked. • There was no cap on the well inside the protective casing.
F4	• The well label does not match the Monitoring Well ID on the Permit. • The well pad was overgrown. • There was erosion around the well pad.
F5	• The well label does not match the Monitoring Well ID on the Permit. • The well was not locked. • There was no cap on the well inside the protective casing.

Table I – Sanitary Sewer Overflows

LOCATION	DATE DISCHARGE OCCURRED	DATE DISCHARGE REPORTED	SPILL VOL (GAL)	SPILL VOL RECOVERED (GAL)	SPILL CHARAC-TERISTIC	CAUSE	AREA AFFECTED	CLEAN-UP
7075 Spotted Fawn Ct	6/30/2023 - 8:00 AM	6/30/2023	1,500	1,200	Raw Wastewater	Rags	Ground	Repair, Lime Vac Truck

Forest Utilities WWTP (FLA014478)
Photos by Alex McSurley on 12/20/23

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Alex McSurley



1. Bar Screen



2. Surge Tank



3. Surge Tank



4. Aeration Blowers



5. Aeration Basin



6.Aeration Basin

Forest Utilities WWTP (FLA014478)
Photos by Alex McSurley on 12/20/23

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Alex McSurley



7. Aeration Basin



8. Aeration Basin



9. Clarifier



10. Clarifier



11. Sludge Holding Tank



12. Sludge Holding Tank

Forest Utilities WWTP (FLA014478)
Photos by Alex McSurley on 12/20/23

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Alex McSurley



13. CCC



14. Falling Baffle in CCC



15. Bridge Filter



16. Crack and Spalling on Tank Wall



17. Leak on Aeration/Digester



18. Leak on Tank Wall

Forest Utilities WWTP (FLA014478)
Photos by Alex McSurley on 12/20/23

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Alex McSurley



19. Lift Station Wet Well



20. Lift Station Wet Well



21.Reuse Piping (Not Pantone Purple)



22. Reuse Storage Pond



23. MWB-21302



24. MWI-21303



25. MWC-21304

Forest Utilities WWTP (FLA014478)
Photos by Alex McSurley on 12/20/23

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Alex McSurley



26. MWC-80019



27. MWC-80020

From: wade moser
To: Chang, Louise
Cc: Forest Utilities; dorree3@gmail.com; Newburg, Deanna; Devine, Nicole; Starrach, Gabriele; Homic, Cierra; Reigelman, Landon
Subject: Re: Forest Utilities FLA014478 - Warning Letter Meeting
Date: Thursday, April 22, 2021 11:01:31 AM
Attachments: Buffer and Standards Documentation 2021.xlsx
Buffer and Standards Documentation.xlsx
CL2 Cal Log Bench.xlsx
CL2 Cal Log Monitor.xlsx
COC.pdf
NTU Cal Log Bench.xlsx
NTU Cal Log Monitor.xlsx
pH Cal Log.xlsx

Louise please allow this correspondence to serve as Forest Utilities Response # 2 to the referenced Warning Letter as well as submitting the information requested during the above referenced April 15th meeting.
For your review and approval, you will find attached the proposed revised calibration and composite sample logs, sample chain of custody and standards documentation forms. Please note that in an effort to comply with FDEP's request to perform a two (2) point chlorine meter calibration Forest Utilities has ordered, but not received, a new Hach colorimeter and has listed the meter information on the chlorine calibration log form excluding the meter serial number.
We are still awaiting the Crypto/Giardia and Effluent analysis results and will forward those results to your department upon receipt. Also, we should have the corrected resubmissions of the DMR/GWM reports completed by April 13 for FDEP staff review.
As per our discussion, Forest Utilities would request that the department allow Forest Utilities to continue the quarterly GWM sampling and testing with the stipulation that any and all exceedances shall be resampled and tested as necessary until satisfactory results are achieved. Should the exceedances continue to the extent that satisfactory results are unobtainable, Forest Utilities would proceed with the Operating Permit Modification Application request process no later than the receipt of the 2021 4th quarter GWM test results.
Please do not hesitate to contact me if you require additional information or questions.
Wade Moser

Comp sample Flow-01.pdf

Comp sample Flow-02.pdf

results.

On Tue, Apr 6, 2021 at 1:05 PM Chang, Louise <Louise.Chang@floridadep.gov> wrote:

> Hello Mr. Moser,
>
> Thank you for contacting the Department of Environmental Protection to schedule the Forest Utilities (FLA014478) Warning Letter meeting. A meeting has been scheduled for Thursday, April 15, 2021 at 9 AM on Microsoft Teams (link below).
>
> The Warning Letter can be accessed here:
> https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.967204.1]&[profile=Enforcement_Legal]

Please do not hesitate to contact me if you have any questions.

Regards,

Louise Chang

Environmental Specialist

South District

Florida Department of Environmental Protection

2295 Victoria Avenue, Suite 364

Fort Myers, FL 33901

Louise.Chang@FloridaDEP.gov

Main: 239-344-5600

Office: 239-344-5630

Microsoft Teams meeting

Join on your computer or mobile app

Click here to join the meeting

Or call in (audio only)

+1 850-629-7330,,748404124# United States, Tallahassee

Phone Conference ID: 748 404 124#

Find a local number | Reset PIN

Learn More | Meeting options

Sanders Laboratories
Environmental Testing Services

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only)

Client: Forest Utilities, Inc./Sampler
Address: 6341 Deer Run
Ft. Myers, Fl. 33908
Phone: 239-481-5333
Fax

Report To: Wade Moser
Bill to:
P.O. #
Preservative: HCL = H, HNO_3= N, $Na_2S_2O_3$ = ST
H_2SO_4 = S, NaOH = SH, NH_4Cl = NH

Project Name: Forest Utilities WWTP FLA014478
Project Location: 6341 Deer Run, Ft. Myers, Fl 33908
Customer Type:
Kit #: (LABORATORY)
Requested Due Date:

Sampled By (PRINT)
Sampler Signature

Matrix	Sample Description / Lot #	Bottle #	Type	Sample Date	Sample Time	Sample Type	Preservatives pH	Preservatives Ice	Preservatives ST	Analysis Requested TSS	Analysis Requested FECAL	Analysis Requested CBOD	Sample ID # (Lab Use Only)
WW	AFBC, EFB-01	Bottle #	Type 500 mL, #			G							
WW	AFBC, EFB-02	Bottle #	Type 500 mL, #			G							
WW	CCC, EFA-01	Bottle #	Type 100 ML, # 9197005			G							
WW	CCC, EFA-02	Bottle #	Type 100 ML, # 9197005			G							
WW	INFL., INF-01	Bottle #	Type 500 mL, #			C							
WW	CCC, EFA-01	Bottle #	Type 500 mL, #			C							
WW	CCC, EFA-02	Bottle #	Type 500 mL, #			C							
	Total Bottle Count _____												

Bottle Lot #		Relinquished By/Affiliation	Date	Time	Accepted By/Affiliation	Date	Time
	Okay to Run As Is... Client Initial:						
	Samples On Ice Yes No						

1050 Endeavor Ct, Nokomis, FL 34275-3623 (941) 488-8103 fax(941) 484-6774 10090 Bavaria Rd., Fort Myers, FL 33913 (239) 590-0337 fax (239) 590-0536

Buffer and Standards Log Documentation

SOP FD 1000

	Date of	Date of	Expiration				
PH Buffers	**Receipt**	**1st use**	**Date**	**Lot #**	**Catalog#**	**Vendor**	**Operator**
4.01							
7.01							
10.01							
NTU Standards							
0.02							
4.0							
10.0							
Chlorine Standards							
STD -1 = 0.19+/- 0.09	4/20/2021		3/1/2023	A1074	25191000	Hach	
STD -2 = 1.53 +/- 0.14	4/20/2021		3/1/2023	A1074	25192000	Hach	
STD -3 = 2.88 +/- 0.30	4/20/2021		3/1/2023	A1074	25193000	Hach	
Replacement Buffers and/or Standards							

Buffer and Standards Log Documentation

SOP FD 1000

	Date of	Date of	Expiration				
PH Buffers	**Receipt**	**1st use**	**Date**	**Lot #**	**Catalog#**	**Vendor**	**Operator**
4.01							
7.01							
10.01							
NTU Standards							
0.02							
4.0							
10.0							
Chlorine Standards							
0.2							
1.6							
2.7							
Replacement Buffers and/or Standards							

Forest Utilities WWTP FLA014478

Chlorine Calibration Log

Chlorine Bench Meter:

Hach DR300 Pocket Colorimeter, Item# LPV445.97.000110, Serial#

Month/Year

SOP FT 2000

Standards			Blank = 0	STD-1 = 0.19 +/- 0.09				STD-2 = 1.53 +/- 0.14				STD-3 = 2.88 +/- 0.30				Sample	
Date	Time	Site ID	Initial/Pass	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Analysis Bench/Monitor	Operator
1		EFA-01															
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
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Initial Cal = Initial Calibration, ICV = Initial Calibration Verification, CCV = Ccontinuing Calibration Verification

Note: separate log for Buffer and Standards Documentation

Forest Utilities WWTP FLA014478 Chlorine Calibration Log

Continuous Flow Chlorine Monitor: **Hydro RAH 210, Serial#7Y911F05012, Accuarcy +/- 01%**

Month/Year **SOP FT 1900, +/- 20% of Bench result**

Standards			STD-1 = 0.19 +/- 0.09				STD-2 = 1.53 +/- 0.14				STD-3 = 2.88 +/- 0.30				Sample	
Date	Time	Site ID	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Analysis Bench/Monitor	Operator
1		EFA-01														
2																
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Initial Cal = Initial Calibration, ICV = Initial Calibration Verification, CCV = Ccontinuing Calibration Verification

Note: separate log for Buffer and Standards Documentation

NTU Continuous Flow Monitor: **HF Scientific Model: MTOL, Serial# 20191110777, Accuracy: +/- 2% Three (3) point calibration**

Year **SOP FT 1900, +/- 20% Of Bench**

Standards			0.02				4.0				10.0				Sample	
Date	Time	Site ID	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Analysis Bench/Monitor	Operator
1		EFB-0 2														
2																
3																
4																
5																
6																
7																
8																
9																
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Initial Cal = Initial Calibration, ICV = Initial Calibration Verification, CCV = Ccontinuing Calibration Verification

Note: separate log for Buffer and Standards Documentation

NTU Bench Meter: **HF Scientific Model: Micro 100, Serial# 201609235, Accuracy: +/- 2% Three (3) point calibration**

Month/Year **SOP FT 1600**

Standards			0.02				4.0				10.0				Sample	
Date	Time	Site ID	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Analysis Bench/Monitor	Operator
1		EFB-02														
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Initial Cal = Initial Calibration, ICV = Initial Calibration Verification, CCV = Ccontinuing Calibration Verification

Note: separate log for Buffer and Standards Documentation

Forest Utilities WWTP Fla 014478
pH Calibration Log

pH Instrument **Hanna Model # HI 98127, Lot #28558. Accuracy : +/- 0.1 pH, Two (2) point calibration**

Month/Year **SOP FT 1100**

Buffer			**4.01**				**7.01**				**10.01**				**Sample**	
Date	**Time**	**Site ID**	**Initial Cal./ Pass**	**ICV**	**CCV**	**Expiration**	**Initial Cal./ Pass**	**ICV**	**CCV**	**Expiration**	**Initial Cal./ Pass**	**ICV**	**CCV**	**Expiration**	**Ph Analysis**	**Operator**
1		EFA- 01														
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Initial Cal = Intial Calibration, ICV = Intial Calibration Verification, CCV = Continuing Calibration Verification, ✓ Pass = Fail = Calibration Value

Note: separate log for Buffer and Standards Documentation

FLORIDA DEPARTMENT OF Environmental Protection

South District Office
2295 Victoria Ave, Suite 364
Ft. Myers, Florida 33901-3875

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

December 18, 2020

In the Matter of an
Application for Permit by:

Forest Utilities, Inc.
Wade E. Moser
6000 Forest Blvd
Fort Myers, Florida 33908-4318
wmoser23@aol.com

Lee County – Domestic Wastewater
File Number FLA014478-015-DW1P
Forest Utilities WWTP

NOTICE OF PERMIT ISSUANCE

Enclosed is Permit Number FLA014478-015 to operate the Forest Utilities WWTP, issued under Chapter 403**,** Florida Statutes.

Monitoring requirements under this permit are effective on July 1, 2021. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements.

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing
A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rules 28-106.201 and 28-106.301, F.A.C., a petition for an administrative hearing must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;
(b) The name, address, any e-mail address, any facsimile number, and telephone number of the petitioner, if the petitioner is not represented by an attorney or a qualified representative; the name, address, and telephone number of the petitioner's representative,

if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;
(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@FloridaDEP.gov. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant and persons entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the notice or within 14 days of receipt of the written notice, whichever occurs first. You cannot justifiably rely on the finality of this decision unless notice of this decision and the right of substantially affected persons to challenge this decision has been duly published or otherwise provided to all persons substantially affected by the decision. While you are not required to publish notice of this action, you may elect to do so pursuant Rule 62-110.106(10)(a), F.A.C.

The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C. If you do not publish notice of this action, this waiver may not apply to persons who have not received a clear point-of-entry.

Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@FloridaDEP.gov, before the deadline

for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation
Mediation is not available in this proceeding.

Judicial Review
Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Florida Rules of Appellate Procedure 9.110 and 9.190 with the Clerk of the Department in the Office of General Counsel (Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000) and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within 30 days from the date this action is filed with the Clerk of the Department.

EXECUTION AND CLERKING
Executed in Ft. Myers, Florida.
STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



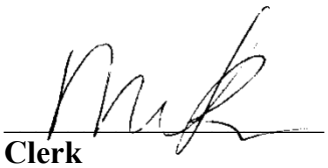
Jon M. Iglehart
Director of District Management

Attachment:
Permit No. FLA014478-015
Statement of Basis

CERTIFICATE OF SERVICE
The undersigned duly designated deputy clerk hereby certifies that this document and all attachments were sent on the filing date below to the following listed persons:

James P. Elliott, P.E., Source, Inc., jpelliott@source-us.com

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.



Clerk December 18, 2020 **Date**

FLORIDA DEPARTMENT OF Environmental Protection

South District Office
2295 Victoria Ave, Suite 364
Ft. Myers, Florida 33901-3875

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

STATE OF FLORIDA
DOMESTIC WASTEWATER FACILITY PERMIT

PERMITTEE:
Forest Utilities, Inc.

RESPONSIBLE OFFICIAL:
Wade E. Moser
6000 Forest Blvd
Fort Myers, Florida 33908- 4318
(239) 848-5174
wmoser23@aol.com

PERMIT NUMBER: FLA014478
FILE NUMBER: FLA014478-015-DW1P
ISSUANCE DATE: **December 18, 2020**
EFFECTIVE DATE: **May 5, 2021**
EXPIRATION DATE: **May 4, 2026**

FACILITY:
Forest Utilities WWTP
6341 Deer Run Road SW
Fort Myers, FL 33908-4318
Lee County
Latitude: 26° 29' 49.7586" N Longitude: 81° 52' 11.9426" W

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and applicable rules of the Florida Administrative Code (F.A.C.). This permit does not constitute authorization to discharge wastewater other than as expressly stated in this permit. The above-named permittee is hereby authorized to operate the facilities in accordance with the documents attached hereto and specifically described as follows:

WASTEWATER TREATMENT:

The facility is a domestic wastewater treatment plant that uses the extended aeration process. The permitted capacity for the annual average daily flow (AADF) is 0.800 MGD. The facility has four surge tanks and one effluent reject tank. Biological treatment occurs in seven aeration tanks and three clarifiers. The high-level disinfection system consists of two traveling bridge sand filters, and two chlorine contact basins. Biosolids are treated and stored in three anaerobic holding tanks, three aerated holding tanks, three sludge drying beds and one dried-sludge holding bin.

REUSE OR DISPOSAL:

Land Application R-001: An existing 0.800 MGD, AADF permitted capacity slow-rate public access system which irrigates the Forrest Country Club Golf Courses. Reclaimed water is stored in two isolated golf course ponds that do not discharge.

IN ACCORDANCE WITH: The limitations, monitoring requirements, and other conditions set forth in this cover sheet and Part I through Part IX on pages 1 through 19 of this permit.

I. RECLAIMED WATER AND EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Reuse and Land Application Systems

1. During the period beginning on the effective date and lasting through the expiration date of this permit, the permittee is authorized to direct reclaimed water to Reuse System R-001. Such reclaimed water shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.B.8.:

			Reclaimed Water Limitations		Monitoring Requirements			
Parameter	Units	Max. /Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow	MGD	Max	0.800	Annual Average	5 Days/ Week	Calculated	FLW-02	
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	8-hr FPC	EFA-01	
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	8-hr FPC	EFA-02	
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	Daily; 24 hours	Grab	EFB-01	
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	Daily; 24 hours	Grab	EFB-02	
Coliform, Fecal	#/100mL	Max	25	Single Sample	Daily; 24 hours	Grab	EFA-01	
Coliform, Fecal	#/100mL	Max	25	Single Sample	Daily; 24 hours	Grab	EFA-02	
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	Monthly	Calculated	EFA-01	See I.A.3
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	Monthly	Calculated	EFA-02	See I.A.3
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	5 Days/ Week	Grab	EFA-01	
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	5 Days/ Week	Grab	EFA-02	
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	Continuous	Meter	EFA-01	See I.A.4 and I.A.7
Chlorine, Total Residual	mg/L	Min	1.0	Single Sample	Continuous	Meter	EFA-02	
Turbidity	NTU	Max	Report	Single Sample	Continuous	Meter	EFB-01	See I.A.5 and I.A.7
Turbidity	NTU	Max	Report	Single Sample	Continuous	Meter	EFB-02	See I.A.5 and I.A.7
Giardia	cysts/ 100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-01	See I.A.8
Cryptosporidium	oocysts/ 100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-01	See I.A.8
Giardia	cysts/ 100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-02	See I.A.8

			Reclaimed Water Limitations		Monitoring Requirements			
Parameter	Units	Max. /Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Cryptosporidium	Oocysts/ 100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-02	See I.A.8

2. Reclaimed water samples shall be taken at the monitoring site locations listed in Permit Condition I.A.1. and as described below:

Monitoring Site Number	Description of Monitoring Site
FLW-02	Bubbler type flow measurement. Outlet weir of chlorine contact tanks prior to reuse storage or public access reuse site(s).
EFA-01	The west chlorine contact tank's outfall.
EFA-02	The east chlorine contact tank's outfall.
EFB-01	The west filter's weir overflow.
EFB-02	The east filter's weir overflow.

3. To report the "% less than detection," count the number of fecal coliform observations that were less than detection, divide by the total number of fecal coliform observations in the month, and multiply by 100% (round to the nearest integer). *[62-600.440(6)(a)]*

4. The minimum total chlorine residual shall be limited as described in the approved operating protocol, such that the permit limitation for fecal coliform bacteria will be achieved. In no case shall the total chlorine residual be less than 1.0 mg/L. *[62-600.440(6)(b)][62-610.460(2)][62-610.463(2)]*

5. The maximum turbidity shall be limited as described in the approved operating protocol, such that the permit limitations for total suspended solids and fecal coliforms will be achieved. *[62-610.463(2)]*

6. The treatment facilities shall be operated in accordance with all approved operating protocols. Only reclaimed water that meets the criteria established in the approved operating protocol(s) may be released to system storage or to the reuse system. Reclaimed water that fails to meet the criteria in the approved operating protocol(s) shall be directed to reject storage for subsequent additional treatment or disinfection. *[62-610.320(6) and 62-610.463(2)]*

7. Instruments for continuous on-line monitoring of total residual chlorine and turbidity shall be equipped with an automated data logging or recording device. *[62-610.463(2)]*

8. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. *[62-610.463(4)]*

9. Grab samples shall be collected during periods of minimal treatment plant pollutant removal efficiencies or maximum organic loading in the reclaimed water or effluent. *[62-600.660(3)(e)]*

B. Other Limitations and Monitoring and Reporting Requirements

1. During the period beginning on the effective date and lasting through the expiration date of this permit, the treatment facility shall be limited and monitored by the permittee as specified below and reported in accordance with condition I.B.8.:

			Limitations		Monitoring Requirements			
Parameter	Units	Max. /Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow	MGD	Max Max	0.800 Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-01	See I.B.4
Percent Capacity, (TMADF/Permitted Capacity) x 100	percent	Max	Report	3-Month Rolling Average	Monthly	Calculated	CAL-01	
BOD, Carbonaceous 5 day, 20C (Influent)	mg/L	Max	Report	Single Sample	Weekly	8-hr FPC	INF-01	See I.B.3
Solids, Total Suspended (Influent)	mg/L	Max	Report	Single Sample	Weekly	8-hr FPC	INF-01	See I.B.3

2. Samples shall be taken at the monitoring site locations listed in Permit Condition I.B.1. and as described below:

Monitoring Site Number	Description of Monitoring Site
FLW-01	Magnetic flow meter on influent line prior to aeration tanks.
CAL-01	Calculation for percent capacity.
INF-01	At the primary bar screen above the surge tanks.

3. Influent samples shall be collected so that they do not contain digester supernatant or return activated sludge, or any other plant process recycled waters. *[62-600.660(4)(a)]*

4. A recording flow meter with totalizer shall be utilized to measure flow and calibrated at least once every 12 months. *[62-600.200(25)]*

5. Sampling results for giardia and cryptosporidium shall be reported on DEP Form 62-610.300(4)(a)4, Pathogen Monitoring, which is attached to this permit. This form shall be submitted to the Department's South District Office and to DEP's Wastewater Management Program in Tallahassee. *[62-610.300(4)(a)]*

6. The sample collection, analytical test methods, and method detection limits (MDLs) applicable to this permit shall be conducted using a sufficiently sensitive method to ensure compliance with applicable water quality standards and effluent limitations and shall be in accordance with Rule 62-4.246, Chapters 62-160 and 62-600, F.A.C., and 40 CFR 136, as appropriate. The list of Department established analytical methods, and corresponding MDLs (method detection limits) and PQLs (practical quantitation limits), which is titled "FAC 62-4 MDL/PQL Table (April 26, 2006)" is available at https://floridadep.gov/dear/quality-assurance/content/quality-assurance-resources. The MDLs and PQLs as described in this list shall constitute the minimum acceptable MDL/PQL values and the Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those described above unless alternate MDLs and/or PQLs have been specifically approved by the Department for this permit. Any method included in the list may be used for reporting as long as it meets the following requirements:

   a. The laboratory's reported MDL and PQL values for the particular method must be equal or less than the corresponding method values specified in the Department's approved MDL and PQL list;

   b. The laboratory reported MDL for the specific parameter is less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Parameters that are listed as "report only" in the permit shall use methods that provide an MDL, which is equal to or less than the applicable water quality criteria stated in 62-302, F.A.C.; and

   c. If the MDLs for all methods available in the approved list are above the stated permit limit or applicable water quality criteria for that parameter, then the method with the lowest stated MDL shall be used.

When the analytical results are below method detection or practical quantitation limits, the permittee shall report the actual laboratory MDL and/or PQL values for the analyses that were performed following the instructions on the applicable discharge monitoring report.

Where necessary, the permittee may request approval of alternate methods or for alternative MDLs or PQLs for any approved analytical method. Approval of alternate laboratory MDLs or PQLs are not necessary if the laboratory reported MDLs and PQLs are less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Approval of an analytical method not included in the above-referenced list is not necessary if the analytical method is approved in accordance with 40 CFR 136 or deemed acceptable by the Department. *[62-4.246, 62-160]*

7. The permittee shall provide safe access points for obtaining representative samples which are required by this permit. *[62-600.650(2)]*

8. Monitoring requirements under this permit are effective on June 1, 2021. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements. During the period of operation authorized by this permit, the permittee shall complete and submit to the Department Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e. monthly, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Unless specified otherwise in this permit, monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below. DMRs shall be submitted for each required monitoring period including periods of no discharge.

REPORT Type on DMR	Monitoring Period	Submit by
Monthly	First day of month - last day of month	28th day of following month
Quarterly	January 1 - March 31 April 1 - June 30 July 1 - September 30 October 1 - December 31	April 28 July 28 October 28 January 28
Semiannual	January 1 - June 30 July 1 - December 31	July 28 January 28
Annual	January 1 - December 31	January 28

The permittee shall submit the completed DMR to the Department by the twenty-eighth (28th) of the month following the month of operation. Please contact the Department at (239) 344-5600 if you are unable to submit the completed DMR electronically using the EzDMR system.

The Department electronic EzDMR system at the time of permit issuance is available through the DEP Business Portal at: http://www.fldepportal.com/go/submit-report/

[62-620.610(18)][62-600.680(1)]

9. During the period of operation authorized by this permit, reclaimed water or effluent shall be monitored annually for the primary and secondary drinking water standards contained in Chapter 62-550, F.A.C., (except for asbestos, total coliform, color, odor, and residual disinfectants). These monitoring results shall be reported to the Department annually on the DMR. During years when a permit is not renewed, a certification stating that no new non-domestic wastewater dischargers have been added to the collection system since the last reclaimed water or effluent analysis was conducted may be submitted with the signed DMR in lieu of performing the analysis. When such a certification is submitted with the DMR, monitoring not required this period should be noted on the DMR. The annual reclaimed water or effluent analysis report, and certification if applicable, shall be completed and submitted in a timely manner so as to be received by the Department at the address identified on the DMR by January 28 of each year. Approved analytical methods identified in Rule 62-620.100(3)(j), F.A.C., shall be used for the analysis. If no method is included for a parameter, methods specified in Chapter 62-550, F.A.C., shall be used. *[62-600.660(2) and (3)(d)][62-600.680(2)][62-610.300(4)]*

10. The permittee shall submit an Annual Reuse Report using DEP Form 62-610.300(4)(a)2. on or before January 1 of each year. *[62-610.870(3)]*

11. Operating protocol(s) shall be reviewed and updated periodically to ensure continuous compliance with the minimum treatment and disinfection requirements. Updated operating protocols shall be submitted to the Department's South District Office for review and approval upon revision of the operating protocol(s) and with each permit application. *[62-610.320(6)][62-610.463(2)]*

12. The permittee shall maintain an inventory of storage systems. The inventory shall be submitted to the Department's South District Office at least 30 days before reclaimed water will be introduced into any new storage system. The inventory of storage systems shall be attached to the annual submittal of the Annual Reuse Report. *[62-610.464(5)]*

13. Except as otherwise specified in this permit, all reports and other information required by this permit, including 24-hour notifications, shall be submitted to the Department in a digital format when practicable. The Department's electronic mailing address is:

    SouthDistrict@FloridaDEP.gov

    Please contact the Department at (239) 344-5600 if you are unable to submit electronically.

    [62-620.610(11)]

14. All reports and other information shall be signed in accordance with the requirements of Rule 62-620.305, F.A.C. *[62-620.305]*

II. BIOSOLIDS MANAGEMENT REQUIREMENTS

A. Basic Requirements

1. Biosolids generated by this facility may be disposed of in a Class I solid waste landfill. *[62-620.320(6), 62-640.880(1)]*

2. The permittee shall monitor and keep records of the quantities of biosolids generated, received from source facilities, treated, distributed and marketed, land applied, used as a biofuel or for bioenergy, transferred to another facility, or landfilled. These records shall be kept for a minimum of five years. *[62-640.650(4)(a)]*

3. Biosolids quantities shall be monitored by the permittee as specified below. Results shall be reported on the permittee's Discharge Monitoring Report for Monitoring Group RMP-Q in accordance with Condition I.B.8.

			Biosolids Limitation		Monitoring Requirements			
Parameter	Units	Max. /Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Biosolids Quantity (Landfilled)	dry tons	Max	Report	Monthly Total	Monthly	Calculated	RMP-1	

[62-640.650(5)(a)1]

4. Biosolids quantities shall be calculated as listed in Permit Condition II.3 and as described below:

Monitoring Site Number	Description of Monitoring Site Calculations
RMP-1	Monthly Total of Biosolids Landfilled.

5. The treatment, management, transportation, use, land application, or disposal of biosolids shall not cause a violation of the odor prohibition in subsection 62-296.320(2), F.A.C. *[62-640.400(6)]*

6. Storage of biosolids or other solids at this facility shall be in accordance with the Facility Biosolids Storage Plan. *[62-640.300(4)]*

7. Biosolids shall not be spilled from or tracked off the treatment facility site by the hauling vehicle. *[62-640.400(9)]*

B. Disposal

1. Disposal of biosolids, septage, and "other solids" in a solid waste disposal facility, or disposal by placement on land for purposes other than soil conditioning or fertilization, such as at a monofill, surface impoundment, waste pile, or dedicated site, shall be in accordance with Chapter 62-701, F.A.C. *[62-640.100(6)(b) & (c)]*

C. Receipt

1. If the permittee intends to accept biosolids from other facilities, a permit revision is required pursuant to paragraph 62-640.880(2)(d), F.A.C. *[62-640.880(2)(d)]*

III. GROUND WATER REQUIREMENTS

A. Construction Requirements

1. The permittee shall give at least 72-hour notice to the Department's South District Office, prior to the installation of any monitoring wells. *[62-520.600(6)(h)]*

2. Before construction of new ground water monitoring wells, a soil boring shall be made at each new monitoring well location to properly determine monitoring well specifications such as well depth, screen interval, screen slot, and filter pack. *[62-520.600(6)(g)]*

3. Within 30 days after installation of a monitoring well, the permittee shall submit to the Department's South District Office well completion reports and soil boring/lithologic logs on the DEP Form 62-520.900(3), Monitoring Well Completion Report. *[62-520.600(6)(j) and .900(3)]*

4. All piezometers and monitoring wells not part of the approved ground water monitoring plan shall be plugged and abandoned in accordance with Rule 62-532.500(5), F.A.C., unless future use is intended. *[62-532.500(5)]*

B. Operational Requirements

1. For the Part III Public Access system, all ground water quality criteria specified in Chapter 62-520, F.A.C., shall be met at the edge of the zone of discharge. The zone of discharge shall extend horizontally 100 feet from the application site(s) or to the property boundaries, whichever is less, and vertically to the base of the shallow water table aquifer. *[62-520.200(27)] [62-520.465]*

2. The ground water minimum criteria specified in Rule 62-520.400 F.A.C., shall be met within the zone of discharge. *[62-520.400 and 62-520.420(4)]*

3. If the concentration for any constituent listed in Permit Condition III.6. in the natural background quality of the ground water is greater than the stated maximum, or in the case of pH is also less than the minimum, the representative background quality shall be the prevailing standard. *[62-520.420(2)]*

4. During the period of operation authorized by this permit, the permittee shall continue to sample ground water at the monitoring wells identified in Permit Condition III.5., below in accordance with this permit and the approved ground water monitoring plan prepared in accordance with Rule 62-520.600, F.A.C. *[62-520.600] [62-610.463]*

5. The following monitoring wells shall be sampled for Reuse System R-001.

Monitoring Well ID	Alternate Well Name and/or Description of Monitoring Location	Latitude	Longitude	Depth (Feet)	Aquifer Monitored	Well Type	New or Existing
MWB-21302	Background monitoring well located 0.86 miles northeast of the plant on Forrest Blvd.	26°51' 21"	81°51' 35"	12	Surficial	Background	Existing
MWC-21304	Compliance monitoring well located 0.58 miles north of the plant near Timberlakes Dr.	26°52' 20"	81°52' 10"	12	Surficial	Compliance	Existing
MWC-80019	Compliance well located 70 feet north of the plant.	26°52' 50"	81°52' 12"	12	Surficial	Compliance	Existing
MWC-80020	Compliance well located 0.2 miles east of the plant on Deer Run Road.	26°52' 50"	81°52' 12"	12	Surficial	Compliance	Existing
MWI-21303	Intermediate well located 0.34 miles northeast of the plant on Timberlakes Dr.	26°52' 5"	81°52' 1"	12	Surficial	Intermediate	Existing

[62-520.600] [62-610.463]

6. The following parameters shall be analyzed for each monitoring well identified in Permit Condition III.5.:

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Water Level Relative to NGVD	Report	ft	In Situ	Quarterly
Nitrogen, Nitrate, Total (as N)	10	mg/L	Grab	Quarterly
Arsenic, Total Recoverable	10	ug/L	Grab	Quarterly
Cadmium, Total Recoverable	5	ug/L	Grab	Quarterly
Chromium, Total Recoverable	100	ug/L	Grab	Quarterly
Lead, Total Recoverable	15	ug/L	Grab	Quarterly
Coliform, Fecal	0	#/100mL	Grab	Quarterly
pH	6.5-8.5	s.u.	In Situ	Quarterly
Sulfate, Total	250	mg/L	Grab	Quarterly
Turbidity	Report	NTU	Grab	Quarterly
Specific Conductance	Report	umhos/cm	In Situ	Quarterly
Temperature (C), Water	Report	Deg C	In Situ	Quarterly
Oxygen, Dissolved (DO)	Report	mg/L	In Situ	Quarterly

[62-520.600(11)(b)] [62-600.670] [62-600.650(3)] [62-520.310(5)]

7. Water levels shall be recorded before evacuating each well for sample collection. Elevation references shall include the top of the well casing and land surface at each well site (NAVD allowable) at a precision of plus or minus 0.01 foot. *[62-520.600(11)(c)] [62-610.463(3)(a)]*

8. Ground water monitoring wells shall be purged prior to sampling to obtain representative samples. *[62-160.210] [62-600.670(3)]*

9. Analyses shall be conducted on unfiltered samples, unless filtered samples have been approved by the Department's South District Office as being more representative of ground water conditions. *[62-520.310(5)]*

10. Ground water monitoring test results shall be submitted on Part D of Form 62-620.910(10) in accordance with Permit Condition I.B.8. *[62-520.600(11)(b)] [62-600.670] [62-600.680(1)] [62-620.610(18)]*

11. If any monitoring well becomes inoperable or damaged to the extent that sampling or well integrity may be affected, the permittee shall notify the Department's South District Office within two business days from discovery, and a detailed written report shall follow within ten days after notification to the Department. The written report shall detail what problem has occurred and remedial measures that have been taken to prevent

recurrence or request approval for replacement of the monitoring well. All monitoring well design and replacement shall be approved by the Department's South District Office before installation. *[62-520.600(6)(l)]*

12. The permittee shall sample the monitoring wells for the primary and secondary drinking water parameters included in Rules 62-550.310 and 62-550.320, F.A.C., (except for asbestos and all parameters in Table 5 of Chapter 62-550, F.A.C., other than Di(2-ethylhexyl) adipate and Di(2-ethylhexyl) phthalate). Results of this sampling shall be submitted to the Department's South District Office with the application for permit renewal. Sampling shall occur no sooner than 180 days before submittal of the renewal application. *[62-520.600(5)(b)]*

IV. ADDITIONAL REUSE AND LAND APPLICATION REQUIREMENTS

A. Part III Public Access System

1. This reuse system includes the following major user(s) of reclaimed water (i.e., using 0.1 MGD or more) and general service area:

Site Number	User Name	User Type	Capacity(MGD)	Acreage
PAA-01	The Forest Country Club Golf Courses	Golf Courses	0.800	160
		Total	0.8	160

[62-610.800(5)][62-620.630(10)(b)]

2. Cross-connections to the potable water system are prohibited. *[62-610.469(7)]*

3. A cross-connection control program shall be implemented and/or remain in effect within the areas where reclaimed water will be provided for use and shall be in compliance with the Rule 62-555.360, F.A.C. *[62-610.469(7)]*

4. The permittee shall conduct inspections within the reclaimed water service area to verify proper connections, to minimize illegal cross-connections, and to verify both the proper use of reclaimed water and that the proper backflow prevention assemblies or devices have been installed and tested. Inspections are required when a customer first connects to the reuse distribution system. Subsequent inspections are required as specified in the cross-connection control and inspection program. *[62-610.469(7)(h)]*

5. If an actual or potential (e.g. no dual check device on residential connections served by a reuse system) cross-connection between the potable and reclaimed water systems is discovered, the permittee shall:

   a. Immediately discontinue potable water and/or reclaimed water service to the affected area if an actual cross-connection is discovered.

   b. If the potable water system is contaminated, clear the potable water lines.

   c. Eliminate the cross-connection and install a backflow prevention device as required by the Rule 62-555.360.F.A.C.

   d. Test the affected area for other possible cross-connections.

   e. Within 24 hours, notify the Department's South District Office's domestic wastewater and drinking water programs.

   f. Within 5 days of discovery of an actual or potential cross-connection, submit a written report to the Department's South District Office detailing: a description of the cross-connection, how the cross-connection was discovered, the exact date and time of discovery, approximate time that the cross-connection existed, the location, the cause, steps taken to eliminate the cross-connection, whether reclaimed water was consumed, and reports of possible illness, whether the drinking water system was contaminated and the steps taken to clear the drinking water system, when the cross-connection was eliminated, plan of

action for testing for other possible cross-connections in the area, and an evaluation of the cross-connection control and inspection program to ensure that future cross-connections do not occur.

[62-555.360][62-620.610(20)]

6. Maximum obtainable separation of reclaimed water lines and potable water lines shall be provided, and the minimum separation distances specified in Rule 62-610.469(7), F.A.C., shall be provided. Reuse facilities shall be color coded or marked. Underground piping which is not manufactured of metal or concrete shall be color coded using Pantone Purple 522C using light stable colorants. Underground metal and concrete pipe shall be color coded or marked using purple as the predominant color. *[62-610.469(7)]*

7. In constructing reclaimed water distribution piping, the permittee shall maintain a 75-foot setback distance from a reclaimed water transmission facility to public water supply wells. No setback distances are required to other potable water supply wells or to any nonpotable water supply wells. *[62-610.471(3)]*

8. A setback distance of 75 feet shall be maintained between the edge of the wetted area and potable water supply wells, unless the utility adopts and enforces an ordinance prohibiting potable water supply wells within the reuse service area. No setback distances are required to any nonpotable water supply well, to any surface water, to any developed areas, or to any private swimming pools, hot tubs, spas, saunas, picnic tables, barbecue pits, or barbecue grills. *[62-610.471(1), (2), (5), and (7)]*

9. Reclaimed water shall not be used to fill swimming pools, hot tubs, or wading pools. *[62-610.469(4)]*

10. Low trajectory nozzles, or other means to minimize aerosol formation shall be used within 100 feet from outdoor public eating, drinking, or bathing facilities. *[62-610.471(6)]*

11. A setback distance of 100 feet shall be maintained from indoor aesthetic features using reclaimed water to adjacent indoor public eating and drinking facilities. *[62-610.471(8)]*

12. The public shall be notified of the use of reclaimed water. This shall be accomplished by posting of advisory signs in areas where reuse is practiced, notes on scorecards, or other methods. *[62-610.468(2)]*

13. All new advisory signs and labels on vaults, service boxes, or compartments that house hose bibbs along with all labels on hose bibbs, valves, and outlets shall bear the words "do not drink" and "no beber" along with the equivalent standard international symbol. In addition to the words "do not drink" and "no beber," advisory signs posted at storage ponds and decorative water features shall also bear the words "do not swim" and "no nadar" along with the equivalent standard international symbols. Existing advisory signs and labels shall be retrofitted, modified, or replaced in order to comply with the revised wording requirements. For existing advisory signs and labels this retrofit, modification, or replacement shall occur within 365 days after the date of this permit. For labels on existing vaults, service boxes, or compartments housing hose bibbs this retrofit, modification, or replacement shall occur within 730 days after the date of this permit. *[62-610.468, 62-610.469]*

14. The permittee shall ensure that users of reclaimed water are informed about the origin, nature, and characteristics of reclaimed water; the manner in which reclaimed water can be safely used; and limitations on the use of reclaimed water. Notification is required at the time of initial connection to the reclaimed water distribution system and annually after the reuse system is placed into operation. A description of on-going public notification activities shall be included in the Annual Reuse Report. *[62-610.468(6)]*

15. Routine aquatic weed control and regular maintenance of storage pond embankments and access areas are required. *[62-610.414(8)]*

16. Overflows from emergency discharge facilities on storage ponds shall be reported as abnormal events in accordance with Permit Condition IX.20. *[62-610.800(9)]*

V. OPERATION AND MAINTENANCE REQUIREMENTS

A. Staffing Requirements

1. During the period of operation authorized by this permit, the wastewater facilities shall be operated under the supervision of one or more operators certified in accordance with Chapter 62-602, F.A.C. In accordance with Chapter 62-699, F.A.C., this facility is a Category III, Class C facility and, at a minimum, operators with appropriate certification must be on the site as follows:

   A Class C or higher operator 6 hours/day for 7 days/week. The lead/chief operator must be a Class C operator, or higher.

   [62-620.630(3)][62-699.310] [62-610.462]

2. An operator meeting the lead/chief operator class for the plant shall be available during all periods of plant operation. "Available" means able to be contacted as needed to initiate the appropriate action in a timely manner. *[62-699.311(1)]*

B. Capacity Analysis Report and Operation and Maintenance Performance Report Requirements

1. The application to renew this permit shall include an updated capacity analysis report prepared in accordance with Rule 62-600.405, F.A.C. *[62-600.405(5)]*

2. The application to renew this permit shall include a detailed operation and maintenance performance report prepared in accordance with Rule 62-600.735, F.A.C. *[62-600.735(1)]*

C. Recordkeeping Requirements

1. The permittee shall maintain the following records and make them available for inspection on the site of the permitted facility.
   a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;
   b. Copies of all reports required by this permit for at least three years from the date the report was prepared;
   c. Records of all data, including reports and documents, used to complete the application for this permit for at least three years from the date the application was filed;
   d. Monitoring information, including a copy of the laboratory certification showing the laboratory certification number, related to the residuals use and disposal activities for the time period set forth in Chapter 62-640, F.A.C., for at least three years from the date of sampling or measurement;
   e. A copy of the current wastewater facility permit;
   f. Copies of the current operation and maintenance manuals for the wastewater facility and the collection/transmission systems owned or operated by the wastewater facility permittee as required by Chapters 62-600 and 62-604, F.A.C.;
   g. A copy of any required record drawings for the wastewater facility and the collection/transmission systems owned or operated by the wastewater facility permittee;
   h. Copies of the licenses of the current certified operators;
   i. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date of the logs or schedules. The logs shall, at a minimum, include identification of the plant; the signature and license number of the operator(s) and the signature of the person(s) making any entries; date and time in and out; specific operation and maintenance activities, including any preventive maintenance or

repairs made or requested; results of tests performed and samples taken, unless documented on a laboratory sheet; and notation of any notification or reporting completed in accordance with Rule 62-602.650(3), F.A.C. The logs shall be maintained on-site in a location accessible to 24-hour inspection, protected from weather damage, and current to the last operation and maintenance performed; and

j. Records of biosolids quantities, treatment, monitoring, and hauling for at least five years.

[62-620.350, 62-604.500, 62-602.650, 62-640.650(4)]

VI. SCHEDULES

1. The permittee is not authorized to discharge to waters of the state after the expiration date of this permit, unless:
   a. The permittee has applied for renewal of this permit at least 180 days before the expiration date of this permit using the appropriate forms listed in Rule 62-620.910, F.A.C., and in the manner established in the Department of Environmental Protection Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C.; or
   b. The permittee has made complete the application for renewal of this permit before the permit expiration date.

   [62-620.335(1) - (4)]

VII. INDUSTRIAL PRETREATMENT PROGRAM REQUIREMENTS

1. This facility is not required to have a pretreatment program at this time. *[62-625.500]*

VIII. OTHER SPECIFIC CONDITIONS

1. The permittee shall comply with all conditions and requirements for reuse contained in their consumptive use permit issued by the Water Management District, if such requirements are consistent with Department rules. *[62-610.800(10)]*

2. In the event that the wastewater facilities or equipment, including collection/transmission systems, no longer function as intended, are no longer safe in terms of public health and safety (including inactive or abandoned facilities), or odor, noise, aerosol drift, or lighting adversely affects neighboring developed areas at the levels prohibited by paragraphs 62-600.400(2)(a) and 62-604.400(2)(c), F.A.C., corrective action (which may include additional maintenance or modifications of the permitted facilities) shall be taken by the permittee. Other corrective action may be required to ensure compliance with rules of the Department. Additionally, the treatment, management, use or land application of residuals shall not cause a violation of the odor prohibition in subsection 62-296.320(2), F.A.C. *[62-600.410(5), 62-604.500(3) and 62-640.400(6)]*

3. All collection/transmission systems shall be operated and maintained so as to provide uninterrupted service. *[62-604.500(2)]*

4. The deliberate introduction of stormwater in any amount into collection/transmission systems designed solely for the introduction (and conveyance) of domestic/industrial wastewater; or the deliberate introduction of stormwater into collection/transmission systems designed for the introduction or conveyance of combinations of storm and domestic/industrial wastewater in amounts which may reduce the efficiency of pollutant removal by the treatment plant is prohibited, except as provided by Rule 62-610.472, F.A.C. *[62-604.130(4)]*

5. Cross-connection, as defined in Rule 62-550.200, F.A.C., between the wastewater facility, including the collection/transmission system, and a potable water system is prohibited. *[62-550.360][62-604.130(3)]*

6. The collection/transmission operation and maintenance manual shall be maintained and revised periodically in accordance with subsection 62-604.500(4), F.A.C., to reflect any alterations performed or to reflect experience resulting from operation. However, a new operation and maintenance manual is not required to be developed for

each project if there is already an existing manual that is applicable to the facilities being constructed. *[62-604.500(4)]*

7. Collection/transmission system overflows shall be reported to the Department in accordance with Permit Condition IX. 20. *[62-604.550] [62-620.610(20)]*

8. The operating authority of a collection/transmission system and the permittee of a treatment plant are prohibited from accepting connections of wastewater discharges which have not received necessary pretreatment or which contain materials or pollutants (other than normal domestic wastewater constituents):

   a. Which may cause fire or explosion hazards; or

   b. Which may cause excessive corrosion or other deterioration of wastewater facilities due to chemical action or pH levels; or

   c. Which are solid or viscous and obstruct flow or otherwise interfere with wastewater facility operations or treatment; or

   d. Which result in the wastewater temperature at the introduction of the treatment plant exceeding $40^{o}C$ or otherwise inhibiting treatment; or

   e. Which result in the presence of toxic gases, vapors, or fumes that may cause worker health and safety problems.

   [62-604.130(5)]

9. The treatment facility shall be enclosed with a fence or otherwise provided with features to discourage the entry of animals and unauthorized persons. *[62-600.400(2)(b)]*

10. Screenings and grit removed from the wastewater facilities shall be collected in suitable containers and hauled to a Department approved Class I landfill or to a landfill approved by the Department for receipt/disposal of screenings and grit. *[62-701.300(1)(a)]*

11. Where required by Chapter 471 or Chapter 492, F.S., applicable portions of reports that must be submitted under this permit shall be signed and sealed by a professional engineer or a professional geologist, as appropriate. *[62-620.310(4)]*

12. The permittee shall provide verbal notice to the Department's South District Office as soon as practical after discovery of a sinkhole or other karst feature within an area for the management or application of wastewater, wastewater residuals (sludges), or reclaimed water. The permittee shall immediately implement measures appropriate to control the entry of contaminants, and shall detail these measures to the Department's South District Office in a written report within 7 days of the sinkhole discovery. *[62-620.320(6)]*

13. The permittee shall provide notice to the Department of the following:

   a. Any new introduction of pollutants into the facility from an industrial discharger which would be subject to Chapter 403, F.S., and the requirements of Chapter 62-620, F.A.C., if it were directly discharging those pollutants; and

   b. Any substantial change in the volume or character of pollutants being introduced into that facility by a source which was identified in the permit application and known to be discharging at the time the permit was issued.

      Notice shall include information on the quality and quantity of effluent introduced into the facility and any anticipated impact of the change on the quantity or quality of effluent or reclaimed water to be discharged from the facility. If pretreatment becomes necessary, this permit may be modified to require the permittee to develop and implement a local pretreatment program in accordance with the requirements of Chapter 62-625, F.A.C.

   [62-620.625(2)]

IX. GENERAL CONDITIONS

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, Florida Statutes. Any permit noncompliance constitutes a violation of Chapter 403, Florida Statutes, and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. *[62-620.610(1)]*

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviations from the approved drawings, exhibits, specifications, or conditions of this permit constitutes grounds for revocation and enforcement action by the Department. *[62-620.610(2)]*

3. As provided in subsection 403.087(7), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. *[62-620.610(3)]*

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. *[62-620.610(4)]*

5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[62-620.610(5)]*

6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. *[62-620.610(6)]*

7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. *[62-620.610(7)]*

8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[62-620.610(8)]*

9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to:

    a. Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;

    b. Have access to and copy any records that shall be kept under the conditions of this permit;

    c. Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and

    d. Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules.

[62-620.610(9)]

10. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except as such use is proscribed by Section 403.111, F.S., or Rule 62-620.302, F.A.C. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules. *[62-620.610(10)]*

11. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by this permit to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department. *[62-620.610(11)]*

12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. *[62-620.610(12)]*

13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. *[62-620.610(13)]*

14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department. *[62-620.610(14)]*

15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility or activity and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. *[62-620.610(15)]*

16. The permittee shall apply for a revision to the Department permit in accordance with Rules 62-620.300, F.A.C., and the Department of Environmental Protection Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.325(2), F.A.C., for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. *[62-620.610(16)]*

17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of this permit. The notice shall include the following information:

    a. A description of the anticipated noncompliance;

    b. The period of the anticipated noncompliance, including dates and times; and

    c. Steps being taken to prevent future occurrence of the noncompliance.

    [62-620.610(17)]

18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246 and Chapters 62-160, 62-600, and 62-610, F.A.C., and 40 CFR 136, as appropriate.

a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10), or as specified elsewhere in the permit.

b. If the permittee monitors any contaminant more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

c. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this permit.

d. Except as specifically provided in Rule 62-160.300, F.A.C., any laboratory test required by this permit shall be performed by a laboratory that has been certified by the Department of Health Environmental Laboratory Certification Program (DOH ELCP). Such certification shall be for the matrix, test method and analyte(s) being measured to comply with this permit. For domestic wastewater facilities, testing for parameters listed in Rule 62-160.300(4), F.A.C., shall be conducted under the direction of a certified operator.

e. Field activities including on-site tests and sample collection shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in Chapter 62-160, F.A.C.

f. Alternate field procedures and laboratory methods may be used where they have been approved in accordance with Rules 62-160.220, and 62-160.330, F.A.C.

[62-620.610(18)]

19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. *[62-620.610(19)]*

20. The permittee shall report to the Department any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. For noncompliance events related to sanitary sewer overflows or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (sanitary sewer overflows or bypass events), type of sewer overflow (e.g., manhole), discharge volumes by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather. The written submission may be provided electronically using the Department's Business Portal at https://www.fldepportal.com/go/ (via "Submit" followed by "Report" or "Registration/Notification"). Notice required under paragraph (d) may be provided together with the written submission using the Business Portal. All noncompliance events related to sanitary sewer overflows or bypass events submitted after December 21, 2020 shall be submitted electronically.

    a. The following shall be included as information which must be reported within 24 hours under this condition:

        (1) Any unanticipated bypass which causes any reclaimed water or the effluent to exceed any permit limitation or results in an unpermitted discharge,

        (2) Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,

        (3) Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and

        (4) Any unauthorized discharge to surface or ground waters.

    b. Oral reports as required by this subsection shall be provided as follows:

        (1) For unauthorized releases or spills of treated or untreated wastewater reported pursuant to subparagraph (a)4. that are in excess of 1,000 gallons per incident, or where information indicates that

public health or the environment will be endangered, oral reports shall be provided to the Department by calling the STATE WATCH OFFICE TOLL FREE NUMBER (800) 320-0519, as soon as practical, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Watch Office:

(a) Name, address, and telephone number of person reporting;

(b) Name, address, and telephone number of permittee or responsible person for the discharge;

(c) Date and time of the discharge and status of discharge (ongoing or ceased);

(d) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);

(e) Estimated amount of the discharge;

(f) Location or address of the discharge;

(g) Source and cause of the discharge;

(h) Whether the discharge was contained on-site, and cleanup actions taken to date;

(i) Description of area affected by the discharge, including name of water body affected, if any; and

(j) Other persons or agencies contacted.

(2) Oral reports not otherwise required to be provided pursuant to subparagraph (b)1. above, shall be provided to the Department within 24 hours from the time the permittee becomes aware of the circumstances.

c. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department shall waive the written report.

d. In accordance with Section 403.077, F.S., unauthorized releases or spills reportable to the State Watch Office pursuant to subparagraph (b)1. above shall also be reported to the Department within 24 hours from the time the permittee becomes aware of the discharge. The permittee shall provide to the Department information reported to the State Watch Office. Notice of unauthorized releases or spills may be provided to the Department through the Department's Public Notice of Pollution web page at https://floridadep.gov/pollutionnotice.

(1) If, after providing notice pursuant to paragraph (d) above, the permittee determines that a reportable unauthorized release or spill did not occur or that an amendment to the notice is warranted, the permittee may submit additional notice to the Department documenting such determination.

(2) If, after providing notice pursuant to paragraph (d) above, the permittee discovers that a reportable unauthorized release or spill has migrated outside the property boundaries of the installation, the permittee must provide an additional notice to the Department that the release has migrated outside the property boundaries within 24 hours after its discovery of the migration outside of the property boundaries.

[62-620.610(20)] [62-620.100(3)] [403.077, F.S.]

21. The permittee shall report all instances of noncompliance not reported under Permit Conditions IX.17., IX.18., or IX.19. of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Permit Condition IX.20. of this permit. *[62-620.610(21)]*

22. Bypass Provisions.

a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment works.

b. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required under Permit Condition IX.22.c. of this permit.

c. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible, at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Permit Condition IX.20. of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.

d. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Permit Condition IX.22.b.(1) through (3) of this permit.

e. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Permit Condition IX.22.b. through d. of this permit.

[62-620.610(22)]

23. Upset Provisions.

a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee.

(1) An upset does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, careless or improper operation.

(2) An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of upset provisions of Rule 62-620.610, F.A.C., are met.

b. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the permittee can identify the cause(s) of the upset;

(2) The permitted facility was at the time being properly operated;

(3) The permittee submitted notice of the upset as required in Permit Condition IX.20. of this permit; and

(4) The permittee complied with any remedial measures required under Permit Condition IX.5. of this permit.

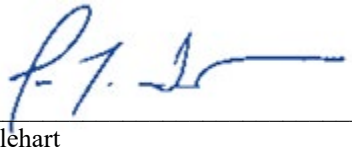
c. In any enforcement proceeding, the burden of proof for establishing the occurrence of an upset rests with the permittee.

d. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review.

[62-620.610(23)]

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Jon M. Iglehart
Director of District Management

Attachments:
Discharge Monitoring Report
"Pathogen Monitoring" Form

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed submit this report to: http://www.fldepportal.com/go/submit-report/

PERMITTEE NAME: Forest Utilities, Inc.
MAILING ADDRESS: 6000 Forest Blvd
Fort Myers, Florida 33908- 4318

FACILITY: Forest Utilities WWTP
LOCATION: 6341 Deer Run Road SW
Fort Myers, FL 33908-4318

COUNTY: Lee
OFFICE: South District

PERMIT NUMBER: FLA014478-015-DW1P

LIMIT: Final
CLASS SIZE: N/A
MONITORING GROUP NUMBER: R-001
MONITORING GROUP DESCRIPTION: slow-rate public access, including Influent
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Monthly
PROGRAM: Domestic

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow	Sample Measurement										
PARM Code 50050 Y Mon. Site No. FLW-02	Permit Requirement		0.800 (An.Avg.)	MGD						5 Days/Week	Calculated
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 Y Mon. Site No. EFA-01	Permit Requirement					20.0 (An.Avg.)		mg/L		Weekly	8-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 A Mon. Site No. EFA-01	Permit Requirement				60.0 (Max.)	45.0 (Max.Wk.Avg.)	30.0 (Mo.Avg.)	mg/L		Weekly	8-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 P Mon. Site No. EFA-02	Permit Requirement					20.0 (An.Avg.)		mg/L		Weekly	8-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 Q Mon. Site No. EFA-02	Permit Requirement				60.0 (Max.)	45.0 (Max.Wk.Avg.)	30.0 (Mo.Avg.)	mg/L		Weekly	8-hr FPC
Solids, Total Suspended	Sample Measurement										
PARM Code 00530 B Mon. Site No. EFB-01	Permit Requirement						5.0 (Max.)	mg/L		Daily; 24 hours	Grab

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: R-001 PERMIT NUMBER: FLA014478-015-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Solids, Total Suspended	Sample Measurement										
PARM Code 00530 P Mon. Site No. EFB-02	Permit Requirement						5.0 (Max.)	mg/L		Daily; 24 hours	Grab
Coliform, Fecal	Sample Measurement										
PARM Code 74055 A Mon. Site No. EFA-01	Permit Requirement						25 (Max.)	#/100mL		Daily; 24 hours	Grab
Coliform, Fecal	Sample Measurement										
PARM Code 74055 P Mon. Site No. EFA-02	Permit Requirement						25 (Max.)	#/100mL		Daily; 24 hours	Grab
Coliform, Fecal, % less than detection	Sample Measurement										
PARM Code 51005 A Mon. Site No. EFA-01	Permit Requirement				75 (Min.Mo.Total)			percent		Monthly	Calculated
Coliform, Fecal, % less than detection	Sample Measurement										
PARM Code 51005 P Mon. Site No. EFA-02	Permit Requirement				75 (Min.Mo.Total)			percent		Monthly	Calculated
pH	Sample Measurement										
PARM Code 00400 A Mon. Site No. EFA-01	Permit Requirement				6.0 (Min.)		8.5 (Max.)	s.u.		5 Days/Week	Grab
pH	Sample Measurement										
PARM Code 00400 P Mon. Site No. EFA-02	Permit Requirement				6.0 (Min.)		8.5 (Max.)	s.u.		5 Days/Week	Grab
Chlorine, Total Residual (For Disinfection)	Sample Measurement										
PARM Code 50060 A Mon. Site No. EFA-01	Permit Requirement				1.0 (Min.)			mg/L		Continuous	Meter
Chlorine, Total Residual	Sample Measurement										
PARM Code 50060 P Mon. Site No. EFA-02	Permit Requirement				1.0 (Min.)			mg/L		Continuous	Meter
Turbidity	Sample Measurement										
PARM Code 00070 B Mon. Site No. EFB-01	Permit Requirement						Report (Max.)	NTU		Continuous	Meter

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP

MONITORING GROUP NUMBER: R-001

PERMIT NUMBER: FLA014478-015-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Turbidity	Sample Measurement										
PARM Code 00070 P Mon. Site No. EFB-02	Permit Requirement						Report (Max.)	NTU		Continuous	Meter
Flow	Sample Measurement										
PARM Code 50050 1 Mon. Site No. FLW-01	Permit Requirement		0.800 (An.Avg.)	MGD						Continuous	Flow Totalizer
Flow	Sample Measurement										
PARM Code 50050 P Mon. Site No. FLW-01	Permit Requirement		Report (Mo.Avg.)	MGD						Continuous	Flow Totalizer
Percent Capacity, (TMADF/Permitted Capacity) x 100	Sample Measurement										
PARM Code 00180 P Mon. Site No. CAL-01	Permit Requirement						Report (3Mo.Avg.)	percent		Monthly	Calculated
BOD, Carbonaceous 5 day, 20C (Influent)	Sample Measurement										
PARM Code 80082 G Mon. Site No. INF-01	Permit Requirement						Report (Max.)	mg/L		Weekly	8-hr FPC
Solids, Total Suspended (Influent)	Sample Measurement										
PARM Code 00530 G Mon. Site No. INF-01	Permit Requirement						Report (Max.)	mg/L		Weekly	8-hr FPC

ISSUANCE/REISSUANCE DATE: December 18, 2020

DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed submit this report to: http://www.fldepportal.com/go/submit-report/

PERMITTEE NAME: Forest Utilities, Inc.
MAILING ADDRESS: 6000 Forest Blvd
Fort Myers, Florida 33908- 4318

FACILITY: Forest Utilities WWTP
LOCATION: 6341 Deer Run Road SW
Fort Myers, FL 33908-4318

COUNTY: Lee
OFFICE: South District

PERMIT NUMBER: FLA014478-015-DW1P

LIMIT: Final
CLASS SIZE: N/A
MONITORING GROUP NUMBER: RMP-Q
MONITORING GROUP DESCRIPTION: Biosolids Quantity
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Monthly
PROGRAM: Domestic

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Biosolids Quantity (Landfilled)	Sample Measurement										
PARM Code B0008 + Mon. Site No. RMP-1	Permit Requirement		Report (Mo.Total)	dry tons						Monthly	Calculated

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed submit this report to: http://www.fldepportal.com/go/submit-report/

PERMITTEE NAME: Forest Utilities, Inc.
MAILING ADDRESS: 6000 Forest Blvd
Fort Myers, Florida 33908- 4318

FACILITY: Forest Utilities WWTP
LOCATION: 6341 Deer Run Road SW
Fort Myers, FL 33908-4318

COUNTY: Lee
OFFICE: South District

PERMIT NUMBER: FLA014478-015-DW1P

LIMIT: Final
CLASS SIZE: N/A
MONITORING GROUP NUMBER: RWS-A
MONITORING GROUP DESCRIPTION: Annual Reclaimed Water or Effluent Analysis
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING NOT REQUIRED:* ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Annually
PROGRAM: Domestic

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Antimony, Total Recoverable (GWS = 6)**	Sample Measurement										
PARM Code 01268 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Arsenic, Total Recoverable (GWS = 10)	Sample Measurement										
PARM Code 00978 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Barium, Total Recoverable (GWS = 2,000)	Sample Measurement										
PARM Code 01009 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Beryllium, Total Recoverable (GWS = 4)	Sample Measurement										
PARM Code 00998 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Cadmium, Total Recoverable (GWS = 5)	Sample Measurement										
PARM Code 01113 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Chromium, Total Recoverable (GWS =100)	Sample Measurement										
PARM Code 01118 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC

*THE "MONITORING NOT REQUIRED" CHECKBOX SHOULD BE SELECTED WHEN A CERTIFICATION STATEMENT IN ACCORDANCE WITH SUBSECTION 62-600.680(2), F.A.C., IS SUBMITTED WITH THIS DMR. SEE CERTIFICATION STATEMENT IN COMMENTS SECTION BELOW.
**GROUND WATER STANDARD (GWS) FOR REFERENCE AND REVIEW ONLY.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):
☐ NO NEW NON-DOMESTIC WASTEWATER DISCHARGERS HAVE BEEN ADDED TO THE COLLECTION SYSTEM SINCE THE LAST RECLAIMED WATER OR EFFLUENT ANALYSIS WAS CONDUCTED.
SIGN AND DATE:

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-015-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Cyanide, Free (amen. to chlorination)(GWS = 200)	Sample Measurement										
PARM Code 00722 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
Fluoride, Total (as F) (GWS = 4.0/2.0)	Sample Measurement										
PARM Code 00951 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L		Annually	24-hr FPC
Lead, Total Recoverable (GWS = 15)	Sample Measurement										
PARM Code 01114 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Mercury, Total Recoverable (GWS = 2)	Sample Measurement										
PARM Code 71901 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Nickel, Total Recoverable (GWS = 100)	Sample Measurement										
PARM Code 01074 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Nitrogen, Nitrate, Total (as N) (GWS = 10)	Sample Measurement										
PARM Code 00620 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L		Annually	24-hr FPC
Nitrogen, Nitrite, Total (as N) (GWS = 1)	Sample Measurement										
PARM Code 00615 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L		Annually	24-hr FPC
Nitrite plus Nitrate, Total 1 det. (as N)(GWS = 10)	Sample Measurement										
PARM Code 00630 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L		Annually	24-hr FPC
Selenium, Total Recoverable (GWS =50)	Sample Measurement										
PARM Code 00981 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Sodium, Total Recoverable (GWS = 160)	Sample Measurement										
PARM Code 00923 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L		Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-015-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Thallium, Total Recoverable (GWS = 2)	Sample Measurement										
PARM Code 00982 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
1,1-dichloroethylene (GWS = 7)	Sample Measurement										
PARM Code 34501 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
1,1,1-trichloroethane (GWS = 200)	Sample Measurement										
PARM Code 34506 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
1,1,2-trichloroethane (GWS = 5)	Sample Measurement										
PARM Code 34511 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
1,2-dichloroethane (GWS = 3)	Sample Measurement										
PARM Code 32103 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
1,2-dichloropropane (GWS = 5)	Sample Measurement										
PARM Code 34541 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
1,2,4-trichlorobenzene (GWS = 70)	Sample Measurement										
PARM Code 34551 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Benzene (GWS = 1)	Sample Measurement										
PARM Code 34030 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
Carbon tetrachloride (GWS = 3)	Sample Measurement										
PARM Code 32102 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
Cis-1,2-dichloroethene (GWS = 70)	Sample Measurement										
PARM Code 81686 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-015-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Dichloromethane (methylene chloride)(GWS = 5)	Sample Measurement										
PARM Code 03821 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
Ethylbenzene (GWS = 700)	Sample Measurement										
PARM Code 34371 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
Monochlorobenzene (GWS = 100)	Sample Measurement										
PARM Code 34031 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
1,2-dichlorobenzene (GWS = 600)	Sample Measurement										
PARM Code 34536 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
1,4-dichlorobenzene (GWS = 75)	Sample Measurement										
PARM Code 34571 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
Styrene, Total (GWS = 100)	Sample Measurement										
PARM Code 77128 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
Tetrachloroethylene (GWS = 3)	Sample Measurement										
PARM Code 34475 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
Toluene (GWS = 1,000)	Sample Measurement										
PARM Code 34010 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
1,2-trans-dichloroethylene (GWS = 100)	Sample Measurement										
PARM Code 34546 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
Trichloroethylene (GWS = 3)	Sample Measurement										
PARM Code 39180 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-015-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Vinyl chloride (GWS = 1)	Sample Measurement										
PARM Code 39175 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
Xylenes (GWS = 10,000)	Sample Measurement										
PARM Code 81551 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
2,3,7,8-tetrachlorodibenzo-p-dioxin(GWS = 3x10^-5)	Sample Measurement										
PARM Code 34675 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
2,4-dichlorophenoxyacetic acid (GWS = 70)	Sample Measurement										
PARM Code 39730 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Silvex (GWS = 50)	Sample Measurement										
PARM Code 39760 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Alachlor (GWS = 2)	Sample Measurement										
PARM Code 39161 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Atrazine (GWS = 3)	Sample Measurement										
PARM Code 39033 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Benzo(a)pyrene (GWS = 0.2)	Sample Measurement										
PARM Code 34247 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Carbofuran (GWS = 40)	Sample Measurement										
PARM Code 81405 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Chlordane (tech mix. and metabolites)(GWS = 2)	Sample Measurement										
PARM Code 39350 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-015-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Dalapon (GWS = 200)	Sample Measurement										
PARM Code 38432 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Bis(2-ethylhexyl)adipate (GWS = 400)	Sample Measurement										
PARM Code 77903 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Bis (2-ethylhexyl) phthalate (GWS = 6)	Sample Measurement										
PARM Code 39100 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Dibromochloropropane (DBCP) (GWS = 0.2)	Sample Measurement										
PARM Code 82625 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
Dinoseb (GWS = 7)	Sample Measurement										
PARM Code 30191 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Diquat (GWS = 20)	Sample Measurement										
PARM Code 04443 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Endothall (GWS = 100)	Sample Measurement										
PARM Code 38926 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Endrin (GWS = 2)	Sample Measurement										
PARM Code 39390 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Ethylene dibromide (1,2-dibromoethane)(GWS = 0.02)	Sample Measurement										
PARM Code 77651 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	Grab
Glyphosate (GWS = 0.7)	Sample Measurement										
PARM Code 79743 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L		Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-015-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Heptachlor (GWS = 0.4)	Sample Measurement										
PARM Code 39410 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Heptachlor epoxide (GWS = 0.2)	Sample Measurement										
PARM Code 39420 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Hexachlorobenzene (GWS = 1)	Sample Measurement										
PARM Code 39700 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Hexachlorocyclopentadiene (GWS = 50)	Sample Measurement										
PARM Code 34386 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Gamma BHC (Lindane) (GWS = 0.2)	Sample Measurement										
PARM Code 39782 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Methoxychlor (GWS = 40)	Sample Measurement										
PARM Code 39480 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Oxamyl (vydate) (GWS = 200)	Sample Measurement										
PARM Code 38865 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Pentachlorophenol (GWS = 1)	Sample Measurement										
PARM Code 39032 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Picloram (GWS = 500)	Sample Measurement										
PARM Code 39720 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Polychlorinated Biphenyls (PCBs)(GWS = 0.5)	Sample Measurement										
PARM Code 39516 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP

MONITORING GROUP NUMBER: RWS-A

PERMIT NUMBER: FLA014478-015-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Simazine (GWS = 4)	Sample Measurement										
PARM Code 39055 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Toxaphene (GWS = 3)	Sample Measurement										
PARM Code 39400 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Trihalomethane, Total by summation(GWS = 0.080)	Sample Measurement										
PARM Code 82080 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L		Annually	Grab
Radium 226 + Radium 228, Total (GWS = 5)	Sample Measurement										
PARM Code 11503 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	pCi/L		Annually	24-hr FPC
Alpha, Gross Particle Activity (GWS = 15)	Sample Measurement										
PARM Code 80045 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	pCi/L		Annually	24-hr FPC
Aluminum, Total Recoverable (GWS = 0.2)	Sample Measurement										
PARM Code 01104 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L		Annually	24-hr FPC
Chloride (as Cl) (GWS = 250)	Sample Measurement										
PARM Code 00940 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L		Annually	24-hr FPC
Iron, Total Recoverable (GWS = 0.3)	Sample Measurement										
PARM Code 00980 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L		Annually	24-hr FPC
Copper, Total Recoverable (GWS = 1,000)	Sample Measurement										
PARM Code 01119 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Manganese, Total Recoverable (GWS = 50)	Sample Measurement										
PARM Code 11123 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-015-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Silver, Total Recoverable (GWS = 100)	Sample Measurement										
PARM Code 01079 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
Sulfate, Total (GWS = 250)	Sample Measurement										
PARM Code 00945 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L		Annually	24-hr FPC
Zinc, Total Recoverable (GWS = 5,000)	Sample Measurement										
PARM Code 01094 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L		Annually	24-hr FPC
pH (GWS = 6.5-8.5)	Sample Measurement										
PARM Code 00400 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	s.u.		Annually	Grab
Solids, Total Dissolved (TDS) (GWS = 500)	Sample Measurement										
PARM Code 70295 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L		Annually	24-hr FPC
Foaming Agents (GWS = 0.5)	Sample Measurement										
PARM Code 01288 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L		Annually	24-hr FPC

DAILY SAMPLE RESULTS - PART B

Permit Number: FLA014478-015-DW1P Facility: Forest Utilities WWTP
Monitoring Period From: _____ To: _____

	BOD, Carbonaceous 5 day, 20C mg/L	BOD, Carbonaceous 5 day, 20C mg/L	BOD, Carbonaceous 5 day, 20C (Influent) mg/L	Chlorine, Total Residual (For Disinfection) mg/L	Chlorine, Total Residual mg/L	Coliform, Fecal #/100mL	Coliform, Fecal #/100mL	Flow MGD	Solids, Total Suspended mg/L	Solids, Total Suspended mg/L	Solids, Total Suspended (Influent) mg/L
Code	80082	80082	80082	50060	50060	74055	74055	50050	00530	00530	00530
Mon. Site	EFA-01	EFA-02	INF-01	EFA-01	EFA-02	EFA-01	EFA-02	FLW-01	EFB-01	EFB-02	INF-01
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
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20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator Class: _____ Certificate No: _____ Name: _____

Evening Shift Operator Class: _____ Certificate No: _____ Name: _____

Night Shift Operator Class: _____ Certificate No: _____ Name: _____

Lead Operator Class: _____ Certificate No: _____ Name: _____

DAILY SAMPLE RESULTS - PART B

Permit Number: FLA014478-015-DW1P Facility: Forest Utilities WWTP
Monitoring Period From: _____ To: _____

	Turbidity NTU	Turbidity NTU	pH s.u.	pH s.u.							
Code	00070	00070	00400	00400							
Mon. Site	EFB-01	EFB-02	EFA-01	EFA-02							
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
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22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator Class: _____ Certificate No: _____ Name: _____

Evening Shift Operator Class: _____ Certificate No: _____ Name: _____

Night Shift Operator Class: _____ Certificate No: _____ Name: _____

Lead Operator Class: _____ Certificate No: _____ Name: _____

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Forest Utilities WWTP
Permit Number: FLA014478-015-DW1P
County: Lee

Monitoring Well ID: MWI-21303
Well Type: Intermediate
Description: Intermediate well located 0.34 miles northeast of the plant on Timberlakes Dr.

Report Frequency: Quarterly
Program: Domestic

Office: South District

Re-submitted DMR: ☐

Monitoring Period From: _____ To: _____

Date Sample Obtained: _____

Time Sample Obtained: _____

Was the well purged before sampling? ___Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		Report	mg/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		Report	ug/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		Report	ug/L	Grab	Quarterly				
Chromium, Total Recoverable	01118		Report	ug/L	Grab	Quarterly				
Lead, Total Recoverable	01114		Report	ug/L	Grab	Quarterly				
Coliform, Fecal	74055		Report	#/100mL	Grab	Quarterly				
pH	00400		Report	s.u.	In Situ	Quarterly				
Sulfate, Total	00945		Report	mg/L	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Specific Conductance	00095		Report	umhos/cm	In Situ	Quarterly				
Temperature (C), Water	00010		Report	Deg C	In Situ	Quarterly				
Oxygen, Dissolved (DO)	00300		Report	mg/L	In Situ	Quarterly				

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Forest Utilities WWTP
Permit Number: FLA014478-015-DW1P
County: Lee

Monitoring Well ID: MWB-21302
Well Type: Background
Description: Background monitoring well located 0.86 miles northeast of the plant on Forrest Blvd.

Report Frequency: Quarterly
Program: Domestic

Office: South District

Re-submitted DMR: ☐

Monitoring Period From: _____ To: _____

Date Sample Obtained: _____

Time Sample Obtained: _____

Was the well purged before sampling? ___Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		Report	mg/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		Report	ug/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		Report	ug/L	Grab	Quarterly				
Chromium, Total Recoverable	01118		Report	ug/L	Grab	Quarterly				
Lead, Total Recoverable	01114		Report	ug/L	Grab	Quarterly				
Coliform, Fecal	74055		Report	#/100mL	Grab	Quarterly				
pH	00400		Report	s.u.	In Situ	Quarterly				
Sulfate, Total	00945		Report	mg/L	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Specific Conductance	00095		Report	umhos/cm	In Situ	Quarterly				
Temperature (C), Water	00010		Report	Deg C	In Situ	Quarterly				
Oxygen, Dissolved (DO)	00300		Report	mg/L	In Situ	Quarterly				

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COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Forest Utilities WWTP
Permit Number: FLA014478-015-DW1P
County: Lee

Monitoring Well ID: MWC-80020
Well Type: Compliance
Description: Compliance well located 0.2 miles east of the plant on Deer Run Road.

Report Frequency: Quarterly
Program: Domestic

Office: South District

Re-submitted DMR: ☐

Monitoring Period From: _____ To: _____

Date Sample Obtained: _____

Time Sample Obtained: _____

Was the well purged before sampling? ___Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		10	mg/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10	ug/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5	ug/L	Grab	Quarterly				
Chromium, Total Recoverable	01118		100	ug/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15	ug/L	Grab	Quarterly				
Coliform, Fecal	74055		0	#/100mL	Grab	Quarterly				
pH	00400		6.5-8.5	s.u.	In Situ	Quarterly				
Sulfate, Total	00945		250	mg/L	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Specific Conductance	00095		Report	umhos/cm	In Situ	Quarterly				
Temperature (C), Water	00010		Report	Deg C	In Situ	Quarterly				
Oxygen, Dissolved (DO)	00300		Report	mg/L	In Situ	Quarterly				

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NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Forest Utilities WWTP
Permit Number: FLA014478-015-DW1P
County: Lee

Monitoring Well ID: MWC-80019
Well Type: Compliance
Description: Compliance well located 70 feet north of the plant.

Report Frequency: Quarterly
Program: Domestic

Office: South District

Re-submitted DMR: ☐

Monitoring Period From: _____ To: _____

Date Sample Obtained: _____

Time Sample Obtained: _____

Was the well purged before sampling? ___Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		10	mg/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10	ug/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5	ug/L	Grab	Quarterly				
Chromium, Total Recoverable	01118		100	ug/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15	ug/L	Grab	Quarterly				
Coliform, Fecal	74055		0	#/100mL	Grab	Quarterly				
pH	00400		6.5-8.5	s.u.	In Situ	Quarterly				
Sulfate, Total	00945		250	mg/L	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Specific Conductance	00095		Report	umhos/cm	In Situ	Quarterly				
Temperature (C), Water	00010		Report	Deg C	In Situ	Quarterly				
Oxygen, Dissolved (DO)	00300		Report	mg/L	In Situ	Quarterly				

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NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Forest Utilities WWTP
Permit Number: FLA014478-015-DW1P
County: Lee

Monitoring Well ID: MWC-21304
Well Type: Compliance
Description: Compliance monitoring well located 0.58 miles north of the plant near Timberlakes Dr.

Report Frequency: Quarterly
Program: Domestic

Office: South District

Re-submitted DMR: ☐

Monitoring Period From: _____ To: _____

Date Sample Obtained: _____

Time Sample Obtained: _____

Was the well purged before sampling? ___Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		10	mg/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10	ug/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5	ug/L	Grab	Quarterly				
Chromium, Total Recoverable	01118		100	ug/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15	ug/L	Grab	Quarterly				
Coliform, Fecal	74055		0	#/100mL	Grab	Quarterly				
pH	00400		6.5-8.5	s.u.	In Situ	Quarterly				
Sulfate, Total	00945		250	mg/L	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Specific Conductance	00095		Report	umhos/cm	In Situ	Quarterly				
Temperature (C), Water	00010		Report	Deg C	In Situ	Quarterly				
Oxygen, Dissolved (DO)	00300		Report	mg/L	In Situ	Quarterly				

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NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENTS AND EXPLANATION (Reference all attachments here):

INSTRUCTIONS FOR COMPLETING THE WASTEWATER DISCHARGE MONITORING REPORT

Read these instructions before completing the DMR. Hard copies and/or electronic copies of the required parts of the DMR were provided with the permit. All required information shall be completed in full and typed or printed in ink. A signed, original DMR shall be mailed to the address printed on the DMR by the 28th of the month following the monitoring period. Facilities who submit their DMR(s) electronically through eDMR do not need to submit a hardcopy DMR. The DMR shall not be submitted before the end of the monitoring period.

The DMR consists of three parts--A, B, and D--all of which may or may not be applicable to every facility. Facilities may have one or more Part A's for reporting effluent or reclaimed water data. All domestic wastewater facilities will have a Part B for reporting daily sample results. Part D is used for reporting ground water monitoring well data.

When results are not available, the following codes should be used on parts A and D of the DMR and an explanation provided where appropriate. Note: Codes used on Part B for raw data are different.

CODE	DESCRIPTION/INSTRUCTIONS
ANC	Analysis not conducted.
DRY	Dry Well
FLD	Flood disaster.
IFS	Insufficient flow for sampling.
LS	Lost sample.
MNR	Monitoring not required this period.

CODE	DESCRIPTION/INSTRUCTIONS
NOD	No discharge from/to site.
OPS	Operations were shutdown so no sample could be taken.
OTH	Other. Please enter an explanation of why monitoring data were not available.
SEF	Sampling equipment failure.

When reporting analytical results that fall below a laboratory's reported method detection limits or practical quantification limits, the following instructions should be used, unless indicated otherwise in the permit or on the DMR:

1. Results greater than or equal to the PQL shall be reported as the measured quantity.
2. Results less than the PQL and greater than or equal to the MDL shall be reported as the laboratory's MDL value. These values shall be deemed equal to the MDL when necessary to calculate an average for that parameter and when determining compliance with permit limits.
3. Results less than the MDL shall be reported by entering a less than sign ("<") followed by the laboratory's MDL value, e.g. < 0.001. A value of one-half the MDL or one-half the effluent limit, whichever is lower, shall be used for that sample when necessary to calculate an average for that parameter. Values less than the MDL are considered to demonstrate compliance with an effluent limitation.

PART A -DISCHARGE MONITORING REPORT (DMR)

Part A of the DMR is comprised of one or more sections, each having its own header information. Facility information is preprinted in the header as well as the monitoring group number, whether the limits and monitoring requirements are interim or final, and the required submittal frequency (e.g. monthly, annually, quarterly, etc.). Submit Part A based on the required reporting frequency in the header and the instructions shown in the permit. The following should be completed by the permittee or authorized representative:

Resubmitted DMR: Check this box if this DMR is being re-submitted because there was information missing from or information that needed correction on a previously submitted DMR. The information that is being revised should be clearly noted on the re-submitted DMR (e.g. highlight, circle, etc.)
No Discharge From Site: Check this box if no discharge occurs and, as a result, there are no data or codes to be entered for all of the parameters on the DMR for the entire monitoring group number; however, if the monitoring group includes other monitoring locations (e.g., influent sampling), the "NOD" code should be used to individually denote those parameters for which there was no discharge.
Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Sample Measurement: Before filling in sample measurements in the table, check to see that the data collected correspond to the limit indicated on the DMR (i.e. interim or final) and that the data correspond to the monitoring group number in the header. Enter the data or calculated results for each parameter on this row in the non-shaded area above the limit. Be sure the result being entered corresponds to the appropriate statistical base code (e.g. annual average, monthly average, single sample maximum, etc.) and units. Data qualifier codes are not to be reported on Part A.
No. Ex.: Enter the number of sample measurements during the monitoring period that exceeded the permit limit for each parameter in the non-shaded area. If none, enter zero.
Frequency of Analysis: The shaded areas in this column contain the minimum number of times the measurement is required to be made according to the permit. Enter the actual number of times the measurement was made in the space above the shaded area.
Sample Type: The shaded areas in this column contain the type of sample (e.g. grab, composite, continuous) required by the permit. Enter the actual sample type that was taken in the space above the shaded area.
Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.
Comment and Explanation of Any Violations: Use this area to explain any exceedances, any upset or by-pass events, or other items which require explanation. If more space is needed, reference all attachments in this area.

PART B - DAILY SAMPLE RESULTS

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Daily Monitoring Results: Transfer all analytical data from your facility's laboratory or a contract laboratory's data sheets for all day(s) that samples were collected. Record the data in the units indicated. Table 1 in Chapter 62-160, F.A.C., contains a complete list of all the data qualifier codes that your laboratory may use when reporting analytical results. However, when transferring numerical results onto Part B of the DMR, only the following data qualifier codes should be used and an explanation provided where appropriate.

CODE	DESCRIPTION/INSTRUCTIONS
<	The compound was analyzed for but not detected.
A	Value reported is the mean (average) of two or more determinations.
J	Estimated value, value not accurate.
Q	Sample held beyond the actual holding time.
Y	Laboratory analysis was from an unpreserved or improperly preserved sample.

To calculate the monthly average, add each reported value to get a total. For flow, divide this total by the number of days in the month. For all other parameters, divide the total by the number of observations.
Plant Staffing: List the name, certificate number, and class of all state certified operators operating the facility during the monitoring period. Use additional sheets as necessary.

PART D - GROUND WATER MONITORING REPORT

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Date Sample Obtained: Enter the date the sample was taken. Also, check whether or not the well was purged before sampling.
Time Sample Obtained: Enter the time the sample was taken.
Sample Measurement: Record the results of the analysis. If the result was below the minimum detection limit, indicate that. Data qualifier codes are not to be reported on Part D.
Detection Limits: Record the detection limits of the analytical methods used.
Analysis Method: Indicate the analytical method used. Record the method number from Chapter 62-160 or Chapter 62-601, F.A.C., or from other sources.
Sampling Equipment Used: Indicate the procedure used to collect the sample (e.g. airlift, bucket/bailer, centrifugal pump, etc.)
Samples Filtered: Indicate whether the sample obtained was filtered by laboratory (L), filtered in field (F), or unfiltered (N).
Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.
Comments and Explanation: Use this space to make any comments on or explanations of results that are unexpected. If more space is needed, reference all attachments in this area.

SPECIAL INSTRUCTIONS FOR LIMITED WET WEATHER DISCHARGES

Flow (Limited Wet Weather Discharge): Enter the measured average flow rate during the period of discharge or divide gallons discharged by duration of discharge (converted into days). Record in million gallons per day (MGD).
Flow (Upstream): Enter the average flow rate in the receiving stream upstream from the point of discharge for the period of discharge. The average flow rate can be calculated based on two measurements; one made at the start and one made at the end of the discharge period. Measurements are to be made at the upstream gauging station described in the permit.
Actual Stream Dilution Ratio: To calculate the Actual Stream Dilution Ratio, divide the average upstream flow rate by the average discharge flow rate. Enter the Actual Stream Dilution Ratio accurate to the nearest 0.1.
No. of Days the SDF > Stream Dilution Ratio: For each day of discharge, compare the minimum Stream Dilution Factor (SDF) from the permit to the calculated Stream Dilution Ratio. On Part B of the DMR, enter an asterisk (*) if the SDF is greater than the Stream Dilution Ratio on any day of discharge. On Part A of the DMR, add up the days with an "*" and record the total number of days the Stream Dilution Factor was greater than the Stream Dilution Ratio.
$CBOD_5$: Enter the average $CBOD_5$ of the reclaimed water discharged during the period shown in duration of discharge.
TKN: Enter the average TKN of the reclaimed water discharged during the period shown in duration of discharge.
Actual Rainfall: Enter the actual rainfall for each day on Part B. Enter the actual cumulative rainfall to date for this calendar year and the actual total monthly rainfall on Part A. The cumulative rainfall to date for this calendar year is the total amount of rain, in inches, that has been recorded since January 1 of the current year through the month for which this DMR contains data.
Rainfall During Average Rainfall Year: On Part A, enter the total monthly rainfall during the average rainfall year and the cumulative rainfall for the average rainfall year. The cumulative rainfall for the average rainfall year is the amount of rain, in inches, which fell during the average rainfall year from January through the month for which this DMR contains data.
No. of Days LWWD Activated During Calendar Year: Enter the cumulative number of days that the limited wet weather discharge was activated since January 1 of the current year.
Reason for Discharge: Attach to the DMR a brief explanation of the factors contributing to the need to activate the limited wet weather discharge.

STATEMENT OF BASIS
FOR
STATE OF FLORIDA DOMESTIC WASTEWATER FACILITY PERMIT

PERMIT NUMBER: FLA014478-015

FACILITY NAME: Forest Utilities, Inc.

FACILITY LOCATION: 6341 Deer Run Road SW, Fort Myers, FL 33908-4318
Lee County

NAME OF PERMITTEE: Forest Utilities, Inc.

PERMIT WRITER: Bill Robertson, P.E.

1. SUMMARY OF APPLICATION

a. Chronology of Application

Application Number: FLA014478-015-DW1P

Application Submittal Date: November 3, 2020

b. Type of Facility

Domestic Wastewater Treatment Plant

Ownership Type: Private

SIC Code: 4952

c. Facility Capacity

Existing Permitted Capacity:	0.800 mgd Annual Average Daily Flow
Proposed Increase in Permitted Capacity:	0.000 mgd Annual Average Daily Flow
Proposed Total Permitted Capacity:	0.800 mgd Annual Average Daily Flow

d. Description of Wastewater Treatment

The facility is a domestic wastewater treatment plant that uses the extended aeration process. The permitted capacity for the annual average daily flow (AADF) is 0.800 MGD. The facility has four surge tanks and one effluent reject tank. Biological treatment occurs in seven aeration tanks and three clarifiers. The high-level disinfection system consists of two traveling bridge sand filters, and two chlorine contact basins. Biosolids are treated and stored in three anaerobic holding tanks, three aerated holding tanks, three sludge drying beds and one dried-sludge holding bin.

e. Description of Effluent Disposal and Land Application Sites (as reported by applicant)

Effluent is disposed of via an existing 0.800 MGD annual average daily flow permitted capacity slow-rate public access system. The reclaim water is used to irrigate the Forrest Country Club Golf Courses. Reclaimed water is stored in two isolated golf course ponds that do not discharge.

2. SUMMARY OF SURFACE WATER DISCHARGE

This facility does not discharge to surface waters.

3. BASIS FOR PERMIT LIMITATIONS AND MONITORING REQUIREMENTS

This facility is authorized to direct reclaimed water to Reuse System R-001, a slow-rate public access system, based on the following:

Parameter	Units	Max/ Min	Limit	Statistical Basis	Rationale
Flow	MGD	Max	0.800	Annual Average	62-600.420(2) FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	20.0	Annual Average	62-610.460 & 62-600.420(3)(a)1. FAC
		Max	30.0	Monthly Average	62-610.460 & 62-600.420(3)(a)2. FAC
		Max	45.0	Weekly Average	62-610.460 & 62-600.420(3)(a)3. FAC
		Max	60.0	Single Sample	62-610.460 & 62-600.420(3)(a)4. FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	20.0	Annual Average	62-600
		Max	30.0	Monthly Average	62-600
		Max	45.0	Weekly Average	62-600
		Max	60.0	Single Sample	62-600
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	62-610.460(1) & 62-600.440(6)(a)3. FAC
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	62-600.440
Coliform, Fecal	#/100mL	Max	25	Single Sample	62-610.460 & 62-600.440(6)(a)2. FAC
Coliform, Fecal	#/100mL	Max	25	Single Sample	62-600.440
Coliform, Fecal, % less than detection	percent	Min	75	Minimum Total	62-610.460 & 62-600.440(6)(a)1. FAC
Coliform, Fecal, % less than detection	percent	Min	75	Minimum Total	62-600.440
pH	s.u.	Min	6.0	Single Sample	62-600.445 FAC
		Max	8.5	Single Sample	62-600.445 FAC
pH	s.u.	Min	6.0	Single Sample	62-600
		Max	8.5	Single Sample	62-600
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	62-600.440(6)(b), 62-610.460(2), & 62-610.463(2) FAC
Chlorine, Total Residual	mg/L	Min	1.0	Single Sample	62-600.440(5)
Turbidity	NTU	Max	Report	Single Sample	62-610.463(2) FAC
Turbidity	NTU	Max	Report	Single Sample	62-600.440
Giardia	cysts/100L	Max	Report	Single Sample	62-610.463(4) FAC
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	62-610.463(4) FAC
Giardia	cysts/100L	Max	Report	Single Sample	62-610
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	62-610

Other Limitations and Monitoring Requirements:

Parameter	Units	Max/ Min	Limit	Statistical Basis	Rationale
Flow	MGD	Max	0.800	Annual Average	62-600.700(2)(b) FAC
		Max	Report	Monthly Average	62-600.700(2)(b) FAC
Percent Capacity, (TMADF/Permitted Capacity) x 100	percent	Max	Report	3-Month Rolling Average	62-600.405(4) FAC
BOD, Carbonaceous 5 day, 20C (Influent)	mg/L	Max	Report	Single Sample	62-600.660(1) FAC
Solids, Total Suspended (Influent)	mg/L	Max	Report	Single Sample	62-600.660(1) FAC
Monitoring Frequencies and Sample Types	-	-	-	All Parameters	62-600 FAC & 62-699 FAC and/or BPJ of permit writer
Sampling Locations	-	-	-	All Parameters	62-600, 62-610.412, 62-610.463(1), 62-610.568, 62-610.613 FAC and/or BPJ of permit writer

4. DISCUSSION OF CHANGES TO PERMIT LIMITATIONS

The current wastewater permit for this facility, FLA014478-012-DW1P expires on May 4, 2021.

Dissolved Solids, Total and Chloride have been removed from the monitoring requirements of Permit Section III - Groundwater Requirements. These parameters are not present in significant amounts in the effluent and therefore are not expected to adversely influence the compliance, background or intermediate well TDS and Chloride levels.

5. BIOSOLIDS MANAGEMENT REQUIREMENTS

Biosolids generated by this facility may be disposed of in a Class I solid waste landfill.

See the table below for the rationale for the biosolids quantities monitoring requirements.

Parameter	Units	Max/ Min	Limit	Statistical Basis	Rationale
Biosolids Quantity (Landfilled)	dry tons	Max	Report	Monthly Total	62-640.650(5)(a)1. FAC
Monitoring Frequency		All Parameters			62-640.650(5)(a) FAC

6. GROUND WATER MONITORING REQUIREMENTS

Ground water monitoring requirements have been established in accordance with Chapters 62-520, 532, 610, and 620, F.A.C.

7. PERMIT SCHEDULES

A schedule is not included in the wastewater permit.

8. INDUSTRIAL PRETREATMENT REQUIREMENTS

At this time, the facility is not required to develop an approved industrial pretreatment program. However, the Department reserves the right to require an approved program if future conditions warrant.

9. ADMINISTRATIVE ORDERS (AO) AND CONSENT ORDERS (CO)

This permit is not accompanied by an AO, and the permittee has not entered into a CO with the Department that affects this permit.

10. REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

No variances were requested for this facility.

11. THE ADMINISTRATIVE RECORD

The administrative record is available for public inspection electronically at http://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/FLA014478/facility!search, or during normal business hours at the location specified in item 12. Copies will be provided at a minimal charge per page.

12. DEP CONTACT

Additional information concerning the permit and proposed schedule for permit issuance may be obtained during normal business hours from:

Bill Robertson, P.E.
South District Office

2295 Victoria Ave
Suite 364
Ft. Myers, FL 33901-3875

Telephone No.: (239) 344-5657

Florida Department of Environmental Protection
Twin Towers Office Bldg., 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

PATHOGEN MONITORING

Part I - Instructions

1. Completion of this report is required by Rules 62-610.463(4), 62-610.472(3)(d), 62-610.525(13), 62-610.568(11), 62-610.568(12), and 62-610.652(6)(c), F.A.C., for all domestic wastewater facilities that provide reclaimed water to certain types of reuse activities. The schedule for sampling and reporting shall be in accordance with the permit for the facility. If a schedule for sampling or re-sampling is not included in the permit, the following schedule shall apply:

   a. Routine Sampling:

      If sampling is required once every two years, this report shall be submitted on or before November 28 of each even numbered year (2006, 2008, 2010, etc.).

      If sampling is required once every five years, this report shall be submitted with the application for permit renewal.

      If sampling is required quarterly, this report shall be submitted on or before February 28, May 28, August 28, and November 28 of each year.

   b. Subsequent Re-Sampling:

      If subsequent re-sampling is required by Item 9 in Part I of this form, this form shall be submitted for the subsequent re-sampling(s) in accordance with the schedule established in Item 9 in Part I of this form.

2. Submit one copy of this form and a copy of the laboratory's final report for the analysis of *Giardia* and *Cryptosporidium* to each of the following two addresses:

   a. The appropriate DEP district office (attention Domestic Wastewater Program). Addresses for the DEP district offices are available at www.dep.state.fl.us/secretary/dist/default.htm.

   b. DEP Water Reuse Coordinator
      Mail Station 3540
      2600 Blair Stone Road
      Tallahassee, Florida 32399-2400

3. Please type or print legibly.

4. In Part II, Items 7 through 12 need to be completed only if this is the first submittal of this report, if the information in Items 7 through 12 has changed since the last submittal, or if the information in any of these questions has not been previously provided.

5. Part III is to be used when sampling for *Giardia* and *Cryptosporidium* at the treatment plant. Part III is also to be used when sampling for *Giardia* and *Cryptosporidium* in a supplemental water supply (see Rule 62-610.472, F.A.C.).

6. For each sample, record the sample volume obtained in liters.

7. For *Giardia*, record the concentrations in cysts per 100 liters. For *Cryptosporidium*, record the concentrations in oocysts per 100 liters. Sufficient sample volumes shall be collected and processed such that the detection limit is no greater than 5 cysts or oocysts per 100 liters. Detection levels on the order of 1 cyst or oocyst per 100 liters are recommended. If an observation is less than the detection limit, make an entry in the form "<2" (where 2 per 100 liters is the detection limit in this example). The actual detection limit will be dictated by the volumes of sample obtained, filtered, and processed. Do NOT record nondetectable values as zero.

8. EPA Method 1623 or other approved methods for reclaimed water or nonpotable waters, adjusted appropriately to accommodate the detection limit requirements, shall be used. Methods previously allowed for EPA's Information Collection Rule (ICR) shall not be used. The full requirements of the approved method, including quality assurance and quality control, are to be met. Quality assurance and sampling requirements in Chapter 62-160, F.A.C., shall apply.

   Two concentrations of *Giardia* and *Cryptosporidium* shall be recorded on Part III of this form:

   a. Total cysts and oocysts shall be enumerated using EPA Method 1623 or other approved methods.

   b. Potentially viable cysts and oocysts shall be enumerated using the DAPI staining technique contained in EPA Method 1623 or similar enumeration techniques included in other approved methods. Cysts and oocysts that are stained DAPI positive or show internal structure by D.I.C. shall be considered as being potentially viable. If the laboratory reports separate values for DAPI positive and for cysts or oocysts having internal structure, the larger of the two concentrations will be reported as being potentially viable.

9. If the number of potentially viable cysts of *Giardia* reported exceeds 5 per 100 liters, a subsequent sample shall be taken and analyzed using EPA Method 1623 or other approved methods and reported using this form. If the number of potentially viable oocysts of *Cryptosporidium* reported exceeds 22 per 100 liters, a subsequent sample shall be taken and analyzed using EPA Method 1623 or other approved methods and reported using this form. This subsequent sample shall be collected within 90 days of the date the initial sample was taken, analyzed for both *Giardia* and *Cryptosporidium*, and the results of the subsequent analysis shall be submitted to DEP using this form within 60 days of sample collection.

10. Rule 62-160.300, F.A.C., requires that all laboratories generating environmental data for submission to the DEP shall hold certification from the Department of Health's (DOH) Environmental Laboratory Certification Program (ELCP). Certification by the ELCP for analysis of *Giardia* and *Cryptosporidium* using EPA Method 1623 for non-potable waters is required. If other approved methods are used, certification by the ELCP is required for the specific method and for the test matrix. Lists of certified laboratories can be found at www.dep.state.fl.us/labs/cgi-bin/aams/index.asp

11. Samples shall be collected during peak flow periods (normally between the hours of 8:00 a.m. and 6:00 p.m.).

12. Recognizing that concentrations of these pathogens generally increase during the late summer through fall period, it is recommended that utilities sample during the August through October time period.

13. If the wastewater treatment facility uses chlorination for disinfection, samples obtained for analysis of *Giardia* and *Cryptosporidium* shall be dechlorinated.

14. When sampling at the treatment facility, obtain a grab sample for total suspended solids (TSS) that is representative of the water leaving the filters at the treatment facility during the period when pathogen

samples are being obtained. In addition, record the highest turbidity and the lowest total chlorine residual observed during the period when pathogen samples are being obtained.

15. When sampling a supplemental water supply, obtain a grab sample for total suspended solids (TSS) that is representative of the surface water or treated stormwater as it is added to the reclaimed water system. This TSS sample shall be taken during the period when pathogen samples are being obtained. In addition, record the lowest total chlorine residual observed during the period when pathogen samples are being obtained.

Part II - General Information

1. DEP wastewater facility identification number: **FLA014478-015**

   Wastewater facility name: Forest Utilities WWTP

   Permittee name: Forest Utilities, Inc.

2. Person completing this form:

   Name: _____

   Telephone: (_____)_____

   Email address: _____

3. Sampling and analysis:

   Date samples were taken: _____

   Organization collecting the samples: _____

   Was the sample dechlorinated in the field? ☐ Yes ☐ No

   Was the sample refrigerated or kept on ice during shipment to the laboratory? ☐ Yes ☐ No

   Date samples delivered to laboratory: _____

   Date analytical work was done: _____

   Laboratory doing the analysis: _____

   Laboratory's DOH Identification Number: _____

   Approved method used:

   ☐ EPA Method 1623

   ☐ Other approved method: _____

   Contact person at the laboratory: _____

   Email address of the lab contact person: _____

4. Is this the first time that this form has been submitted for the facility?

   ☐ Yes [Please complete Questions 7 through 16.]

   ☐ No [Proceed to Question 5.]

5. Is this a report of "subsequent re-sampling" required by Item 9 in Part I of this form based on concentrations of potentially viable cysts or oocysts in a previous sampling?

☐ No [Proceed to Question 6.]

☐ Yes [Attach a description of any facility or operational changes made to the treatment facilities since the time of the previous sampling and proceed to Question 6.]

6. Has the information requested in Questions 7 through 12 (below) changed since the last submittal of this form?

☐ Yes [Please complete Questions 7 through 16.]

☐ No [Proceed to Questions 13 through 16 of Part II of this form. You do not need to complete Questions 7 through 12.]

7. Type of secondary treatment system:

☐ Conventional activated sludge ☐ Extended aeration

☐ Contact stabilization ☐ Biological nutrient removal (such as Bardenpho)

☐ Other: _____

8. Does this treatment facility nitrify (convert ammonia nitrogen to nitrate)? ☐ Yes ☐ No

9. Filter type:

☐ Deep bed, single media ☐ Deep bed, multiple media

☐ Shallow bed, automatic backwash ☐ Upflow (including Dynasand)

☐ Slow rate sand filter ☐ Diatomaceous earth filter

☐ Fabric filter ☐ Cartridge filter

☐ Membranes (microfiltration, ultrafiltration, membrane bioreactor, reverse osmosis)

☐ Other: _____

10. Filter Media (complete for each type of media provided):

Top layer of media: Media type: _____

Effective size: _____ mm

Uniformity coefficient: _____

Bed depth: _____ inches

Middle layer of media: Media type: _____

Effective size: _____ mm

Uniformity coefficient: _____

Bed depth: _____ inches

Bottom layer of media: Media type: _____

Effective size: _____ mm

Uniformity coefficient: _____

Bed depth: _____ inches

11. Filter backwash water:

☐ Backwash water is returned to the headworks of the treatment plant.

☐ Backwash water is returned to the aeration basin.

☐ Other. Please describe: _____

12. Disinfection system:

☐ Chlorination, gas ☐ Hypochlorite

☐ Chlorine dioxide ☐ Chlorination, other _____

☐ Ultraviolet ☐ Ozone

☐ Other: _____

13. Is chlorine added before the filters? ☐ No ☐ Yes Dose: _____ mg/L

14. During the period that samples were taken, did you add a coagulant, coagulant aid, polyelectrolyte, or other chemical to enhance filtration?

☐ No

☐ Yes. Please list the chemicals being added and their dose.

Chemical 1 - Name: _____ Dose: _____ mg/L

Chemical 2 - Name: _____ Dose: _____ mg/L

Chemical 3 - Name: _____ Dose: _____ mg/L

15. Wastewater treatment plant permitted capacity: _____ MGD

16. Wastewater flow being treated at the time samples were collected: _____ MGD

PART III - PATHOGEN MONITORING REPORT

FACILITY ID: FLA014478
FACILITY NAME: Forest Utilities WWTP
FACILITY ADDRESS: 6341 Deer Run Road SW, Fort Myers, FL 33908-4318
PERMITTEE NAME: Forest Utilities, Inc.
MAILING ADDRESS: 6000 Forest Blvd, Fort Myers, Florida 33908- 4318
DATE OF SAMPLING: _____

Parameter	Quantity or Loading		Quality or Concentration	
	Sample Measurement	Units	Sample Measurement	Units
Treatment Plant: After Filter Monitoring Site No.				
Turbidity PARM Code 00070				NTU
TSS PARM Code 00530				mg/L
Treatment Plant: After Disinfection Monitoring Site No.				
Total Chlorine Residual PARM Code 50060				mg/L
Volume Collected PARM Code 71994		Liters		
Giardia, total count * PARM Code GIARD				total cysts/100 L
Giardia, potentially viable cysts * PARM Code VGIAR				potentially viable cysts/100 L
Cryptosporidium, total count * PARM Code CRYPT				total oocysts/100 L
Cryptosporidium, potentially viable oocysts * PARM Code VCRYP				potentially viable oocysts/100 L
Supplemental Water Supply (surface water or stormwater): After Treatment & Disinfection Monitoring Site No.				
TSS PARM Code 00530				mg/L
Total Chlorine Residual PARM Code 50060				mg/L
Volume Collected PARM Code 71994		Liters		
Giardia (total count) * PARM Code GIARD				total cysts/100 L
Giardia, potentially viable cysts * PARM Code VGIAR				potentially viable cysts/100 L
Cryptosporidium, total count * PARM Code CRYPT				total oocysts/100 L
Cryptosporidium, potentially viable oocysts * PARM Code VCRYP				potentially viable oocysts/100 L

* Data entries must be made for both total and potentially viable cysts and oocysts.

PART IV - CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Name/Title of Principle Executive Officer or Authorized Agent (Type or Print)	Signature of Principle Executive Officer or Authorized Agent	Telephone No.	Date (YY/MM/DD)
	Email Address		

FLORIDA DEPARTMENT OF Environmental Protection

South District
Post Office Box 2549
Fort Myers, FL 33902-2549
SouthDistrict@FloridaDEP.gov

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

March 1, 2021

Wade Moser, General Manager
6341 Deer Run Road SW
Fort Myers, FL 33908
Email: forestu@aol.com

Re: Warning Letter
Forest Utilities WWTP
FLA014478
LEE County – DW

Dear Mr. Moser:

A Compliance Evaluation Inspection was conducted for your facility on October 14, 2020 and a File Review on February 26, 2021, respectively under the authority of Section 403.061, Florida Statutes (F.S.). During this inspection and file review, possible violations of Chapters 62-160, 62-520, 62-555, 62-600, 62-610, 62-620, of the Florida Administrative Code (F.A.C.), were observed.

During the inspection and file review, Department personnel noted the following:

- The facility did not properly fill out their chain of custody.
- The facility did not preserve their samples properly.
- The facility did not complete their calibration/verification logs for their pH meter, chlorine meter, and turbidity meter.
- The facility did not record the beginning and end times of composite sampling.
- The facility does not have all records of sampling available and complete.
- The facility has DMR deficiencies.
- The facility did not do the required sampling for annual Reclaimed Water and/or Effluent Analysis Report.
- The facility did not submit an Annual Reuse Report.
- The facility did not submit their monitoring results for Giardia and Cryptosporidium in a timely manner.
- The facility did not submit their groundwater DMRs in a timely manner.
- The facility did not identify all of their analysis methods in their groundwater DMR.

- The facility did not properly report their non-detectable values on their groundwater DMR.
- The facility has multiple groundwater exceedances.

Violations of Florida Statutes or administrative rules may result in liability for damages and restoration, and the judicial imposition of civil penalties, pursuant to Sections 403.121, Florida Statutes.

Please contact Louise Chang, at (239) 344-5630, within **15 days** of receipt of this Warning Letter to arrange a meeting to discuss this matter. The Department is interested in receiving any facts you may have that will assist in determining whether any violations have occurred. Any document submittals can be made to our email mailbox at SD-WWinspect@Floridadep.gov or may be mailed to the above address. You may bring anyone with you to the meeting that you feel could help resolve this matter.

Please be advised that this Warning Letter is part of an agency investigation, preliminary to agency action in accordance with Section 120.57(5), Florida Statutes. We look forward to your cooperation in completing the investigation and resolving this matter.

Sincerely,

Jon M. Iglehart
Director of District Management
South District
Florida Department of Environmental Protection

FLORIDA DEPARTMENT OF Environmental Protection

South District
Post Office Box 2549
Fort Myers, FL 33902-2549
SouthDistrict@FloridaDEP.gov

Ron DeSantis
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March 1, 2021

Wade Moser, General Manager
6341 Deer Run Road SW
Fort Myers, FL 33908
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Sincerely,

Jon M. Iglehart
Director of District Management
South District
Florida Department of Environmental Protection

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
WASTEWATER COMPLIANCE INSPECTION REPORT

Facility Name and Physical Address	WAFR ID	County	Entry Date	Entry Time
Forest Utilities WWTP 6341 Deer Run Road SW Fort Myers, FL 33908	FLA014478 **Facility Phone #** (239) 481 - 5333	LEE	10/14/2020 **Exit Date** 10/14/2020	09: 00 AM **Exit Time** 11: 30 AM

LAT	N 26	o	29	‘	13	“
LONG	W 81	o	52	‘	12	“

Name(s) of Field Representatives(s) and Title	Operator Certification #	Email	Phone

Name & Address of Permittee / Designated Rep.	Title	Email	Phone
Wade Moser 6341 Deer Run Road SW Fort Myers, FL 33908	General Manager	Forestu@aol.com	(239) 481 - 5333

Inspection Type	C	E	I		Samples Taken(Y/N): N Pictures Taken(Y/N): Y	Sample ID#:	Samples Split (Y/N) : N

X **Domestic** ☐ **Industrial**

FACILITY COMPLIANCE AREAS EVALUATED

IC = In Compliance; MC = Minor Out of Compliance; NC = Out of Compliance; SC = Significant out of Compliance; NA = Not Applicable; NE = Not Evaluated
Significant Non-Compliance Criteria Should be Reviewed when Out of Compliance Ratings Are Given in Areas Marked by a “♦ ”

	PERMITS/ORDERS		SELF MONITORING PROGRAM		FACILITY OPERATIONS		EFFLUENT/DISPOSAL
IC	1. ♦ Permit	IC	3. Laboratory	IC	6. Facility Site Review	IC	9. ♦ Effluent Quality
NA	2. ♦ Compliance Schedules	NC	4. Sampling	IC	7. Flow Measurement	IC	10. ♦ Effluent Disposal
		NC	5. ♦ Records & Reports	IC	8.♦ Operation & Maintenance	IC	11. Biosolids
						NC	12. ♦ Groundwater
NE	14. Other					IC	13. ♦ SSO Survey

Facility and/or Order Compliance Status:	☐ In-Compliance	X Out-Of-Compliance	☐ Significant-Out-Of-Compliance

Recommended Actions: See Warning Letter

Name(s) and Signature(s) of Inspector(s)		District Office/Phone Number	Date
Nicole Devine	Nicole Devine	SD/ (239) 344-5675	10/23/2020
Name and Signature of Reviewer Deanna Newburg	Deanna Newburg	**District Office/Phone Number** SD/ (239) 344-5677	**Date** 02/26/2021

Single Event Violations (*SNC SEVs)				
Check for Yes	**Evaluation Area**	**Description**	**Finding Description**	**Finding ID**
☐	Permit	Effluent Violations - Unapproved Bypass	Wastewater was diverted from a portion of the treatment process without department approval.	**UNBY**
☐	*Permit	Permit Violations - Discharge Without a Valid Permit	The facility was operating without a permit or with an expired permit.	**UPHI**
☐	Permit	Permit Violations - Failure to Submit Timely Permit Renewal Application	The permittee failed to submit an application to renew the existing permit at least 180 days prior to expiration.	**PFSA**
☐	Laboratory	Management Practice Violations - Laboratory Not Certified	The laboratory was not certified by the National Environmental Laboratory Accreditation Conference (NELAC).	**LNCE**
☐	Sampling	Monitoring Violations - Analysis not Conducted	The facility failed to collect and/or analyze samples as required by permit or enforcement action.	**ANCV**
☐	Sampling	Monitoring Violations - Failure to Monitor for Toxicity Requirements	The facility failed to collect and/or analyze routine or follow-up toxicity samples.	**FTOX**
☐	Records and Reports	Management Practice Violations - Failure to Develop Adequate SPCC Plan	The facility failed to develop or maintain their Spill Prevention Control and Countermeasures (SPCC) plan.	**FSPC**
☐	Records and Reports	Management Practice Violations - Failure to Maintain Records	The facility failed to maintain records for the required retention period.	**FMRR**
☐	Records and Reports	Reporting Violations - Failure to Notify	The permittee failed to notify the department of any event or activity that requires notification as required by permit or rule.	**RSWP**
☒	Records and Reports	Reporting Violations - Failure to Submit DMRs	The permittee failed to submit any DMR required by rule, permit, or enforcement action in a timely manner.	**FDMR**
☒	Records and Reports	Reporting Violations - Failure to submit required report (non-DMR, non-pretreatment)	The facility failed to submit any report required by rule, permit, enforcement action or inspection activity except for DMRs.	**FRPT**
☐	Facility Site Review	Management Practice Violations - Improper Land Application (non-503, non-CAFO)	The land application system was not being maintained.	**LASN**
☐	Flow Measurement	Monitoring Violations - No Flow Measurement Device	The facility failed to install a flow measurement device, an approved flow measurement device, or a working flow measurement device.	**NOFL**
☐	Operation and Maintenance	Management Practice Violations - Improper Operation and Maintenance	The facility failed to follow their operation and maintenance plan/manual or their Biosolids Nutrient Management Plan.	**IONM**
☐	Operation and Maintenance	Management Practice Violations - Inflow/Infiltration (I/I)	The facility had an inflow and infiltration problem causing collection system issues and/or operational issues.	**ININ**
☐	Operation and Maintenance	Management Practice Violations - No Licensed/Certified Operator	The facility was being operated without a certified operator or by an operator that is not licensed for the size of plant.	**ONCO**
☐	*Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent acute toxicity has been documented through follow-up tests.	**EATX**
☐	*Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent chronic toxicity has been documented through follow-up tests.	**ECTX**
☐	*Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent acute or chronic toxicity has been documented in the effluent through the use of routine and follow-up tests.	**ETOX**
☐	Effluent Quality	Effluent Violations - Narrative Effluent Violation	The facility violated a permit or enforcement narrative effluent limit.	**XNEV**
☐	*Effluent Quality	Effluent Violations - Reported Fish Kill	The facility had a discharge of wastewater that resulted in a fish kill.	**XFSH**
☐	Sanitary Sewer Overflow Survey	WW SSO - Discharge to Waters	A sewage spill from any components of a collection/transmission system or from a treatment plant reached surface waters including stormwater conveyance system or drainage ditch.	**SSO1**
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to Maintain Records or Meet Record Keeping Requirements	The facility failed to keep routine documentation and reporting records of spills, and/or operation and maintenance activities on the collection/transmission system.	**SSO2**
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to monitor	The facility failed to collect and/or analyze bacteriological samples for sewage spills that reached surface waters.	**SSO3**
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to report violation that may endanger public health 122.41(l)(7)	The facility failed to report a sewage spill within 24 hours of discovery.	**SSO4**
☐	Sanitary Sewer Overflow Survey	WW SSO - Improper Operation and Maintenance	The facility failed to perform routine preventative maintenance to keep the collection/transmission system in good working order.	**SSO5**
☐	Sanitary Sewer Overflow Survey	WW SSO - Overflow to Dry Land	A sewage spill from any part of a collection/transmission system or treatment plant that did not make it to surface waters, i.e., stormwater collection system, drainage ditch, stream, pond, or lake.	**SSO6**

Facility Treatment Summary: The facility is a domestic wastewater treatment plant that uses the extended aeration process. The permitted capacity for the annual average daily flow (AADF) is 0.800 MGD. The facility has four (4) surge tanks and one (1) effluent reject tank. Biological treatment occurs in seven (7) aeration tanks and three (3) clarifiers. The high-level disinfection system consists of two (2) traveling bridge sand filters and two (2) chlorine contact tanks. Biosolids are treated and stored in three (3) anaerobic holding tanks, three (3) aeration holding tanks, three (3) sludge drying beds and one (1) dried sludge holding bin.
Reuse or Disposal Summary: A slow rate public access reuse system that irrigates 280 acres of the Forest Country Club Golf Courses. Reclaimed water is stored in two (2) isolated golf course ponds that do not discharge. The permitted capacity for the reuse system is 0.800 MGD AADF.

1. Permit (PERM) — In-Compliance

Current Permit Available Onsite?	Yes
Date Permit Issued?	May 5, 2016
Date Permit Expires?	May 4, 2021
Permit Renewal Application Due by?	November 5, 2020
Administrative or Judicial Orders?	No

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
1.1 Observation: Is the permit valid?	Yes		UPHI
1.2 Observation: Was Is a copy of the permit available onsite?	Yes	PEOS	PENA
1.3 Observation: Is the facility operated in accordance with the permit?	Yes	PEOP	PEMA
1.4 Observation: Is the permit renewal application in house for review? Additional Comments: The facility has submitted their permit renewal application to the Department on October 27, 2020 and it was issued on December 18, 2020 with an expiration date of May 4, 2026.	Yes	PAPR	
1.5 Observation: Has the facility failed to submit the permit renewal application 180 days prior to the expiration date? Additional Comments: Department records indicate that the current operating permit will expire on May 4, 2021. F.A.C. Rule 62-620.335(1) states that a Permittee shall submit an application to renew the existing permit at least 180 days before the expiration date of the existing permit. Timely and sufficient submittal of the renewal application and permit processing fee is important (and in your best interest) as it automatically extends the expiration date on the existing permit until the Department takes final action on the renewal application. A tardy application could result in non-compliance. Your renewal application and permit processing fee must be submitted no later than November 5, 2020. The facility has submitted their permit renewal application to the Department on October 27, 2020 and it was issued on December 18, 2020 with an expiration date of May 4, 2026.	No	PFSA	PSSC
1.6 Observation: Has the permittee for the facility changed?	No	PSSC	
1.7 Observation: Is wastewater diverted from a portion of the treatment process without Department approval?	No	UNBY	

1.8 Observation: Is the facility discharging to waters of the state without an appropriate FDEP permit?	No	PDWS	
1.9 Observation: Does the facility have a substantial plant modification placed into service without Department approval?	No	UNPM	

2. Compliance Schedules (COMS) Not Applicable

Compliance Schedule in Permit met?	See Observation
Compliance Schedule(s) in Order are being met?	See Observation

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
2.1 Observation: Is the facility under a compliance schedule?	No	PSSC	

3. Laboratory (LABS) In-Compliance

Contract Lab Name and Certification #	Sanders Laboratories Inc. – Nokomis E84380
Facility DOH Certification #	E84380

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
3.1 Observation: Does the facility have a laboratory onsite?	No		NANA
3.2 Observation: Is the laboratory certified by the National Environmental Laboratory Accreditation Conference (NELAC)? Additional Comments: The facility has contract with Sanders Laboratory Inc. Nokomis (E84380) to collect and analyze samples outlined in their permit. The laboratory then submits the sample results back to the facility, who is responsible for properly and correctly reporting those results on their DMRs.	Yes	LACD	LNCE

4. Sampling (SAMP) Out-of-Compliance

Sampling conducted during inspection?	No
Sampling observed during inspection?	No
Sampling conducted at locations identified by the permit?	Yes
Safe access to sampling locations?	Yes

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
4.1 Observation: Is there continuous monitoring?	Yes		

Additional Comments: The facility is permitted to continuously monitor for Total Residual Chlorine (TRC) at both the west and east chlorine contact chamber (CCC) outfalls, Turbidity at both the west and east filter overflow, and Flow at the meter prior to the aeration tanks.

R-001 Reuse System:

			Reclaimed Water Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow (calculated to reuse)	MGD	Max	0.800	Annual Average	5 days/week	Calculated	FLW-02	See I.B.4
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	8-hr FPC	EFA-01	
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	8-hr FPC	EFA-02	
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	7 days/week	Grab	EFB-01	
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	7 days/week	Grab	EFB-02	
Coliform, Fecal	#/100mL	Max	25	Single Sample	7 days/week	Grab	EFA-01	
Coliform, Fecal	#/100mL	Max	25	Single Sample	7 days/week	Grab	EFA-02	
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	7 days/week	Calculated	EFA-01	See I.A.3
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	7 days/week	Calculated	EFA-02	See I.A.3
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	5 Days/Week	Grab	EFA-01	
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	5 Days/Week	Grab	EFA-02	
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	Continuous	Meter	EFA-01	See I.A.4 and I.A.7
Chlorine, Total Residual	mg/L	Min	1.0	Single Sample	Continuous	Meter	EFA-02	
Turbidity	NTU	Max	Report	Single Sample	Continuous	Meter	EFB-01	See I.A.5 and I.A.7
Turbidity	NTU	Max	Report	Single Sample	Continuous	Meter	EFB-02	See I.A.5 and I.A.7
Giardia	cysts/100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-01	See I.A.8

			Reclaimed Water Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Giardia	cysts/100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-02	See I.A.8
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-01	See I.A.8
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-02	See I.A.8

Monitoring Site Number	Description of Monitoring Site
FLW-02	As indicated in the application, flow is determined by bubbler-type flow measurement: flow is calculated using a weir formula. Outlet weir of chlorine contact tanks prior to reuse storage or public access reuse site(s).
EFA-01	The west chlorine contact tank's outfall.
EFA-02	The east chlorine contact tank's outfall.
EFB-01	The west Filter's weir overflow.
EFB-02	The east Filter's weir overflow.

			Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow (into treatment plant)	MGD	Max Max	0.800 Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-01	See I.B.4
Percent Capacity, (TMADF/Permitted Capacity) x 100	percent	Max	Report	3-Month Rolling Average	Monthly	Calculated	CAL-01	
BOD, Carbonaceous 5 day, 20C (Influent)	mg/L	Max	Report	Single Sample	Weekly	8-hr FPC	INF-01	See I.B.3
Solids, Total Suspended (Influent)	mg/L	Max	Report	Single Sample	Weekly	8-hr FPC	INF-01	See I.B.3

Monitoring Site Number	Description of Monitoring Site
FLW-01	Magnetic flow meter prior to the aeration tanks.
CAL-01	Calculation of percent capacity. Calculated from the FLW-01 measurements.
INF-01	At the primary bar screen above the surge tanks.

Biosolids:

			Biosolids Limitations		Monitoring Requirements		
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number
Biosolids Quantity (Landfilled)	Dry Tons	Max	Report	Monthly Total	Monthly	Calculated	RMP-1

Monitoring Site Number	Description of Monitoring Site Calculations
RMP-1	Monthly Total of Biosolids Landfilled.

4.2 Observation: Are samples being collected and analyzed as required by the permit or enforcement action?	Yes		ANCV
4.3 Observation: Is the facility conducting analysis properly for $CBOD_5$?	Yes		SACB
4.4 Observation: Are the TSS samples collected after filtration and prior to chlorination?	Yes		SASS
4.5 Observation: Is sample collection being performed in accordance with DEP SOP-001/01?	Yes	SOPF	SSOP
4.6 Observation: Are samples being collected in the proper containers in accordance with 40 CFR Part 136, Table II? Additional Comments: The facility does not indicate on their chain of custody (COC) the type of sampling container they utilize. See Section 4.10 for additional comments, permit/rule reference, and corrective actions.	NE		SPCO
4.7 Observation: Are samples being located at locations specified in the permit?	Yes		SWLO
4.8 Observation: Are the sample locations safe?	Yes	SSAP	SAFA
4.9 Observation: Is the chain of custody form maintained for samples?	Yes		SCOC
4.10 Deficiency: Is the chain of custody form filled out properly? Additional Comments: The COC do not include the following: Name, address and contact information of the sampler; facility and monitoring location sites sampled; facility sampled has the permit ID information provided; the number and type of bottles collected for each analytical group; required field parameters are recorded (pH, temperature, chlorine, etc.); type of sample preservation; lot numbers and expiration dates preservatives; sample temperature at time of receipt; and affiliation of the person who relinquished and received the samples. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter	No		SCHC

62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Corrective Actions: From this point forward, please ensure that the COCs include all required and relevant information. Please submit in documentation of your updated COC.			
4.11 Deficiency: Are samples preserved properly? Additional Comments: The COCs submitted by the facility for review (COC 09/16/2019 – 09/22/2019) are not preserved properly. Specifically, the fecal coliform samples require $Na_2S_2O_3$ to be added to the sample for preservation, and the facility only has ice as a preservative. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter 62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Corrective Actions: From this point forward, please ensure that all samples collected are preserved properly. Please submit in documentation of your updated COC. For more information on proper preservation methods for different parameters, please see Table FS 1000-4 in DEP SOP FS 1000.	No		SNPP
4.12 Observation: Are samples placed on ice?	Yes		SNPI
4.13 Observation: Are the calibration standards and/or buffers expired?	No	CSBO	CBST
4.14 Observation: Is the pH meter calibrated daily?	Yes		SAPC
4.15 Deficiency: Are the calibration/verification logs for the pH meter complete? Additional Comments: The calibration logs for the pH meter does not include the following: Times of calibration, value and/or unit of standard (acceptance criteria); standards and/or buffers used for calibration and their respective lot number(s) and expiration date(s); and indication of whether the calibration passed and/or failed. Also, please note that the DEP SOPs that you have on file have since changed. The current DEP SOPs can be found on our website at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter 62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Corrective Actions: Please submit an updated calibration/verification log to the Department that includes all required and relevant information.	No		PSSC
4.16 Observation: Is the pH calibration bracketed? Additional Comments: The facility uses pH buffers 4.0 s.u. and 7.0 s.u. to calibrate their pH meter daily. Given this range, they can reliably read pH value(s) of 3.8 s.u. to	Yes	PSSC	SAPB

7.2 s.u. The facility does have a pH buffer of 10.0 s.u., but from their calibration records it is unclear when and/or if they use it.			
4.17 Deficiency: Is the chlorine meter calibrated daily? Additional Comments: The chlorine calibration/verification logs submitted by the facility indicate that the meter (both field and continuous) were not calibrated from 09/17/2020 – 10/7/2020. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter 62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Corrective Actions: From this point forward, please ensure that both the chlorine field meter and continuous meter are being calibrated daily. Please submit in documentation of your chlorine calibration/verification log indicating daily calibration.	No		STRC
4.18 Deficiency: Are the calibration/verification logs for the chlorine meter complete? Additional Comments: The calibration logs for the chlorine meter does not include the following; times of calibration, value and/or unit of standard(acceptance criteria), standards and/or buffers used for calibration and their respective lot number(s) and expiration date(s), and indication of whether calibration passed. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter 62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Corrective Actions: Please submit an updated calibration/verification log to the Department that includes all required and relevant information.	No		PSSC
4.19 Deficiency: Are the calibration/verification logs for the turbidity meter complete? Additional Comments: The calibration logs for the turbidity meter does not include the following; times of calibration, value and/or unit of standard(acceptance criteria), standards and/or buffers used for calibration and their respective lot number(s) and expiration date(s), and indication of whether calibration passed. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter 62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Corrective Actions: Please submit an updated calibration/verification log to the Department that includes all required and relevant information.	No		PSSC

4.20 Observation: Are self-monitoring records maintained in an organized manner?	Yes		SASM
4.21 Observation: Does the facility have composite sampling?	Yes		
4.22 Observation: Are temperature measurement devices routinely checked against NIST thermometers?	Yes		SATM
4.23 Observation: Is a thermometer present at the influent and/or effluent composite sampler? Additional Comments: The facility does not have a composite sampler onsite, rather they take the samples themselves and store them in a refrigerator in the office that has a NIST thermometer which is checked daily.	Yes	PSSC	SNTP
4.24 Deficiency: Do records show the beginning and end times of composite sampling? Additional Comments: The facility does not record the beginning or end times of each composite sampling event in their records. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter 62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Permit/Rule Reference: F.A.C. Rule 62-160.240(3)(c)(5) states that the date and time of sample collection, including date and time sample collection ended (if collecting a composite sample) shall be provided when requested by the Department. Corrective Actions: From this point forward, please record the beginning and end times of all composite sampling events. Please submit in documentation of these entries.	No		SABE

5. Records and Reports (RRPT) Out-of-Compliance

Documents/Records Reviewed	
Discharge Monitoring Reports (DMRs)	From 06/01/2019 To 10/31/2020

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
5.1 Observation: Are copies of the operator license current and onsite? Additional Comments: Neil R. Harden (0005379) Class B issued on 04/23/2019 and expires on 04/30/2021. Adrian Charlton (0014895) Class A issued on 04/26/2019 and expires on 04/30/2021. Wade E. Moser (0003040) Class C issued on 04/29/2019 and expires on 04/30/2021.	Yes	OCAO	ROPL
5.2 Observation: Is a copy of the current laboratory certification available onsite?	Yes	LCAI	LCNA

Additional Comments: The facility has contract with Sanders Laboratory Inc. Nokomis (E84380) to collect and analyze samples outlined in their permit.			
5.3 Deficiency: Does the facility have all records of sampling available and complete? Additional Comments: While the facility has a complete record of sampling, the COCs are missing information. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter 62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Corrective Actions: From this point forward, please ensure that the COCs include all required and relevant information. Please submit in documentation of your updated COC.	No		RECD
5.4 Observation: Are the DMRs submitted on the proper form?	Yes		RDMR
5.5 Observation: Is an authorized representative signing the DMRs?	Yes		RARS
5.6 Deficiency: Does a review of the DMRs reveal any deficiencies? Additional Comments: Please see the table below for a detailed description of the deficiencies found in the DMR review. Also, the Department does not have reasonable assurance that the facility is calibrating their meter correctly and/or that their meter is functioning as intended given the constant pH readings of 6.9 s.u. to 7.1 s.u. on Part B of the DMRs. Permit/Rule Reference: F.A.C. Rule 62-600.650 (5) states that the owner, manager, or operator of a domestic wastewater facility, or agent or employee thereof, shall not submit misleading, false, or inaccurate information or operational reports to the Department, either knowingly or through neglect. Corrective Actions: Please provide documentation to the Department explaining the cause of the constant pH readings, with a description of how the facility calibrates their pH meter. Also, please correct all DMR deficiencies outlined in the table below and re-submit the DMRs to the Department. When re-submitting DMRs, please remember to check of the re-submittal box on the DMR.	Yes	RDMV	RRDS

Monitoring Period	Description of Deficiencies/Transcriptions and/or Calculation Errors
SEP-2020	- pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
AUG-2020	- pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - FLW-01 (PARM Code 50050) monthly average calculated incorrectly - Missing additional operator on DMR Part B
JUL-2020	- pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
JUN-2020	- CBOD EFA-01 (PARM Code 80082) weekly and monthly average calculated incorrectly - pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B

	- pH EFA-01 (PARM Code 0400) is consistently the same - FLW-01 (PARM Code 50050) monthly average calculated incorrectly - CBOD INF-01 (PARM Code 80082) maximum value transcribed incorrectly - Missing additional operator on DMR Part B
MAY-2020	- pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
APR-2020	- FLW-02 (PARM Code 50050) is not on the submitted Part B - pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
MAR-2020	- FLW-02 (PARM Code 50050) is not on the submitted Part B - CBOD EFA-01 (PARM Code 80082) weekly average is calculated and/or transcribed incorrectly - pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - TSS INF-01 (PARM Code 00530) maximum value transcribed incorrectly - Missing additional operator on DMR Part B
FEB-2020	- FLW-02 (PARM Code 50050) is not on the submitted Part B - pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - TSS INF-01 (PARM Code 00530) maximum value transcribed incorrectly - Missing additional operator on DMR Part B
JAN-2020	- FLW-02 (PARM Code 50050) is not on the submitted Part B - pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
DEC-2019	- FLW-02 (PARM Code 50050) is not on the submitted Part B - Fecal Coliform EFA-01 (PARM Code 74055) maximum value transcribed incorrectly - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
NOV-2019	- FLW-02 (PARM Code 50050) is not on the submitted Part B - CBOD EFA-01 (PARM Code 80082) weekly average is calculated and/or transcribed incorrectly - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
OCT-2019	- FLW-02 (PARM Code 50050) is not on the submitted Part B - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
SEP-2019	- FLW-02 (PARM Code 50050) is not on the submitted Part B - No explanation of NOD for FLW-02 - CBOD EFA-01 (PARM Code 80082) weekly average is calculated and/or transcribed incorrectly - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
AUG-2019	- FLW-02 (PARM Code 50050) is not on the submitted Part B - No explanation of NOD for FLW-02 - CBOD EFA-01 (PARM Code 80082) weekly average is calculated and/or transcribed incorrectly - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
JUL-2019	- FLW-02 (PARM Code 50050) is not on the submitted Part B - No explanation of NOD for FLW-02

	- CBOD EFA-01 (PARM Code 80082) weekly average is calculated and/or transcribed incorrectly - pH EFA-01 (PARM Code 0400) is consistently the same
JUN-2019	- FLW-02 (PARM Code 50050) is not on the submitted Part B - No explanation of NOD for FLW-02 - CBOD EFA-01 (PARM Code 80082) weekly average is calculated and/or transcribed incorrectly - pH EFA-01 (PARM Code 0400) is consistently the same

5.7 Observation: Is the facility submitting fraudulent data?	No	RSFD	
5.8 Observation: Is there failure to correct incomplete/deficient DMRs for 30 days or more after Department notice?	No	RDID	
5.9 Deficiency: Has the facility failed to submit any DMR required by rule, permit, or enforcement action in a timely manner? Additional Comments: The following DMRs were not submitted in a timely manner. Please see the table below for a more detailed description. Permit/Rule Reference: F.A.C. Rule 62-620.610(18) states that during any period of operation authorized by the current permit, the permittee shall complete and submit to the Department Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e. monthly, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to the permit. Unless specified otherwise in this permit, monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates outlined in the permit. DMRs shall be submitted for each required monitoring period, including periods of no discharge. Rule/Permit Reference: F.A.C. Rule 62-520.600(11)(b) states that on a quarterly basis, or as specified in the permit, the permittee shall submit reports on all monitoring wells identification the type, number and concentration of discharge constituents or parameters that have been approved by the Department as appropriate criteria to monitor in the monitoring program based upon their potential to exceed the minimum criteria contained in F.A.C. Rule 62-520.400 and the appropriate standards for the particular class of water adjacent to the zone of discharge as described in F.A.C. Rule 62-520.420 through 62-520.470. Corrective Actions: From this point forward, please ensure that all DMRs are submitted in a timely manner.	Yes	FDMR	PSSC

Monitoring Period	Date Submitted	Date Due	Days Late
AUG-2020	09/29/2020	09/28/2020	1
AUG-2019	09/31/2019	09/28/2020	3
JUL-2019	09/16/2019	08/28/2019	19

Groundwater DMR

Monitoring Period	Date Submitted	Date Due	Days Late
APR-2020 to JUN-2020	08/26/2020	07/28/2020	29

5.10 Observation: Does the facility have two or more DMRs not submitted to the Department within a 6-month period?	No	RD26	
5.11 Observation: Are all required documents and reports available at the plant well organized and complete?	Yes	RALL	PSSC

5.12 Observation: Does the facility maintain records of their daily calibration of their pH meter?	Yes		RRPH
5.13 Observation: Does the facility maintain records of their daily calibration of their chlorine meter?	Yes		RTRC
5.14 Observation: Does the facility maintain records of their daily checks of their in-line meter(s) with their field meter(s)?	Yes		RDIM
5.15 Observation: Is a copy of the Operation and Maintenance (O & M) Manual available onsite?	Yes		ROMM
5.16 Deficiency: Has the permittee submitted an annual Reclaimed Water and/or Effluent Analysis Report? Additional Comments: The facility submitted their Annual Reclaimed Water and/or Effluent Analysis Report, but they did not conduct any sampling. Permit/Rule Reference: As outlined in the permit under Section I.B during the period of operation authorized by this permit, reclaimed water or effluent shall be monitored annually for the primary and secondary drinking water standards contained in Chapter 62-550, F.A.C., (except for asbestos, total coliform, color, odor, and residual disinfectants). These monitoring results shall be reported to the Department annually on the DMR. During years when a permit is not renewed, a certification stating that no new non-domestic wastewater dischargers have been added to the collection system since the last reclaimed water or effluent analysis was conducted may be submitted with the signed DMR in lieu of performing the analysis. When such a certification is submitted with the DMR, monitoring not required this period should be noted on the DMR. The annual reclaimed water or effluent analysis report, and certification if applicable, shall be completed and submitted in a timely manner so as to be received by the Department at the address identified on the DMR by January 28 of each year. Approved analytical methods identified in Rule 62-610.100(3)(j), F.A.C, shall be used for analysis. If no method is included for a parameter, methods specified in Chapter 62-550, F.A.C., shall be used. Corrective Actions: Please sample for the parameters outlined in the permit and resubmit the Annual Reclaimed Water and/or Effluent Analysis Report (DMR RWS-A) to the Department.	Yes	PSSC	RARR
5.17 Deficiency: Has the permittee submitted an Annual Reuse Report on DEP Form 62-610.300(4)(a)2? Additional Comments: The Department has no record of the Annual Reuse Report for OCT-2019 to SEP-2020. Permit/Rule Reference: Section IV.A.14 in the permit states that the permittee shall submit an Annual Reuse Report using DEP Form 62-610.300(4)(a)2 on or before January 1 of each year. The form can be found on the DEP website here: https://floridadep.gov/water/domestic-wastewater/content/domestic-wastewater-forms. Corrective Actions: Please submit the Annual Reuse report to the South District and the DEP Reuse Coordinator in Tallahassee.	No		PSSC
5.18 Deficiency: Does the facility submit their monitoring results for Giardia and Cryptosporidium in a timely manner?	No		RNGC

Additional Comments: The facility has not submitted their pathogen monitoring within the last five (5) years. Permit/Rule Reference: F.A.C. Rule 62-610.463(4)(b) states that treatment facilities having capacities of less than 1.0 MGD, shall sample the reclaimed water for Giardia and Cryptosporidium where sampling shall be conducted at one time during each five-year period. Intervals between sampling shall not be greater than five years. Samples shall be taken at a point immediately following the disinfection process. Corrective Actions: Please submit DEP Form 62-610.300(4)(a)4 to the South District and the DEP Reuse Coordinator in Tallahassee. https://floridadep.gov/water/domestic-wastewater/forms/pathogen-monitoring			
5.19 Observation: Are the Giardia and Cryptosporidium results submitted on the DEP Form 62-610.300(4)(a)4? Additional Comments: The facility has not submitted their pathogen monitoring within the last five (5) years. Please see Section 5.18 for Additional Comments, Permit/Rule Reference and Corrective Actions.	NE		PSSC
5.20 Observation: Has the facility failed to maintain the records onsite for the required retention period?	No	FMRR	
5.21 Observation: Are records well organized?	Yes	RORG	
5.22 Observation: Is the logbook available onsite?	Yes		RNOM
5.23 Observation: Are the entries in the operator logbook clear, concise, informative and relevant?	Yes	ROPC	
5.24 Observation: Is the logbook complete and contains all required information?	Yes	LOGI	RLOG
5.25 Observation: Has the permittee failed to notify the Department of any event or activity that requires notification as required by permit or rule?	No	RSWP	
5.26 Deficiency: Has the facility failed to submit any report required by rule, permit, enforcement action or inspection activity, except for DMRs? Additional Comments: The facility has not submitted their pathogen monitoring within the last five (5) years and the Annual Reuse Report form. Permit/Rule Reference: F.A.C. Rule 62-610.463(4)(b) states that treatment facilities having capacities of less than 1.0 MGD, shall sample the reclaimed water for Giardia and Cryptosporidium where sampling shall be conducted at one time during each five-year period. Intervals between sampling shall not be greater than five years. Samples shall be taken at a point immediately following the disinfection process. Permit/Rule Reference: Section IV.A.14 in the permit states that the permittee shall submit an Annual Reuse Report using DEP Form 62-610.300(4)(a)2 on or before January 1 of each year. The form can be found on the DEP website here: https://floridadep.gov/water/domestic-wastewater/content/domestic-wastewater-forms. Corrective Actions: Please submit DEP Form 62-610.300(4)(a)4 to the South District and the DEP Reuse Coordinator in Tallahassee. https://floridadep.gov/water/domestic-wastewater/forms/pathogen-monitoring	No	FRPT	

6. Facility Site Review (FACS) In-Compliance

Facility Site Review (Plant/Site Grounds)	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.1 Observation: Are odors emanating from the facility and permeating beyond the plant site at the time of the inspection?	No	FAFO	FANO
6.2 Observation: Is there excessive noise which could be heard beyond the boundaries of the facility?	No	FAEN	
6.3 Observation: Are facility grounds well maintained?	Yes	FACM	FGNM
6.4 Observation: Is the area surrounding the facility overgrown with vegetation?	No	FAVE	
6.5 Observation: Is the site secured properly?	Yes	FAPS	FNPS
6.6 Observation: Is the fence around the facility compromised?	No	FAAC	
6.7 Observation: Are rags, grit and/or screening being disposed on the facility grounds?	No	FARG	
6.8 Observation: Is sludge being disposed on the facility grounds?	No	FASL	
6.9 Observation: Is leachate from the screening dumpster(s) discharging onto the facility grounds?	No	FLDG	
6.10 Observation: Is the leachate discharging to a nearby storm drain?	No	FLDS	
6.11 Observation: Is there adequate access to all monitoring locations?	Yes		FAMA

Facility Site Review (RPZ)	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.12 Observation: Is an RPZ in place on the potable water supply line?	Yes	RPZI	FANB
6.13 Observation: Is the RPZ(s) leaking and/or in need of a repair and/or replacement?	No	RRPZ	RPOK
6.14 Observation: Is a record of testing available on the RPZ(s)? Additional Comments: The RPZ was calibrated on 10/08/2020 by Lee County Utilities Cross Connection Control Program.	Yes	PSSC	FARB
6.15 Observation: Are there any cross connections between the potable water supply and the facility?	No	FACC	

Facility Site Review (Headworks)	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.16 Observation: Are there excessive odors emanating from the headworks?	No		FNEO
6.17 Observation: Is there excessive corrosion in the area surrounding the headworks?	No	FECO	
6.18 Observation: Are screenings and grit being collected in suitable containers?	Yes	FSGS	FANC
6.19 Observation: Are screenings and grit being disposed at a Class I Landfill?	Yes	FSG1	FAC1

6.20 Observation: Is the disposal of the screenings and grit being placed on drying beds and causing vector attraction?	No	FADB	
6.21 Observation: Is there excessive debris on the bar screen?	No	FEDA	FBSC
6.22 Observation: Is the bar screen damaged?	No	FBCD	
6.23 Observation: Does the operator logbook indicate that the bar screen is cleaned routinely?	Yes		FABS
6.24 Observation: Is there evidence of recent overflows at the headworks?	No	FARO	

Facility Site Review (Surge Tanks)	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.25 Deficiency: Are there two functioning pumps in the surge tank(s)?	Yes		FS2P

Facility Site Review (Aeration Basin(s))	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.26 Observation: Is the aeration basin providing adequate mixing?	Yes	FACG	FABM
6.27 Observation: Is even distribution of air observed?	Yes		FADC
6.28 Observation: Are the air line(s) to the aeration basin(s) free from leaks?	Yes	FAOK	FALL
6.29 Observation: Is thick foam observed in the aeration basin(s)?	No	FWBF	
6.30 Observation: Is excessive foaming being carried over into the clarifiers?	No	FFOA	
6.31 Observation: Is the clock for the aeration system control operational?	Yes	FCLO	FTCA
6.32 Observation: Is the return activated sludge (RAS) line properly located so that it comes in contact with the influent?	Yes	FRLP	FRIL
6.33 Observation: Is there excessive splashing from the RAS line causing solids to be discharged outside the tank?	No	FESR	

Facility Site Review (Blowers)	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.34 Observation: Are dual blowers and motors required to run the facility?	Yes	F2BR	
6.35 Observation: Are the blowers equipped with belt guards?	Yes	BHBG	BGMB
6.36 Observation: Are the blowers excessively loud?	No	FB2L	
6.37 Observation: Is the blower operational at the time of the inspection?	Yes	FBWK	FBNW
6.38 Observation: Is the secondary blower missing?	No	F2BM	
6.39 Observation: Is the secondary blower motor operational?	Yes	F2OK	F2BI
6.40 Observation: Is there excessive wear on blowers?	No	FBBW	
6.41 Observation: Do the motor(s) have air filters?	Yes	FBFR	
6.42 Observation: Does the blower motor air filter need to be replaced?	No	FBAR	
6.43 Observation: Are spare parts and a second standby blower stored onsite?	Yes	FSPS	

6.44 Observation: Is one of the dual blower motor(s) undersized?	No	F1BU	
6.45 Observation: Is the electrical box wiring for the blowers adequately protected?	Yes		FBWI

Facility Site Review (Clarifier(s))	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.46 Observation: Is the clarifier effluent clear and free of solids?	Yes	FCLR	FESO
6.47 Observation: Are solids discharging over the clarifier weir(s)?	No	FCSD	
6.48 Observation: Is there excessive sand and/or grit accumulated in the clarifier?	No	FPES	
6.49 Observation: Is excessive scum and/or trash overflowing from the clarifier?	No	FAEX	
6.50 Observation: Does the skimmer appear to be functional?	Yes	FSKP	FSTH
6.51 Observation: Is the sludge pump functional?	Yes		FSPF
6.52 Observation: Is the RAS very watery indicating the pump is not functioning?	No	FRAS	
6.53 Observation: Is the sludge collector functional?	Yes		FSCF
6.54 Observation: Are the clarifier weir(s) level?	Yes	FCWA	FCWL
6.55 Observation: Are the clarifier weir(s) overgrown with algae?	No	FCWC	
6.56 Observation: Is there evidence of short circuiting in the clarifier?	No	FSHO	
6.57 Observation: Is gasification occurring to cause solids to rise to the surface?	No	FGAS	

Facility Site Review (Chlorine Contact Chamber(s))	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.58 Observation: Is the Chlorine Contact Chamber (CCC) effluent clear with no scum or debris observed?	Yes	FCCC	FOAT
6.59 Observation: Is it free of an accumulation of solids?	Yes		FSOL
6.60 Observation: Are the baffles functioning as intended?	Yes	FBMD	
6.61 Observation: Does the chlorine injection point provide optimal mixing to occur?	Yes		FCIP
6.62 Observation: Is the chlorine pump operational?	Yes	FPRI	
6.63 Observation: Is there an adequate chlorine supply for disinfection?	Yes		FCNO
6.64 Observation: Is the chlorine storage area protected from the elements?	Yes		FCHL
6.65 Observation: Does the facility have an alarm for their chlorine system?	Yes		
6.66 Observation: Is the alarm indicator for the chlorine system operational?	Yes	FALO	FALR
6.67 Observation: Does the facility use chlorine gas for disinfection?	Yes		
6.68 Observation: Is the chlorine supply system covered in frost?	No	FROS	
6.69 Observation: Is the fan inside the chlorine room operational?	Yes		FFAN

6.70 Observation: Are the chlorine scales operational?	Yes		FSCA
6.71 Observation: Is the Self-Contained Breathing Apparatus (SCBA) available?	Yes	SCBA	SCNA
6.72 Observation: Are the chlorine gas cylinders properly secured?	Yes	FGCS	FCGS
6.73 Observation: Are the chlorine gas cylinders properly labeled as empty and/or full?	Yes	CCTA	CCNT
6.74 Observation: Is a leak detection kit available?	Yes		FLDK
6.75 Observation: Is a fresh supply of ammonia available to test for leaks in the gas chlorination system?	Yes		FAMM

Facility Site Review (Filter(s))	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.76 Observation: Is the filter plugged and/or overflowing?	No	FSFP	
6.77 Observation: Did the filter contain sufficient media?	Yes	FHSM	F1FM
6.78 Observation: Is the media filter covered with solids?	No	FSFM	

Facility Site Review (Digester(s))	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.79 Observation: Were the tank contents in the aerobic digester(s) well mixed?	Yes	FDWM	FADX
6.80 Observation: Are the diffusers clogged providing for uneven mixing?	No	FDMX	
6.81 Observation: Are the digester(s) free from excessive odors?	Yes	FDNO	FDOD
6.82 Observation: Are the digester(s) free from excessive foaming?	Yes	FDNF	FEFO
6.83 Observation: Is the digester full?	No	FULL	

Facility Site Review (Lift Station(s))	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.84 Observation: Is the area around the lift station(s) maintained?	Yes		FLAO
6.85 Observation: Are there warning signs with emergency contact information on and/or around the lift station(s)?	Yes		FNWS
6.86 Observation: Is the cover to the lift station(s) locked?	Yes		FCLL
6.87 Observation: Is the cover to the lift station(s) a safety hazard?	No	FLCR	
6.88 Observation: Are there two functioning pumps that alternate?	Yes		FL2R
6.89 Observation: Are both pumps at the lift station functional?	Yes		FLPN
6.90 Observation: Does the electrical panel need to be repaired and/or replaced?	No	FREW	
6.91 Observation: Is the lift station(s) warning system functional? Additional Comments: The facility has a SCADA system as their primary warning system for their collection system that operates via sensors in the lift station, with some lift stations having a backup warning system of audio and/or visual alarms.	Yes	PSSC	FWSN

Facility Site Review (Alternative Power Source)	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.92 Observation: Was an alternative power source available at the facility?	Yes	FHAP	FNAP
6.93 Observation: Is the onsite generator tested under load on a monthly basis?	Yes	FOGT	FGNT
6.94 Observation: Are records available for the testing of the generator?	Yes	FTRA	FROT

7. Flow Measurement (FLOW) In-Compliance

Flow Meter Present and Location as per Permit?	Yes
Easy Access to Flow Meter?	Yes
Date of Last Flow Meter Calibration?	05/12/2020

Flow Meter Location	Prior to Aeration Tanks (FLW-01)
Flow Meter Type	Mag Meter

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
7.1 Observation: Is the flow measuring device installed?	Yes		NOFL
7.2 Observation: Is the flow measuring device installed properly?	Yes	FLPI	FLII
7.3 Observation: Is the flow measurement device operational?	Yes		PSSC
7.4 Observation: Is a copy of the flow calibration report current? Additional Comments: The flow meter (FLW-01) was calibrated on 05/12/2020 by Florida Rural Water Association (FRWA).	Yes	FCRP	FLDC
7.5 Observation: Is the flow measurement device calibrated properly?	Yes	FLCO	
7.6 Observation: Is the flow measurement device operating within +/- 10% of the actual flow?	Yes	F10A	

8. Operation and Maintenance (OPMA) In-Compliance

Facility being operated as per permit?	Choose an item.

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
8.1 Observation: Is a certified operator operating the wastewater treatment facility with the appropriate license level for the size of the plant?	Yes	O602	ONCO
8.2 Observation: Is the operator performing treatment plant operation and maintenance duties in a responsible and professional manner?	Yes	OMPM	OPMM

8.3 Observation: Does the facility have adequate plant staffing?	Yes		OAST
8.4 Observation: Are the any of the features at the plant in disrepair providing for an unsafe work environment?	No	HCTR	
8.5 Observation: Are leaks noted on the exterior of the tanks, wall, and/or pipes of the facility?	No	LITP	
8.6 Observation: Is the facility operated in accordance with the Operations and Maintenance (O & M) Manual(s)?	Yes		IONM
8.7 Observation: Is the facility maintaining a log documenting routine equipment maintenance?	Yes		OLOG
8.8 Observation: Are critical spare parts available?	Yes	OSPA	OSPN
8.9 Observation: Does the facility have an inflow and infiltration problem causing collection system issues and/or operational issues?	No	ININ	
8.10 Observation: Does the facility fail to replace malfunctioning equipment, which resulted in a high potential for water supply quality or health impacts?	No	OFRE	
8.11 Observation: Is the facility operating in a manner that results in a high potential for water quality violations?	No	OHPV	
8.12 Observation: Does the facility fail to perform maintenance, which resulted in a high potential for water quality violations?	No	OFPM	

9. Effluent Quality (EFLQ) In-Compliance

DMR Review Period	From 06/01/2019 To 12/31/2020
Any Exceedances?	No

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
9.1 Observation: Is the effluent clear?	Yes	EFCL	
9.2 Observation: Is excessive foaming observed in the final discharge stream?	No	EFOA	
9.3 Observation: Is suspended solids, scum and/or color observed in the final effluent stream?	No	ETSS	
9.4 Observation: Are grease balls observed in the final effluent stream?	No	EGRE	
9.5 Observation: Is a visible sheen observed in the final effluent stream?	No	EOIL	
9.6 Observation: Is the final effluent excessively turbid?	No	ETUR	
9.7 Observation: Is the effluent within the acceptable total residual chlorine (TRC)? Additional Comments: At the time of the inspection the facility has a TRC of 7.77 mg/L on their in-line continuous TRC meter.	Yes	ECRA	E5RC (0.5 mg/L) E1VI (1.0 mg/L)

9.8 Observation: Does the facility violate the permit or enforcement narrative effluent limitation(s)?	No	XNEV	
9.9 Observation: Is the facility violating an effluent limitation four out of six months?	No	PSSC	
9.10 Observation: Is the TRC below the minimum requirement for 10% or more in a six-month timeframe?	No	EC10	
9.11 Observation: Does the facility have a discharge that resulted in a fish kill?	No	XFSH	

10. Effluent Disposal (EFLD) In-Compliance

Facility Discharging?	Yes
Discharge Location(s) as per Permit?	Yes

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
10.1 Observation: Is the facility discharging?	Yes	EDAI	ENOD
10.2 Observation: Is advisory signage posted around the disposal site(s)?	Yes		EWAR
10.3 Observation: Is an aerosol mist leaving the boundaries of the land application?	No	EMIS	
10.4 Observation: Is the facility operating an unauthorized disposal system?	No	PSSC	
10.5 Observation: Is the disposal system failing resulting in a high potential for water quality and/or health impacts?	No	PSSC	
10.6 Observation: Is the facility modifying their disposal system without proper approval?	No	PSSC	

Effluent Disposal (Reuse)	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
10.7 Observation: Is all plastic reclaimed water equipment color-coded Pantone purple?	Yes	522O	522C
10.8 Observation: Are the reclaimed water valves and outlets appropriately tagged and/or labeled?	Yes		EDND
10.9 Observation: Is the public adequately notified of the use of reclaimed water?	Yes		ENOT
10.10 Observation: Is a cross connection control program implemented within reuse areas?	Yes	ICCP	ECCC
10.11 Observation: Is the facility meeting the minimum setback distance?	Yes	E421	ESET
10.12 Observation: Is the reclaimed water running off the application site?	No	EROF	
10.13 Observation: Is significant ponding observed on the reclaimed water disposal site?	No	EPON	

10.14 Observation: Is a cover crop and/or vegetation been planted on the reclaimed water area(s)?	Yes		ECRO
10.15 Observation: Are edible food crops being irrigated with the reclaimed water?	No	EEAT	
10.16 Observation: Does the reclaimed water storage ponds have adequate free-board?	Yes		E3FB

11. Biosolids (RESS) In-Compliance

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
11.1 Observation: Does the facility maintain adequate records for sludge hauling? Additional Comments: The facility last hauled their biosolids on 07/09/2020.	Yes	PSSC	RE5Y
11.2 Observation: Are the biosolids being disposed of in accordance with the per-mit? Additional Comments: The facility is permitted to dispose of biosolids in a Class I solid waste landfill.	Yes	RMET	RDIS

12. Groundwater Quality (GWQL) Out-of-Compliance

DMR Review Period	From 06/01/2019 To 12/31/2020
Any Exceedances?	Yes
All monitoring wells accessible, secured and locked?	Yes

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
12.1 Observation: Is the facility exempt from groundwater monitoring?	No	GWEX	
12.2 Observation: Are the groundwater monitoring wells locked and secured?	Yes	GLCS	GLOC
12.3 Observation: Are the groundwater monitoring wells labeled?	Yes		PSSC
12.4 Observation: Are any of the groundwater monitoring wells damaged?	No		
12.5 Observation: Are the groundwater monitoring results sent to the Department on the correct form?	Yes		GWRF
12.6 Deficiency: Are the groundwater monitoring results sent to the Department on time? Additional Comments: Please see the table below for a more detailed description of the groundwater DMRs that were received late. Permit/Rule Reference: F.A.C. Rule 62-520.600(11)(b) states that on a quarterly basis, or as specified in the permit, the permittee shall submit reports on all monitoring wells	No		GNSU

identification the type, number and concentration of discharge constituents or parameters that have been approved by the Department as appropriate criteria to monitor in the monitoring program based upon their potential to exceed the minimum criteria contained in F.A.C. Rule 62-520.400 and the appropriate standards for the particular class of water adjacent to the zone of discharge as described in F.A.C. Rule 62-520.420 through 62-520.470. Corrective Actions: From this point forward, please ensure that all DMRs are submitted in a timely manner.			

Monitoring Period	Date Submitted	Date Due	Days Late
APR-2020 to JUN-2020	08/26/2020	07/28/2020	29

12.7 Observation: Is the facility sampling for the correct groundwater monitoring parameters?	Yes		GPWP
12.8 Observation: Is the facility sampling according to the frequency in the permit?	Yes		GWOP
12.9 Deficiency: Is the analysis method identified on the groundwater monitoring report? Additional Comments: The analysis method is not identified on DMR Part D MWB021302 for Total Recoverable Chromium. Permit/Rule Reference: F.A.C. Rule 62-610.412(2) states that a groundwater monitoring program shall be established by the permittee and approved by the Department pursuant to F.A.C. Rule 62-522.600 (unless other exempted). Groundwater sampling parameters for monitoring background and receiving water quality will be established by the Department based upon the quality of reclaimed water to be discharged, site specific soil and hydrogeologic characteristics, and other considerations. Corrective Actions: Please re-submit the Part D DMRs to the Department with all required information include. When re-submitting DMRs, please ensure that the re-submittal box is check off.	No		GANA
12.10 Observation: Are the laboratory detection limits provided on the groundwater monitoring report?	Yes	GOKI	GDET
12.11 Observation: Is the static water reported on the groundwater monitoring report?	Yes	GSLR	GSTA
12.12 Observation: Does any of the groundwater monitoring reports reveal that the wells were too dry to sample?	No	GDRY	
12.13 Deficiency: Are appropriate codes used when transcribing non-detectable samples? Additional Comments: The facility is using the code "BDL" (below detection limit) when reporting non-detectable (ND) samples on their Part D DMR for the following quarters: • Apr-Jun 2019 for MWB-21302, MWI-21303, MWC-21304, MWC-80019 and MWC-80020 • Jul-Sep 2019 for MWB-21302, MWI-21303, MWC-21304, MWC-80019 and MWC-80020 • Oct-Dec 2019 for MWB-21302, MWI-21303, MWC-21304, MWC-80019 and MWC-80020	No		PSSC

• Jan-Mar 2020 for MWB-21302, MWI-21303, MWC-21304, MWC-80019 and MWC-80020 Permit/Rule Reference: Acceptable codes, with descriptions and instructions, are contained in the permit under "Instructions for Completing the Wastewater Discharge Monitoring Report." Results less than the MDL (method detection limit) shall be reported by entering a less than sign ("<") followed by the laboratory's MDL value. Corrective Actions: Please re-submit Part D DMRs to the Department with all ND sample values correctly transcribed. When re-submitting DMRs, please ensure that the re-submittal box is check off.			
12.14 Observation: Does the facility have records of their purging logs?	Yes		PSSC
12.15 Observation: Are the wells purged properly?	Yes	GWPP	GRNC
12.16 Deficiency: Are there any exceedances from the groundwater monitoring results? Additional Comments: Department personnel conducted an inspection on 09/25/2019 and issued a Compliance Assistance Offer Letter (CAOL) on 10/30/2019. The inspection report and letter detailed groundwater exceedances, which the facility addressed via additional groundwater sampling. The facility modified their groundwater monitoring plan based upon these results. This modification was included with the facility's permit renewal application. Permit/Rule Reference: F.A.C. Rule 62-610.412(2) states that a groundwater monitoring program shall be established by the permittee and approved by the Department pursuant to F.A.C. Rule 62-522.600 (unless other exempted). Groundwater sampling parameters for monitoring background and receiving water quality will be established by the Department based upon the quality of reclaimed water to be discharged, site specific soil and hydrogeologic characteristics, and other considerations. Corrective Actions: The groundwater monitoring plan was submitted with the renewal application and was approved with the issuance of the permit to remove TDS and Chloride. Please address the plans for the exceedances for pH, Arsenic, and Fecal.	Yes	GVIO	GNOD

Monitoring Period	Compliance Well(s)	MWB-21302	Limit(s)
OCT-2020 to DEC-2020	*MWC-21304* TDS: 970 mg/L Cl: 295 mg/L	*MWB-21302* TDS: 220 mg/L Cl: 13.9 mg/L	 500.0 mg/L 250.0 mg/L
JUL-2020 to SEP-2020	*MWC-21304* TDS: 1,300 mg/L Cl: 606 mg/L Fecal: 2 #/100mL pH: 6.41 s.u.	*MWB-21302* TDS: 800 mg/L Cl: 171 mg/L Fecal: 1 #/100mL pH: 7.0 s.u	 500.0 mg/L 250.0 mg/L 0.0 #/100mL 6.5 – 8.5 s.u.
	MWC-80019 Arsenic: 12 ug/L Fecal: 12 #/100mL	*MWB-21302* Arsenic: 3.8 ug/L Fecal: 1 #/100mL	 10.0 ug/L 0.0 #/100mL
	MWC-80020 Cl: 300 mg/L	*MWB-21302* Cl: 171 mg/L	 250.0 mg/L
APR-2020 to JUN-2020	*MWC-21304* TDS: 1,200 mg/L Cl: 392 mg/L	*MWB-21302* TDS: 600 mg/L Cl: 110 mg/L	 500.0 mg/L 250.0 mg/L

	MWC-80019 Arsenic: 13 ug/L Fecal: 4 #/100mL	*MWB-21302* Arsenic: 2.3 ug/L Fecal: 1 #/100mL	10.0 ug/L 0.0 #/100mL
	MWC-80020 N: 19.9 mg/L TDS: 1,100 mg/L Cl: 300 mg/L	*MWB-21302* N: 0.04 mg/L TDS: 600 mg/L Cl: 110 mg/L	10.0 mg/L 500.0 mg/L 250.0 mg/L
JAN-2020 to MAR-2020	*MWC-21304* TDS: 1,050 mg/L Cl: 343 mg/L pH: 6.43 s.u.	*MWB-21302* TDS: 766 mg/L Cl: 150 mg/L pH: 7.13 s.u.	500.0 mg/L 250.0 mg/L 6.5 – 8.5 s.u.
	MWC-80020 N: 11.8 mg/L TDS:864 mg/L Cl: 344 mg/L	*MWB-21302* N: 2.62 mg/L TDS: 766 mg/L Cl: 150 mg/L	10.0 mg/L 500.0 mg/L 250.0 mg/L
OCT-2019 to DEC-2019	*MWC-21304* TDS: 1,200 mg/L Cl: 408 mg/L	*MWB-21302* TDS: 610 mg/L Cl: 160 mg/L	500.0 mg/L 250.0 mg/L
	MWC-80020 TDS:790 mg/L Cl: 367 mg/L	*MWB-21302* TDS: 610 mg/L Cl: 160 mg/L	500.0 mg/L 250.0 mg/L
JUL-2019 to SEP-2019	*MWC-21304* TDS: 730 mg/L Cl: 304 mg/L pH: 6.42 s.u.	*MWB-21302* TDS: 410 mg/L Cl: 34.4 mg/L pH: 6.89 s.u.	500.0 mg/L 250.0 mg/L 6.5 – 8.5 s.u.

13. SSO Survey (SSOS) In-Compliance

Does the facility have an Operating and Maintenance Manual for their collection system?	Yes
Does the facility track spills in their collection system?	Yes
Does the facility have procedures for minimizing spills?	Yes
Are those procedures included in the Operation and Maintenance Manual or a separate document?	Yes
How often is the Manual updated?	As Needed

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
13.1 Observation: Does the facility have any abnormal events? Additional Comments: The facility has had no SSOs over the past 12 months.	No	PSSC	PSSC
13.2 Observation: Does the facility report the spill(s) to the Department within 24 hours of discovery?	NA		SS04
13.3 Observation: Does the facility follow up on spills?	Yes	PSSC	PSSC
13.4 Observation: Are there any spills that made it to surface water, include storm-water conveyance system and/or drainage ditch?	NA	SS01	

13.5 Observation: Is the facility sampling for any spills that reached surface water(s)?	NA		SS03
13.6 Observation: Are there any spills released to the ground?	NA	SS06	
13.7 Observation: Does the facility keep routine documentation and reporting records of spills, and/or operation and maintenance activities on the collection/transmission system(s)?	Yes		SS02
13.8 Observation: Does the facility have an emergency response plan including the collection/transmission system(s)?	Yes		PSSC
13.9 Observation: Does the facility perform routine preventative maintenance to keep the collection/transmission system(s) in good working order?	Yes		SS05

14. Other (OTHE) Not Evaluated

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
14.1 Observation: Not Evaluated.	NE	NENE	NENE

I certify that these photos represent the true
on-site conditions observed
and have not been altered in any way.

Nicole Devine

Forest Utilities (FLA014478)
Photos by Nicole Devine on 10/14/2020



1. Facility Grounds



2. Surge Tank Pumps



3. Surge Tanks



4. Bar Screen

Forest Utilities (FLA014478)
Photos by Nicole Devine on 10/14/2020

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Nicole Devine



5. Biological Treatment Blowers



6. Aeration Tank



7. RAS Pumps



8. Clarifier

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Nicole Devine

Forest Utilities (FLA014478)
Photos by Nicole Devine on 10/14/2020



9. Filter



10. CCC



11. Sludge Drying Bed



12. Lift Station Electrical Panel

I certify that these photos represent the true
on-site conditions observed
and have not been altered in any way.

Nicole Devine

Forest Utilities (FLA014478)
Photos by Nicole Devine on 10/14/2020



13. GW Well



14. GW Well

Appendix D

OPCC

Engineer's Opinion of Probable Construction Cost

Forest Utilities, Inc.

Initial Improvements



Engineer's Opinion of Probable Construction Cost

Forest Utilities, Inc.

Secondary Improvements

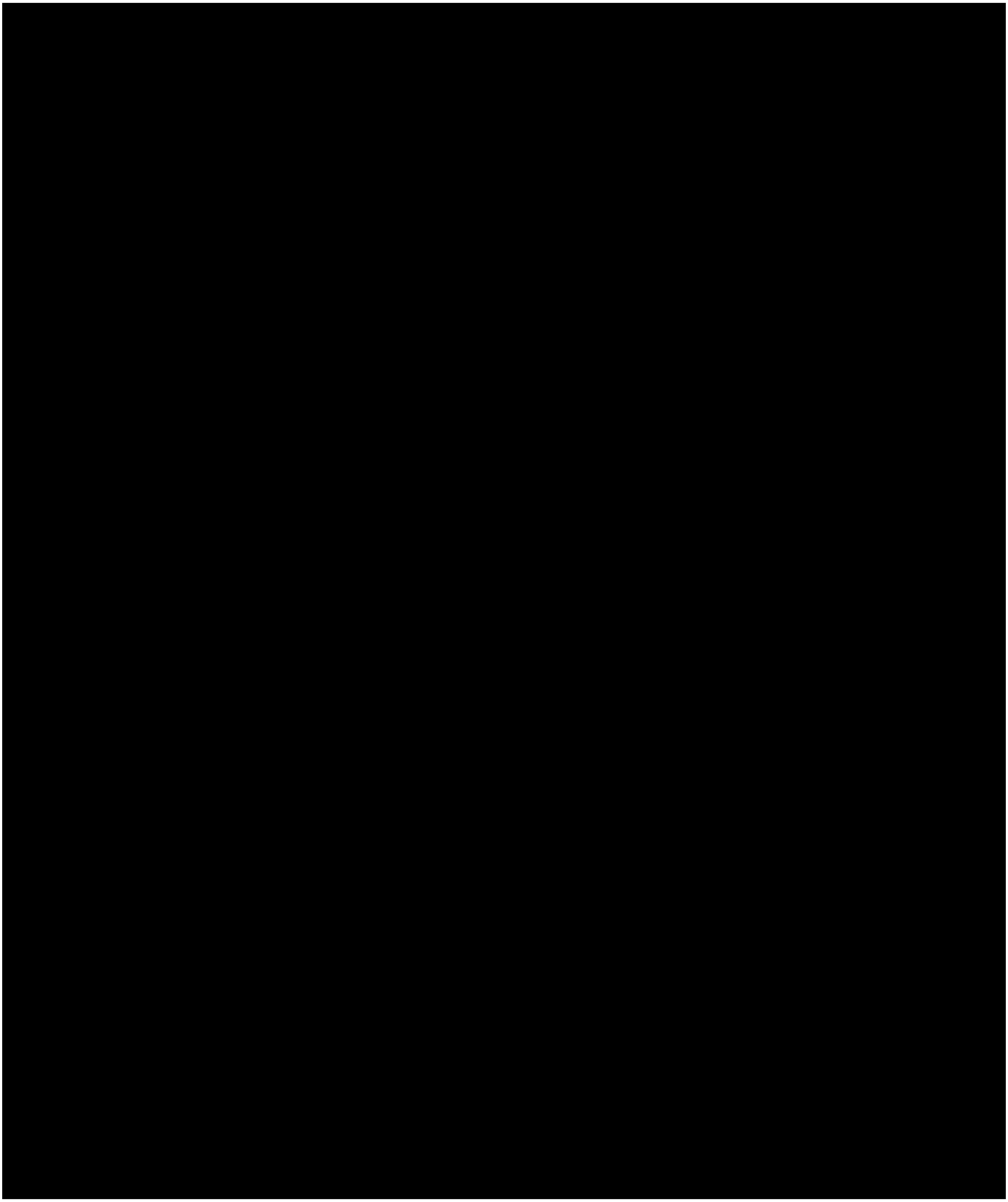


EXHIBIT I

THIS INSTRUMENT PREPARED BY:

Charles L. Cooper
Bryant Miller Olive P.A.
1545 Raymond Diehl Rd., Ste. 300
Tallahassee, FL 32308

Property Appraiser's ID #:

Consideration: $_____
Doc Stamps: $_____
_____[Space Above This Line For Recording Data]_____

WARRANTY DEED

This Warranty Deed is made this ___ day of _____, 2025, by FOREST UTILITIES, INC., a Florida corporation ("Grantor") whose post office address is 6000 Forest Boulevard, Fort Meyers, FL 33919, to CSWR-FLORIDA UTILITY OPERATING COMPANY, LLC, a Florida limited liability company ("Grantee") whose post office address is 1630 Des Peres Rd., Suite 140, St. Louis, MO 63131.

"Grantor" and "Grantee" are used for singular or plural, as context requires.

WITNESSETH, that Grantor, for the sum of $10 and other good and valuable consideration, the receipt of which is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto Grantee the following described property:

See Exhibit "A" attached hereto and by reference made a part hereof.

This conveyance is subject to easements, restrictions, reservations, and limitations of record, if any, **and together with** all the easements, tenements, hereditaments and appurtenances thereto belonging or in anywise benefitting or appertaining, to have and to hold the same in fee simple forever.

And, Grantor hereby covenants with Grantee that Grantor is lawfully seized of said land in fee simple; that Grantor has good right and lawful authority to sell and convey said land; that Grantor hereby fully warrants the title to said land; and that Grantor will defend the same against the lawful claims of all persons whomever, and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 2025, and the following [insert any other exceptions].

[*Signature page to follow*]

In Witness Whereof, Grantor has signed and sealed these presents the day and year above written.

Signed, sealed and delivered as to Grantor in the presence of:

Forest Utilities, Inc., a Florida corporation

By:_____
Doris Swor

Title: President

_____

Print Name: _____

_____

Print Name: _____

STATE OF _____

COUNTY OF _____

The foregoing instrument was sworn to (or affirmed) and subscribed before me by means of ☐ physical presence or ☐ online notarization, this ____ day of ____, 2025, by Doris Swor as President of Forest Utilities, Inc., on behalf of the company. She (___) is personally known to me or (___) produced _____ as identification.

_____
Notary Public
My Commission Expires:

EXHIBIT A

DESCRIPTION OF A PARCEL OF LAND LYING IN SECTION 1, TOWNSHIP 46 SOUTH, RANGE 24 EAST, LEE COUNTY, FLORIDA.

A TRACT OR PARCEL OF LAND SITUATED IN THE STATE OF FLORIDA, COUNTY OF LEE, LYING IN THE SOUTHWEST QUARTER OF SECTION 1, TOWNSHIP 46 SOUTH, RANGE 24 EAST, BEING A PORTION OF THE TRACT OR PARCEL AS RECORDED IN OFFICIAL RECORDS BOOK 1723 AT PAGE 1712, OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA AND BEING FURTHER BOUND AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID SECTION 1, TOWNSHIP 46 SOUTH, RANGE 24 EAST; THENCE N.00°22'48"W. ALONG THE WEST LINE OF SAID SECTION | FOR 800.00 FEET; THENCE N.73°57'27"E. FOR 250.82 FEET; THENCE N.29°02'14"E. FOR 30.00 FEET; THENCE S.40°18'15"E. FOR 239.90 FEET; THENCE S.19°38'44"E. FOR 90.44 FEET; THENCE S.44°40'30"W. FOR 284.50 FEET; THENCE S.45°51'29"E. FOR 101.12 FEET; THENCE S.00°51'29"E. FOR 300.00 FEET TO THE NORTH LINE OF I.D.D. CANAL "T"; THENCE N.89°08'3 L"E. ALONG SAID NORTH LINE FOR 400.99 FEET TO THE SOUTHWEST CORNER OF LOT 3 BLOCK 10 OF THE FOREST UNIT ONE AS RECORDED IN PLAT BOOK 33, PAGES 85 THROUGH 88 OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA; THENCE S.00°51'29"E. FOR 50.00 FEET TO THE SOUTHERLY LINE OF SAID SECTION 1, TOWNSHIP 46 SOUTH, RANGE 24 EAST; THENCE S.89°08'31"W. ALONG SAID SOUTHERLY LINE FOR 714.70 FEET TO THE SOUTHWEST CORNER OF SAID SECTION | AND THE POINT OF BEGINNING.

BEARINGS ARE BASED ON THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION | AS BEARING N.00°22'48"W. AS DESCRIBED IN SAID OFFICIAL RECORDS BOOK 1723, PAGE 1712 OF THE PUBLIC RECORDS OF LEE COUNTY, FLORIDA.

EXHIBIT J

FLORIDA DEPARTMENT OF Environmental Protection

South District
2295 Victoria Ave., Suite 364
Fort Myers, FL 33901
SouthDistrict@FloridaDEP.gov

Ron DeSantis
Governor

Jay Collins
Lt. Governor

Alexis A. Lambert
Secretary

February 2, 2026

In the Matter of an
Application for Permit by:

Forest Utilities, Inc.
Doris Swor, President
6341 Deer Run Rd SW
Fort Myers, Florida 33908
dorrees6@gmail.com

Lee County – Domestic Wastewater
Forest Utilities WWTP
File Number FLA014478-017-DW1P

NOTICE OF PERMIT ISSUANCE

Enclosed is Permit Number FLA014478 to operate the Forest Utilities WWTP, issued under Chapter 403, Florida Statutes.

Monitoring requirements under this permit are effective July 1, 2026. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements.

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing
A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rules 28-106.201 and 28-106.301, F.A.C., a petition for an administrative hearing must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;
(b) The name, address, any e-mail address, any facsimile number, and telephone number of the petitioner, if the petitioner is not represented by an attorney or a qualified representative; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the

proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;

(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@FloridaDEP.gov. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant and persons entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the notice or within 14 days of receipt of the written notice, whichever occurs first. You cannot justifiably rely on the finality of this decision unless notice of this decision and the right of substantially affected persons to challenge this decision has been duly published or otherwise provided to all persons substantially affected by the decision. While you are not required to publish notice of this action, you may elect to do so pursuant Rule 62-110.106(10)(a), F.A.C.

The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C. If you do not publish notice of this action, this waiver may not apply to persons who have not received a clear point-of-entry.

Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@FloridaDEP.gov, before the deadline

for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation
Mediation is not available in this proceeding.

Judicial Review
Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Florida Rules of Appellate Procedure 9.110 and 9.190 with the Clerk of the Department in the Office of General Counsel (Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000) and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within 30 days from the date this action is filed with the Clerk of the Department.

EXECUTION AND CLERKING
Executed in Lee County, Florida.
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Elizabeth Sweigert
Director of District Management
South District Office

Attachments:
1. Permit No. FLA014478-017-DW1P
2. Statement of Basis

CERTIFICATE OF SERVICE
The undersigned duly designated deputy clerk hereby certifies that this document and all attachments were sent on the filing date below to the following listed persons:

James P. Elliott, P.E., Source, Inc., jpelliott@source-inc.com

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.



Clerk

February 2, 2026

Date

FLORIDA DEPARTMENT OF
Environmental Protection

South District
2295 Victoria Ave., Suite 364
Fort Myers, FL 33901
SouthDistrict@FloridaDEP.gov

Ron DeSantis
Governor

Jay Collins
Lt. Governor

Alexis A. Lambert
Secretary

STATE OF FLORIDA
DOMESTIC WASTEWATER FACILITY PERMIT

Forest Utilities, Inc.
Doris Swor, President
6341 Deer Run Rd SW
Fort Myers, Florida 33908
dorrees6@gmail.com

PERMIT NUMBER: FLA014478
FILE NUMBER: FLA014478-017-DW1P
ISSUANCE DATE: February 2, 2026
EFFECTIVE DATE: May 5, 2026
EXPIRATION DATE: May 4, 2031

FACILITY:
Forest Utilities WWTP
6341 Deer Run
Fort Myers, FL 33908-4399
Lee County
Latitude: 26°29' 49.76" N Longitude: 81°52' 11.94" W

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and applicable rules of the Florida Administrative Code (F.A.C.). This permit does not constitute authorization to discharge wastewater other than as expressly stated in this permit. This permit is accompanied by an Administrative Order, pursuant to paragraphs 403.088(2)(e) and (f), Florida Statutes. Compliance with Administrative Order, AO-014478-017-SD, is a specific requirement of this permit. The above-named permittee is hereby authorized to operate the facilities in accordance with the documents attached hereto and specifically described as follows:

WASTEWATER TREATMENT:

An existing 0.800 Million Gallons per Day (MGD) Annual Average Daily Flow (AADF) extended aeration wastewater treatment plant. Major units include: four surge tanks (700,000 gallons), seven aeration basins (692,788 gallons), seven sludge digestors (232,544 gallons), three clarifiers (one 800,000 gpd circular clarifier and two 500,000 gpd standby rectangular clarifiers), two sand filters (1,300,000 gpd), and two chlorine contact chambers (24,687 gallons). Disinfection is provided by a liquid sodium hypochlorite solution.

REUSE OR DISPOSAL:

Land Application R-001: An existing 0.800 MGD AADF permitted capacity slow-rate public access system that irrigates the Forest Country Club Golf Course. Reclaimed water is stored in two isolated golf course ponds that do not discharge.

IN ACCORDANCE WITH: The limitations, monitoring requirements, and other conditions set forth in this cover sheet and Part I through Part IX on pages 1 through 20 of this permit.

I. RECLAIMED WATER AND EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Reuse and Land Application Systems

1. During the period beginning on May 5, 2026, and lasting through the expiration date of this permit, the permittee is authorized to direct reclaimed water to Reuse System R-001. Such reclaimed water shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.B.8.:

			Reclaimed Water Limitations		Monitoring Requirements			
Parameter	Units	Max. /Min.	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow	MGD	Max	0.800	Annual Average	5 Days/Week	Calculated	FLW-02	
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	8-hr FPC	EFA-01	
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	8-hr FPC	EFA-02	
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	Daily; 24 hours	Grab	EFB-01	
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	Daily; 24 hours	Grab	EFB-02	
Coliform, Fecal	#/100mL	Max	25	Single Sample	Daily; 24 hours	Grab	EFA-01	
Coliform, Fecal	#/100mL	Max	25	Single Sample	Daily; 24 hours	Grab	EFA-02	
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	Daily; 24 hours	Calculated	EFA-01	See I.A.3.
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	Monthly	Calculated	EFA-02	See I.A.3.
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	5 Days/Week	Grab	EFA-01	
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	5 Days/Week	Grab	EFA-02	
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	Continuous	Meter	EFA-01	See I.A.4. and I.A.7.
Chlorine, Total Residual	mg/L	Min	1.0	Single Sample	Continuous	Meter	EFA-02	See I.A.4. and I.A.7.
Turbidity	NTU	Max	Report	Single Sample	Continuous	Meter	EFB-01	See I.A.5. and I.A.7.
Turbidity	NTU	Max	Report	Single Sample	Continuous	Meter	EFB-02	See I.A.5. and I.A.7.
Giardia	cysts/100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-01	See I.A.8.
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-01	See I.A.8.

			Reclaimed Water Limitations		Monitoring Requirements			
Parameter	Units	Max. /Min.	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Giardia	cysts/100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-02	See I.A.8.
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-02	See I.A.8.
Nitrogen, Total	mg/L	Max Max Max Max	3.0 3.75 4.5 6.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	Grab	EFA-01	
Phosphorus, Total (as P)	mg/L	Max Max Max Max	1.0 1.25 1.50 2.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	Grab	EFA-01	

2. Reclaimed water samples shall be taken at the monitoring site locations listed in Permit Condition I.A.1. and as described below:

Monitoring Site Number	Description of Monitoring Site
FLW-02	Bubbler type flow measurement. Outlet weir of chlorine contact tanks prior to reuse storage or public access reuse site(s).
EFA-01	The west chlorine contact tank's outfall.
EFA-02	The east chlorine contact tank's outfall.
EFB-01	The west filter's weir overflow.
EFB-02	The east filter's weir overflow.

3. To report the "% less than detection," count the number of fecal coliform observations that were less than detection, divide by the total number of fecal coliform observations in the month, and multiply by 100% (round to the nearest integer). *[62-600.440(6)(a)]*

4. The minimum total chlorine residual shall be limited as described in the approved operating protocol, such that the permit limitation for fecal coliform bacteria will be achieved. In no case shall the total chlorine residual be less than 1.0 mg/L. *[62-600.440(6)(b)][62-610.460(2)][62-610.463(2)]*

5. The maximum turbidity shall be limited as described in the approved operating protocol, such that the permit limitations for total suspended solids and fecal coliforms will be achieved. Filtration shall be provided for total suspended solids control. *[62-610.463(2)]*

6. The treatment facilities shall be operated in accordance with all approved operating protocols. Only reclaimed water that meets the criteria established in the approved operating protocol(s) may be released to system storage or to the reuse system. Reclaimed water that fails to meet the criteria in the approved operating protocol(s) shall be directed to reject storage for subsequent additional treatment or disinfection. *[62-610.320(6) and 62-610.463(2)]*

7. Instruments for continuous on-line monitoring of total residual chlorine and turbidity shall be equipped with an automated data logging or recording device. *[62-610.463(2)]*

8. Sampling for Giardia and Cryptosporidium shall be conducted at one time during each five-year period. Intervals between sampling shall not exceed five years. The sample results shall be submitted to the Department on or before November 28 of each applicable year using Form 62-610.300(3)(a)4. *[62-610.463(4)]*

9. Grab samples shall be collected during periods of minimal treatment plant pollutant removal efficiencies or maximum organic loading in the reclaimed water or effluent. *[62-600.660(3)(e)]*

B. Other Limitations and Monitoring and Reporting Requirements

1. During the period beginning on May 5, 2026 and lasting through the expiration date of this permit, the treatment facility shall be limited and monitored by the permittee as specified below and reported in accordance with condition I.B.8.:

			Limitations		Monitoring Requirements			
Parameter	Units	Max. /Min.	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow	MGD	Max Max	0.800 Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-01	See I.B.4.
Percent Capacity, (TMADF/Permitted Capacity) x 100	percent	Max	Report	3-Month Rolling Average	Monthly	Calculated	CAL-01	
BOD, Carbonaceous 5 day, 20C (Influent)	mg/L	Max	Report	Single Sample	Weekly	8-hr FPC	INF-01	See I.B.3.
Solids, Total Suspended (Influent)	mg/L	Max	Report	Single Sample	Weekly	8-hr FPC	INF-01	See I.B.3.

2. Samples shall be taken at the monitoring site locations listed in Permit Condition I.B.1. and as described below:

Monitoring Site Number	Description of Monitoring Site
FLW-01	Magnetic flow meter on influent line prior to aeration tanks.
CAL-01	Calculation for percent capacity.
INF-01	At the primary bar screen above the surge tanks.

3. Influent samples shall be collected so that they do not contain digester supernatant or return activated sludge, or any other plant process recycled waters. *[62-600.660(4)(a)]*

4. A recording flow meter with totalizer shall be utilized to measure flow and calibrated at least once every 12 months. *[62-600.200(25)]*

5. Sampling results for giardia and cryptosporidium shall be reported on DEP Form 62-610.300(3)(a)4, Pathogen Monitoring, which is attached to this permit. This form shall be submitted to the Department's Wastewater Management Program (M.S. 3545 Blair Stone Road, Tallahassee, Florida 32399-2400 or at epost.bwfrdom@dep.state.fl.us) and to the Department's South District Office. *[62-610.300(3)(a)]*

6. The sample collection, analytical test methods, and method detection limits (MDLs) applicable to this permit shall be conducted using a sufficiently sensitive method to ensure compliance with applicable water quality standards and effluent limitations and shall be in accordance with Rule 62-4.246, Chapters 62-160 and 62-600, F.A.C., and 40 CFR 136, as appropriate. The list of Department established analytical methods, and corresponding MDLs (method detection limits) and PQLs (practical quantitation limits), which is titled "FAC 62-4 MDL/PQL Table (November 10, 2020)" is available at https://floridadep.gov/dear/quality-assurance/content/quality-assurance-resources. The MDLs and PQLs as described in this list shall constitute the minimum acceptable MDL/PQL values and the Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those described above unless alternate MDLs and/or PQLs have been specifically approved by the Department for this permit. Any method included in the list may be used for reporting as long as it meets the following requirements:

   a. The laboratory's reported MDL and PQL values for the particular method must be equal or less than the corresponding method values specified in the Department's approved MDL and PQL list;

   b. The laboratory reported MDL for the specific parameter is less than or equal to the permit limit or the applicable water quality criteria stated in Chapter 62-302, F.A.C. Parameters that are listed as "report only" in the permit shall use methods that provide an MDL, which is equal to or less than the applicable water quality criteria stated in 62-302, F.A.C.; and

c. If the MDLs for all methods available in the approved list are above the stated permit limit or applicable water quality criteria for that parameter, then the method with the lowest stated MDL shall be used.

When the analytical results are below method detection or practical quantitation limits, the permittee shall report the actual laboratory MDL and/or PQL values for the analyses that were performed following the instructions on the applicable discharge monitoring report.

Where necessary, the permittee may request approval of alternate methods or for alternative MDLs or PQLs for any approved analytical method. Approval of alternate laboratory MDLs or PQLs are not necessary if the laboratory reported MDLs and PQLs are less than or equal to the permit limit or the applicable water quality criteria stated in Chapter 62-302, F.A.C. Approval of an analytical method not included in the above-referenced list is not necessary if the analytical method is approved in accordance with 40 CFR 136 or deemed acceptable by the Department. *[62-4.246, 62-160]*

7. The permittee shall provide safe access points for obtaining representative samples which are required by this permit. *[62-600.650(2)]*

8. Monitoring requirements under this permit are effective on July 1, 2026. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements. During the period of operation authorized by this permit, the permittee shall complete and submit to the Department Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e. monthly, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Unless specified otherwise in this permit, monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below. DMRs shall be submitted for each required monitoring period including periods of no discharge.

REPORT Type on DMR	Monitoring Period	Submit by
Monthly	first day of month - last day of month	28th day of following month
Once Every Two Months	January 1 - February 28/29 March 1 - April 30 May 1 - June 30 July 1 - August 31 September 1 - October 31 November 1 - December 31	March 28 May 28 July 28 September 28 November 28 January 28
Quarterly	January 1 - March 31 April 1 - June 30 July 1 - September 30 October 1 - December 31	April 28 July 28 October 28 January 28
Semiannual	January 1 - June 30 July 1 - December 31	July 28 January 28
Annual	January 1 - December 31	January 28

The permittee may submit either paper or electronic DMR forms. If submitting electronic DMR forms, the permittee shall use the electronic DMR system approved by the Department (EzDMR) and shall electronically submit the completed DMR forms using the DEP Business Portal at https://www.fldepportal.com/go/. Reports shall be submitted to the Department by the twenty-eighth (28th) of the month following the month of operation. Data submitted in electronic format is equivalent to data submitted on signed and certified paper DMR forms.

If submitting paper DMR forms, the permittee shall make copies of the attached DMR forms, without altering the original format or content unless approved by the Department, and shall mail the completed DMR forms to the Department's South District Office at the address specified in Permit Condition I.B.15. by the twenty-eighth (28th) of the month following the month of operation.

[62-620.610(18)][62-600.680(1)]

9. During the period of operation authorized by this permit, reclaimed water or effluent shall be monitored annually for the primary and secondary drinking water standards contained in Chapter 62-550, F.A.C., and the Revised Total Coliform Rule contained in Rule 62-550.830, F.A.C., (except for asbestos, color, odor, and

residual disinfectants). These monitoring results shall be reported to the Department annually on the DMR. During years when a permit is not renewed, a certification stating that no new non-domestic wastewater dischargers have been added to the collection system since the last reclaimed water or effluent analysis was conducted may be submitted with the signed DMR in lieu of performing the analysis. When such a certification is submitted with the DMR, monitoring not required this period should be noted on the DMR. The annual reclaimed water or effluent analysis report, and certification if applicable, shall be completed and submitted in a timely manner so as to be received by the Department at the address identified on the DMR by January 28 of each year. Approved analytical methods identified in Rule 62-620.100(3)(j), F.A.C., shall be used for the analysis. If no method is included for a parameter, methods specified in Chapter 62-550, F.A.C., shall be used. *[62-600.660(2) and (3)(d)][62-600.680(2)][62-610.300(3)]*

10. The permittee shall submit DEP Form 62-610.300(3)(a)2., Annual Reuse Report, on or before January 1 of each year to the Department and the appropriate water management district. The form shall be submitted electronically to the Department using the Online Business Portal (https://www.fldepportal.com/DepPortal/go/home) *[62-610.870(3)(a)]*

11. Operating protocol(s) shall be reviewed and updated periodically to ensure continuous compliance with the minimum treatment and disinfection requirements. Updated operating protocols shall be submitted to the Department's South District Office for review and approval upon revision of the operating protocol(s) and with each permit application. *[62-610.320(6)][62-610.463(2)]*

12. The permittee shall maintain an inventory of storage systems. The most recent inventory shall be submitted each year with the Annual Reuse Report. At least 30 days before reclaimed water will be introduced into any new storage system, the updated inventory shall be submitted to the Department's South District Office. The inventory shall include the following:

    a. name or identifier for the storage system;

    b. location of the storage system (latitude/longitude);

    c. function of the storage system (system storage or reject storage);

    d. type of facility (covered tank, lined pond, unlined pond);

    e. Indication of whether or not the storage facility is a water of the state or discharges to a water of the state; and

    f. distances to the nearest public water supply wells and to the nearest potable water supply wells which are not public water supply wells.

    [62-610.464(5) and 62-610.870(3)(d)]

13. The permittee shall submit an annual report summarizing the implementation of the facility's collection system action plan required by paragraph 62-600.705(2)(b), F.A.C. The report shall be electronically submitted to the Department's South District Office no later than June 30 of each calendar year. *[62-600.705(2)]*

14. The permittee shall submit the following with any application for permit renewal or substantial permit revision:

    a. a copy of the facility's up-to-date power outage contingency plan required by subsection 62-600.705(1), F.A.C., for mitigating impacts to the facility's collection systems and pump stations; and,

    b. an electronic summary of the facility's up-to-date collection system action plan required by paragraph 62-600.705(2)(a), F.A.C.

    [62-600.705(1) and (2)]

15. Unless specified otherwise in this permit, all reports and other information required by this permit, including 24-hour notifications, shall be submitted to or reported to, as appropriate, the Department's South District Office at the address specified below:

sd-wwinspect@FloridaDEP.gov

Please contact South District at 239-344-5600 if you are unable to submit electronically. *[62-620.305]*

16. All reports and other information shall be signed in accordance with the requirements of Rule 62-620.305, F.A.C. *[62-620.305]*

II. BIOSOLIDS MANAGEMENT REQUIREMENTS

A. Basic Requirements

1. Biosolids generated by this facility may be disposed of in a Class I solid waste landfill. *[62-620.320(6), 62-640.880(1)]*

2. The permittee shall monitor and keep records of the quantities of biosolids generated or landfilled. These records shall be kept for a minimum of five years. *[62-640.650(4)(a)]*

3. Biosolids quantities shall be monitored by the permittee as specified below. Results shall be reported on the permittee's Discharge Monitoring Report for Monitoring Group RMP-Q in accordance with Condition I.B.8.

			Biosolids Limitation		Monitoring Requirements		
Parameter	Units	Max. /Min.	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number
Biosolids Quantity (Landfilled)	dry tons	Max	Report	Monthly Total	Monthly	Calculated	RMP-1

[62-640.650(5)(a)1]

4. Biosolids quantities shall be calculated as listed in Permit Condition II.3 and as described below:

Monitoring Site Number	Description of Monitoring Site Calculations
RMP-1	Monthly Total of Biosolids Landfilled.

5. The transportation or disposal of biosolids shall not cause a violation of the odor prohibition in subsection 62-296.320(2), F.A.C. *[62-640.400(6)]*

6. Storage of biosolids or other solids at this facility shall be in accordance with the Facility Biosolids Storage Plan. *[62-640.300(4)]*

7. Biosolids shall not be spilled from or tracked off the treatment facility site by the hauling vehicle. *[62-640.400(9)]*

B. Disposal

1. Disposal of biosolids, septage, and "other solids" in a solid waste disposal facility, or disposal by placement on land for purposes other than soil conditioning or fertilization, such as at a monofill, surface impoundment, waste pile, or dedicated site, shall be in accordance with Chapter 62-701, F.A.C. *[62-640.100(6)(b) & (c)]*

C. Receipt

1. If the permittee intends to accept biosolids from other facilities, a permit revision is required pursuant to paragraph 62-640.880(2)(d), F.A.C. *[62-640.880(2)(d)]*

III. GROUND WATER REQUIREMENTS

A. Construction Requirements

1. The permittee shall give at least 72-hour notice to the Department's South District Office, prior to the installation of any monitoring wells. *[62-520.600(6)(h)]*

2. Before construction of new ground water monitoring wells, a soil boring shall be made at each new monitoring well location to properly determine monitoring well specifications such as well depth, screen interval, screen slot, and filter pack. *[62-520.600(6)(g)]*

3. Within 30 days after installation of a monitoring well, the permittee shall submit to the Department's South District Office well completion reports and soil boring/lithologic logs on the attached DEP Form(s) 62-520.900(3), Monitoring Well Completion Report. *[62-520.600(6)(j) and .900(3)]*

4. All piezometers and monitoring wells not part of the approved ground water monitoring plan shall be plugged and abandoned in accordance with Rule 62-532.500(5), F.A.C., unless future use is intended. *[62-532.500(5)]*

B. Operational Requirements

1. For the Part III Public Access system, all ground water quality criteria specified in Chapter 62-520, F.A.C., shall be met at the edge of the zone of discharge. The zone of discharge shall extend horizontally 100 feet from the application site(s) or to the property boundaries, whichever is less, and vertically to the base of the shallow water table aquifer. *[62-520.200(27)] [62-520.465]*

2. The ground water minimum criteria specified in Rule 62-520.400 F.A.C., shall be met within the zone of discharge. *[62-520.400 and 62-520.420(4)]*

3. If the concentration for any constituent listed in Permit Condition III.6. in the natural background quality of the ground water is greater than the stated maximum, or in the case of pH is also less than the minimum, the representative background quality shall be the prevailing standard. *[62-520.420(2)]*

4. During the period of operation authorized by this permit, the permittee shall continue to sample ground water at the monitoring wells identified in Permit Condition III.5., below in accordance with this permit and the approved ground water monitoring plan prepared in accordance with Rule 62-520.600, F.A.C. *[62-520.600] [62-610.463]*

5. The following monitoring wells shall be sampled for Reuse System R-001.

Monitoring Well ID	Alternate Well Name and/or Description of Monitoring Location	Latitude	Longitude	Depth (Feet)	Aquifer Monitored	Well Type	New or Existing
MWB-21302	Background monitoring well located 0.86 miles northeast of the plant on Forrest Blvd.	26°51' 21"	81°51' 35"	12	Surficial	Background	Existing
MWC-21304	Compliance monitoring well located 0.58 miles north of the plant near Timberlakes Dr.	26°52' 20"	81°52' 10"	12	Surficial	Compliance	Existing
MWC-80019	Compliance well located 70 feet north of the plant.	26°52' 50"	81°52' 12"	12	Surficial	Compliance	Existing
MWC-80020	Compliance well located 0.2 miles east of the plant on Deer Run Road.	26°52' 50"	81°52' 12"	12	Surficial	Compliance	Existing
MWI-21303	Intermediate well located 0.34 miles northeast of the plant on Timberlakes Dr.	26°52' 5"	81°52' 1"	12	Surficial	Intermediate	Existing

[62-520.600] [62-610.463]

6. The following parameters shall be analyzed for each monitoring well identified in Permit Condition III.5.:

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Water Level Relative to NGVD	Report	ft	In Situ	Quarterly
Nitrogen, Nitrate, Total (as N)	10.0	mg/L	Grab	Quarterly
Arsenic, Total Recoverable	10.0	ug/L	Grab	Quarterly
Cadmium, Total Recoverable	5.0	ug/L	Grab	Quarterly
Chromium, Total Recoverable	100.0	ug/L	Grab	Quarterly
Lead, Total Recoverable	15.0	ug/L	Grab	Quarterly
Coliform, Fecal	4.0	#/100mL	Grab	Quarterly
pH	6.5-8.5	s.u.	In Situ	Quarterly
Sulfate, Total	250.0	mg/L	Grab	Quarterly
Turbidity	Report	NTU	Grab	Quarterly
Specific Conductance	Report	umhos/cm	In Situ	Quarterly
Temperature (C), Water	Report	Deg C	In Situ	Quarterly
Oxygen, Dissolved (DO)	Report	mg/L	In Situ	Quarterly

[62-520.600(11)(b)] [62-600.670] [62-600.650(3)] [62-520.310(5)]

7. Water levels shall be recorded before evacuating each well for sample collection. Elevation references shall include the top of the well casing and land surface at each well site (NAVD allowable) at a precision of plus or minus 0.01 foot. *[62-520.600(11)(c)] [62-610.463(3)(a)]*

8. Ground water monitoring wells shall be purged prior to sampling to obtain representative samples. *[62-160.210] [62-600.670(3)]*

9. Analyses shall be conducted on unfiltered samples, unless filtered samples have been approved by the Department's South District Office as being more representative of ground water conditions. *[62-520.310(5)]*

10. Ground water monitoring test results shall be submitted on Part D of Form 62-620.910(10) in accordance with Permit Condition I.B.8. *[62-520.600(11)(b)] [62-600.670] [62-600.680(1)] [62-620.610(18)]*

11. If any monitoring well becomes inoperable or damaged to the extent that sampling or well integrity may be affected, the permittee shall notify the Department's South District Office within two business days from discovery, and a detailed written report shall follow within ten days after notification to the Department. The written report shall detail what problem has occurred and remedial measures that have been taken to prevent recurrence or request approval for replacement of the monitoring well. All monitoring well design and replacement shall be approved by the Department's South District Office before installation. *[62-520.600(6)(l)]*

12. The permittee shall sample the compliance wells for the primary and secondary drinking water parameters included in Rules 62-550.310 and 62-550.320, F.A.C., (except for asbestos and all parameters in Table 5 of Chapter 62-550, F.A.C., other than Di(2-ethylhexyl) adipate and Di(2-ethylhexyl) phthalate). Results of this sampling shall be submitted to the Department's South District Office with the application for permit renewal. Sampling shall occur no sooner than 180 days before submittal of the renewal application. *[62-520.600(5)(b)]*

IV. ADDITIONAL REUSE AND LAND APPLICATION REQUIREMENTS

A. Part III Public Access System

1. This reuse system includes the following major user(s) of reclaimed water (i.e., using 0.1 MGD or more) and general service area:

Site Number	User Name	User Type	Capacity(MGD)	Acreage
PAA-01	The Forest Country Club Golf Courses	Golf Courses	0.800	160
		Total	0.8	160

[62-610.800(5)][62-620.630(10)(b)]

2. Cross-connections to the potable water system are prohibited. *[62-610.469(7)]*

3. A cross-connection control program shall be implemented and/or remain in effect within the areas where reclaimed water will be provided for use and shall be in compliance with the Rule 62-555.360, F.A.C. *[62-610.469(7)]*

4. The permittee shall conduct inspections within the reclaimed water service area to verify proper connections, to minimize illegal cross-connections, and to verify both the proper use of reclaimed water and that the proper backflow prevention assemblies or devices have been installed and tested. Inspections are required when a customer first connects to the reuse distribution system. Subsequent inspections are required as specified in the cross-connection control and inspection program. *[62-610.469(7)(h)]*

5. If an actual or potential (e.g. no dual check device on residential connections served by a reuse system) cross-connection between the potable and reclaimed water systems is discovered, the permittee shall:

   a. Immediately discontinue potable water and/or reclaimed water service to the affected area if an actual cross-connection is discovered.

   b. If the potable water system is contaminated, clear the potable water lines.

   c. Eliminate the cross-connection and install a backflow prevention device as required by the Rule 62-555.360.F.A.C.

   d. Test the affected area for other possible cross-connections.

   e. Within 24 hours, notify the Department's South District Office's domestic wastewater and drinking water programs.

   f. Within 5 days of discovery of an actual or potential cross-connection, submit a written report to the Department's South District Office detailing: a description of the cross-connection, how the cross-connection was discovered, the exact date and time of discovery, approximate time that the cross-connection existed, the location, the cause, steps taken to eliminate the cross-connection, whether reclaimed water was consumed, and reports of possible illness, whether the drinking water system was contaminated and the steps taken to clear the drinking water system, when the cross-connection was eliminated, plan of action for testing for other possible cross-connections in the area, and an evaluation of the cross-connection control and inspection program to ensure that future cross-connections do not occur.

   [62-555.360][62-620.610(20)]

6. Maximum obtainable separation of reclaimed water lines and potable water lines shall be provided and the minimum separation distances specified in Rule 62-610.469(7), F.A.C., shall be provided. Reuse facilities shall be color coded or marked. Underground piping which is not manufactured of metal or concrete shall be color coded using Pantone Purple 522C using light stable colorants. Underground metal and concrete pipe shall be color coded or marked using purple as the predominant color. *[62-610.469(7)]*

7. In constructing reclaimed water distribution piping, the permittee shall maintain a 75-foot setback distance from a reclaimed water transmission facility to public water supply wells. No setback distances are required to other potable water supply wells or to any nonpotable water supply wells. *[62-610.471(3)]*

8. A setback distance of 75 feet shall be maintained between the edge of the wetted area and potable water supply wells, unless the utility adopts and enforces an ordinance prohibiting potable water supply wells within the

reuse service area. No setback distances are required to any nonpotable water supply well, to any surface water, to any developed areas, or to any private swimming pools, hot tubs, spas, saunas, picnic tables, barbecue pits, or barbecue grills. *[62-610.471(1), (2), (5), and (7)]*

9. Reclaimed water shall not be used to fill swimming pools, hot tubs, or wading pools. *[62-610.469(4)]*

10. Low trajectory nozzles, or other means to minimize aerosol formation shall be used within 100 feet from outdoor public eating, drinking, or bathing facilities. *[62-610.471(6)]*

11. A setback distance of 100 feet shall be maintained from indoor aesthetic features using reclaimed water to adjacent indoor public eating and drinking facilities. *[62-610.471(8)]*

12. The public shall be notified of the use of reclaimed water. This shall be accomplished by posting of advisory signs in areas where reuse is practiced, notes on scorecards, or other methods. *[62-610.468(2)]*

13. The permittee shall ensure that users of reclaimed water are informed about the origin, nature, and characteristics of reclaimed water; the manner in which reclaimed water can be safely used; and limitations on the use of reclaimed water. Notification is required at the time of initial connection to the reclaimed water distribution system and annually after the reuse system is placed into operation. A description of on-going public notification activities shall be included in the Annual Reuse Report. *[62-610.468(6)]*

14. Routine aquatic weed control and regular maintenance of storage pond embankments and access areas are required. *[62-610.414(8)]*

15. Overflows from emergency discharge facilities on storage ponds shall be reported as abnormal events in accordance with Permit Condition IX.20. *[62-610.800(9)]*

16. Requirements for system storage pond capacity shall be as contained in Rule 62-610.414, F.A.C. System storage capacity shall be the volume equal to three times that portion of the average daily flow of the total reuse capacity for which no alternative reuse or disposal system is permitted. *[62-610.414, 62-610.464 (2)]*

17. A separate, off-line system for storage of reject water shall be provided unless another permitted reuse system or effluent disposal system is capable of discharging the reject water in accordance with requirements of Chapter 62-600, F.A.C. At a minimum this capacity shall be the volume equal to one day flow at the average daily design flow of the treatment plant or the average daily permitted flow of the reuse system, whichever is less. *[62-610.464(3)]*

V. OPERATION AND MAINTENANCE REQUIREMENTS

A. Staffing Requirements

1. During the period of operation authorized by this permit, the wastewater facilities shall be operated under the supervision of one or more operators certified in accordance with Chapter 62-602, F.A.C. In accordance with Chapter 62-699, F.A.C., this facility is a Category I, Class B facility and, at a minimum, operators with appropriate certification must be on the site as follows:

   A Class C or higher operator 6 hours/day for 7 days/week. The lead/chief operator must be a Class B operator, or higher.

   [62-620.630(3)][62-699.310] [62-610.462]

2. The lead/chief operator shall be employed at the plant full time. "Full time" shall mean at least 4 days per week, working a minimum of 35 hours per week, including leave time. A licensed operator shall be on-site and in charge of each required shift for periods of required staffing time when the lead/chief operator is not on-site. An operator meeting the lead/chief operator class for the treatment plant shall be available during all periods of

plant operation. "Available" means able to be contacted as needed to initiate the appropriate action in a timely manner. *[62-699.311(10), (6) and (1)]*

3. An operator meeting the lead/chief operator class for the plant shall be available during all periods of plant operation. "Available" means able to be contacted as needed to initiate the appropriate action in a timely manner. *[62-699.311(1)]*

B. Capacity Analysis Report and Operation and Maintenance Performance Report Requirements

1. The application to renew this permit shall include an updated capacity analysis report prepared in accordance with Rule 62-600.405, F.A.C. *[62-600.405(5)]*

2. The application to renew this permit shall include a detailed operation and maintenance performance report prepared in accordance with Rule 62-600.735, F.A.C. *[62-600.735(1)]*

C. Recordkeeping Requirements

1. The permittee shall maintain the following records and make them available for inspection on the site of the permitted facility.

   a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;

   b. Copies of all reports required by this permit for at least three years from the date the report was prepared;

   c. Records of all data, including reports and documents, used to complete the application for this permit for at least three years from the date the application was filed;

   d. Monitoring information, including a copy of the laboratory certification showing the laboratory certification number, related to the residuals use and disposal activities for the time period set forth in Chapter 62-640, F.A.C., for at least three years from the date of sampling or measurement;

   e. A copy of the current wastewater facility permit;

   f. Copies of the current operation and maintenance manuals for the wastewater facility and the collection/transmission systems owned or operated by the wastewater facility permittee as required by Chapters 62-600 and 62-604, F.A.C.;

   g. A copy of any required record drawings for the wastewater facility and the collection/transmission systems owned or operated by the wastewater facility permittee;

   h. Copies of the licenses of the current certified operators;

   i. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date of the logs or schedules. The logs shall, at a minimum, include identification of the plant; the signature and license number of the operator(s) and the signature of the person(s) making any entries; date and time in and out; specific operation and maintenance activities, including any preventive maintenance or repairs made or requested; results of tests performed and samples taken, unless documented on a laboratory sheet; and notation of any notification or reporting completed in accordance with Rule 62-602.650(3), F.A.C. The logs shall be maintained on-site in a location accessible to 24-hour inspection, protected from weather damage, and current to the last operation and maintenance performed; and

   j. Records of biosolids quantities, treatment, monitoring, and hauling for at least five years.

   [62-620.350, 62-604.500, 62-602.650, 62-640.650(4)]

VI. SCHEDULES

1. In accordance with section 403.088(2)(e) and (f), Florida Statutes, a compliance schedule for this facility is contained in Administrative Order AO-014478-017-SD which is hereby incorporated by reference.

2. The following improvement actions shall be completed according to the following schedule:

Improvement Actions	Completion Date
1. Rehabilitate deteriorated concrete around the facility.	Within 24 months of Issuance
2. Replace deteriorated hand railing.	Within 12 months of Issuance
3. Replace deteriorated air piping.	Within 9 months of Issuance
4. Replace RAS/WAS pumps.	Within 9 months of Issuance
5. Replace wood panel support frames.	Within 9 months of Issuance
6. Submit a minor modification application to replace the manual bar screen with automatic screen device.*	Within 12 months of Issuance
7. Submit a minor modification application to replace the deteriorated effluent sand filter.*	Within 18 months of Issuance
8. Submit a minor modification application to install lift station duplex pumping units.*	Within 24 months of Issuance

**Please note, all minor modifications can be applied for on the same application.*

[62-620.320(6)]

3. The permittee is not authorized to discharge to waters of the state after the expiration date of this permit, unless:

   a. The permittee has applied for renewal of this permit at least 180 days before the expiration date of this permit using the appropriate forms listed in Rule 62-620.910, F.A.C., and in the manner established in the Department of Environmental Protection Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C.; or

   b. The permittee has made complete the application for renewal of this permit before the permit expiration date.

   [62-620.335(1)-(4)]

VII. INDUSTRIAL PRETREATMENT PROGRAM REQUIREMENTS

1. This facility is not required to have a pretreatment program at this time. *[62-625.500]*

VIII. OTHER SPECIFIC CONDITIONS

1. The permittee shall comply with all conditions and requirements for reuse contained in their consumptive use permit issued by the Water Management District, if such requirements are consistent with Department rules. *[62-610.800(10)]*

2. In the event that the wastewater facilities or equipment, including collection/transmission systems, no longer function as intended, are no longer safe in terms of public health and safety (including inactive or abandoned facilities), or odor, noise, aerosol drift, or lighting adversely affects neighboring developed areas at the levels prohibited by paragraphs 62-600.400(2)(a) and 62-604.400(2)(c), F.A.C., corrective action (which may include additional maintenance or modifications of the permitted facilities) shall be taken by the permittee. Other corrective action may be required to ensure compliance with rules of the Department. Additionally, the treatment, management, use or land application of residuals shall not cause a violation of the odor prohibition in subsection 62-296.320(2), F.A.C. *[62-600.410(5), 62-604.500(3) and 62-640.400(6)]*

3. All collection/transmission systems shall be operated and maintained to provide uninterrupted service. All pump stations shall be operated and maintained to provide the emergency pumping capability requirements in paragraph 62-604.400(2)(a), F.A.C., the lightning and transient voltage surge protections in paragraph 62-

604.400(2)(b), F.A.C., and the design and signage requirements in paragraph 62-604.400(2)(d), F.A.C. Also, all equipment, pipes, manholes, pump stations, and other appurtenances necessary for the collection/transmission of domestic wastewater, including equipment provided pursuant to subsection 62-604.400(2), F.A.C., shall be maintained to function as intended. *[62-604.500(2) and (3)]*

4. The permittee shall evaluate and update the emergency response plan portion of the collection system operation and maintenance manual annually. The emergency response plan shall assess collection system security including cybersecurity; water quality monitoring for sanitary sewer overflows affecting surface waters; and hurricane and severe storm preparedness and response. *[62-604.500(4)]*

5. Collection/transmission systems shall be maintained to minimize excessive infiltration and inflow into the collection/transmission system, as well as excessive leakage from the collection/transmission system. The permittee shall take corrective actions when infiltration, inflow, or leakage is excessive. Infiltration and inflow are considered excessive if one or both cause or contribute to sanitary sewer overflows. Leakage, or exfiltration, is considered excessive if it causes or contributes to a violation of surface water quality standards or ground water quality standards. *[62-604.500(5)]*

6. All collection/transmission systems shall be operated and maintained to prevent sanitary sewer overflows. The permittee shall evaluate the cause of all sanitary sewer overflows and evaluate potential corrective measures to avoid future sanitary sewer overflows. Corrective actions shall be taken by the permittee if excessive inflow and infiltration causes or contributes to a sanitary sewer overflow. The owner/operator of a satellite collection system shall take corrective actions for a sanitary sewer overflow in the receiving collection system caused by excessive inflow and infiltration in the satellite collection system. *[62-604.500(6)]*

7. The deliberate introduction of stormwater in any amount into collection/transmission systems designed solely for the introduction (and conveyance) of domestic/industrial wastewater; or the deliberate introduction of stormwater into collection/transmission systems designed for the introduction or conveyance of combinations of storm and domestic/industrial wastewater in amounts which may reduce the efficiency of pollutant removal by the treatment plant is prohibited, except as provided by Rule 62-610.472, F.A.C. *[62-604.130(4)]*

8. Cross-connection, as defined in Rule 62-550.200, F.A.C., between the wastewater facility, including the collection/transmission system, and a potable water system is prohibited. *[62-550.360][62-604.130(3)]*

9. The collection/transmission operation and maintenance manual shall be maintained and revised periodically in accordance with subsection 62-604.500(4), F.A.C., to reflect any alterations performed or to reflect experience resulting from operation. However, a new operation and maintenance manual is not required to be developed for each project if there is already an existing manual that is applicable to the facilities being constructed. *[62-604.500(4)]*

10. Collection/transmission system overflows shall be reported to the Department in accordance with Permit Condition IX. 20. *[62-604.550] [62-620.610(20)]*

11. The operating authority of a collection/transmission system and the permittee of a treatment plant are prohibited from accepting connections of wastewater discharges which have not received necessary pretreatment or which contain materials or pollutants (other than normal domestic wastewater constituents):

    a. Which may cause fire or explosion hazards; or

    b. Which may cause excessive corrosion or other deterioration of wastewater facilities due to chemical action or pH levels; or

    c. Which are solid or viscous and obstruct flow or otherwise interfere with wastewater facility operations or treatment; or

    d. Which result in the wastewater temperature at the introduction of the treatment plant exceeding $40^{o}C$ or otherwise inhibiting treatment; or

    e. Which result in the presence of toxic gases, vapors, or fumes that may cause worker health and safety problems.

[62-604.130(5)]

12. The treatment facility and storage ponds for Part II systems shall be enclosed with a fence or otherwise provided with features to discourage the entry of animals and unauthorized persons. *[62-600.400(2)(b)]*

13. Screenings and grit removed from the wastewater facilities shall be collected in suitable containers and hauled to a Department approved Class I landfill or to a landfill approved by the Department for receipt/disposal of screenings and grit. *[62-701.300(1)(a)]*

14. Where required by Chapter 471 or Chapter 492, F.S., applicable portions of reports that must be submitted under this permit shall be signed and sealed by a professional engineer or a professional geologist, as appropriate. *[62-620.310(4)]*

15. The permittee shall provide verbal notice to the Department's South District Office as soon as practical after discovery of a sinkhole or other karst feature within an area for the management or application of wastewater, wastewater residuals (sludges), or reclaimed water. The permittee shall immediately implement measures appropriate to control the entry of contaminants, and shall detail these measures to the Department's South District Office in a written report within 7 days of the sinkhole discovery. *[62-620.320(6)]*

16. The permittee shall provide notice to the Department of the following:

    a. Any new introduction of pollutants into the facility from an industrial discharger which would be subject to Chapter 403, F.S., and the requirements of Chapter 62-620, F.A.C., if it were directly discharging those pollutants; and

    b. Any substantial change in the volume or character of pollutants being introduced into that facility by a source which was identified in the permit application and known to be discharging at the time the permit was issued.

    Notice shall include information on the quality and quantity of effluent introduced into the facility and any anticipated impact of the change on the quantity or quality of effluent or reclaimed water to be discharged from the facility. If pretreatment becomes necessary, this permit may be modified to require the permittee to develop and implement a local pretreatment program in accordance with the requirements of Chapter 62-625, F.A.C.

    [62-620.625(2)]

IX. GENERAL CONDITIONS

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, Florida Statutes. Any permit noncompliance constitutes a violation of Chapter 403, Florida Statutes, and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. *[62-620.610(1)]*

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviations from the approved drawings, exhibits, specifications, or conditions of this permit constitutes grounds for revocation and enforcement action by the Department. *[62-620.610(2)]*

3. As provided in subsection 403.087(7), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. *[62-620.610(3)]*

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title

or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. *[62-620.610(4)]*

5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[62-620.610(5)]*

6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. *[62-620.610(6)]*

7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. *[62-620.610(7)]*

8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[62-620.610(8)]*

9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to:

    a. Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;

    b. Have access to and copy any records that shall be kept under the conditions of this permit;

    c. Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and

    d. Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules.

    [62-620.610(9)]

10. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except as such use is proscribed by Section 403.111, F.S., or Rule 62-620.302, F.A.C. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules. *[62-620.610(10)]*

11. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by this permit to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department. *[62-620.610(11)]*

12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A

reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. *[62-620.610(12)]*

13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. *[62-620.610(13)]*

14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department. *[62-620.610(14)]*

15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility or activity and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. *[62-620.610(15)]*

16. The permittee shall apply for a revision to the Department permit in accordance with Rules 62-620.300, F.A.C., and the Department of Environmental Protection Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.325(2), F.A.C., for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. *[62-620.610(16)]*

17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of this permit. The notice shall include the following information:

    a. A description of the anticipated noncompliance;

    b. The period of the anticipated noncompliance, including dates and times; and

    c. Steps being taken to prevent future occurrence of the noncompliance.

    [62-620.610(17)]

18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246 and Chapters 62-160, 62-600, and 62-610, F.A.C., and 40 CFR 136, as appropriate.

    a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10), or as specified elsewhere in the permit.

    b. If the permittee monitors any contaminant more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

    c. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this permit.

    d. Except as specifically provided in Rule 62-160.300, F.A.C., any laboratory test required by this permit shall be performed by a laboratory that has been certified by the Department of Health Environmental Laboratory Certification Program (DOH ELCP). Such certification shall be for the matrix, test method and analyte(s) being measured to comply with this permit. For domestic wastewater facilities, testing for parameters listed in Rule 62-160.300(4), F.A.C., shall be conducted under the direction of a certified operator.

    e. Field activities including on-site tests and sample collection shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in Chapter 62-160, F.A.C.

    f. Alternate field procedures and laboratory methods may be used where they have been approved in accordance with Rules 62-160.220, and 62-160.330, F.A.C.

[62-620.610(18)]

19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. *[62-620.610(19)]*

20. The permittee shall report to the Department any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; clean up actions taken and status; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. For noncompliance events related to sanitary sewer overflows, bypass events, or unauthorized discharges, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (e.g., sanitary sewer overflow, bypass, unauthorized discharge); type of sanitary sewer overflow structure (e.g., manhole); the discharge location address and latitude/longitude; type of water discharged; discharge volumes and volumes recovered; volume discharged to surface waters and receiving waterbody name; types of human health and environmental impacts of the sanitary sewer overflow, bypass event, or unauthorized discharge (e.g., beach closure); whether the noncompliance was caused by a third party; and whether the noncompliance was related to wet weather. The written submission may be provided electronically using the Department's Business Portal at https://www.fldepportal.com/go/ (via "Submit" followed by "Report" or "Registration/Notification"). Notice required for public notice of pollution under paragraph (d) may be provided together with the written submission using the Business Portal. All noncompliance events related to sanitary sewer overflows or bypass events submitted after September 14, 2021, shall be submitted electronically.

    a. The following shall be included as information which must be reported within 24 hours under this condition:
        (1) Any unanticipated bypass which causes any reclaimed water or the effluent to exceed any permit limitation or results in an unpermitted discharge,
        (2) Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,
        (3) Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice; and,
        (4) Any unauthorized discharge to surface or ground waters, except for discharges to ground water of reclaimed water meeting Part III or Part V treatment standards under Chapter 62-610, F.A.C.

    b. Oral reports as required by this subsection shall be provided as follows:
        (1) For unauthorized releases or spills of treated or untreated wastewater reported pursuant to subparagraph (a)4., that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the Department by calling the STATE WATCH OFFICE TOLL FREE NUMBER (800)320-0519, as soon as practicable, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Watch Office:
            (a) Name, address, and telephone number of person reporting,
            (b) Name, address, and telephone number of permittee or responsible person for the discharge,
            (c) Date and time of the discharge and status of discharge (ongoing or ceased),
            (d) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater),
            (e) Estimated amount of the discharge,
            (f) Location or address of the discharge,
            (g) Source and cause of the discharge,
            (h) Whether the discharge was contained on-site, and cleanup actions taken to date,
            (i) Description of area affected by the discharge, including name of water body affected; and,
            (j) Other persons or agencies contacted.

(2) Oral reports, not otherwise required to be provided pursuant to subparagraph (b)1., above, shall be provided to the Department within 24 hours from the time the permittee becomes aware of the circumstances.

c. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department shall waive the written report.

d. In accordance with Section 403.077, F.S., unauthorized releases or spills reportable to the State Watch Office pursuant to subparagraph (b)1. above shall also be reported to the Department within 24 hours from the time the permittee becomes aware of the discharge. The permittee shall provide to the Department information reported to the State Watch Office. Notice of unauthorized releases or spills may be provided to the Department through the Department's Public Notice of Pollution web page at https://floridadep.gov/pollutionnotice or by reporting electronically using the Department's Business Portal at https://www.fldepportal.com/go/ (via "Submit" followed by "Report" or "Registration/Notification").

(1) If, after providing notice pursuant to paragraph (d) above, the permittee determines that a reportable unauthorized release or spill did not occur or that an amendment to the notice is warranted, the permittee may submit a letter to the Department documenting such determination at pollution.notice@floridadep.gov.

(2) If, after providing notice pursuant to paragraph (d) above, the permittee discovers that a reportable unauthorized release or spill has migrated outside the property boundaries of the installation, the permittee must provide an additional notice to the Department that the release has migrated outside the property boundaries within 24 hours after its discovery of the migration outside of the property boundaries.

e. Unless discharged to surface waters, a spill, release, discharge, upset or bypass involving reclaimed water meeting Part III or Part V treatment standards under Chapter 62-610, F.A.C., shall not be considered to endanger health or the environment and shall be reported under subsection (21) of this permit.

[62-620.610(20)] [62-620.100(3)]

21. The permittee shall report all instances of noncompliance not reported under Permit Conditions IX.17., IX.18., or IX.19. of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Permit Condition IX.20. of this permit. *[62-620.610(21)]*

22. Bypass Provisions.

a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment works.

b. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required under Permit Condition IX.22.c. of this permit.

c. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Permit Condition IX.20. of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.

d. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Permit Condition IX.22.b.(1) through (3) of this permit.

e. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Permit Condition IX.22.b. through d. of this permit.

[62-620.610(22)]

23. Upset Provisions.

a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee.

(1) An upset does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, careless or improper operation.

(2) An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of upset provisions of Rule 62-620.610, F.A.C., are met.

b. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the permittee can identify the cause(s) of the upset;

(2) The permitted facility was at the time being properly operated;

(3) The permittee submitted notice of the upset as required in Permit Condition IX.20. of this permit; and

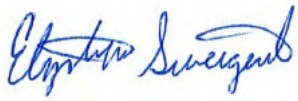
(4) The permittee complied with any remedial measures required under Permit Condition IX.5. of this permit.

c. In any enforcement proceeding, the burden of proof for establishing the occurrence of an upset rests with the permittee.

d. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review.

[62-620.610(23)]

Executed in Lee County, Florida.
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Elizabeth Sweigert
Director of District Management
South District Office

Attachment:
Discharge Monitoring Report
Administrative Order
"Pathogen Monitoring" Form

STATEMENT OF BASIS
FOR
STATE OF FLORIDA DOMESTIC WASTEWATER FACILITY PERMIT

PERMIT NUMBER: FLA014478-017

FACILITY NAME: Forest Utilities WWTP

FACILITY LOCATION: 6341 Deer Run, Fort Myers, FL 33908-4399
Lee County

NAME OF PERMITTEE: Forest Utilities, Inc.

PERMIT WRITER: Gabriela Hasher

1. SUMMARY OF APPLICATION

a. Chronology of Application

Application Number: FLA014478-017-DW1P

Application Submittal Date: November 4, 2025

b. Type of Facility

Domestic Wastewater Treatment Plant

Ownership Type: Private

SIC Code: 4952

c. Facility Capacity

Existing Permitted Capacity:	0.800 MGD Annual Average Daily Flow
Proposed Increase in Permitted Capacity:	0.000 MGD Annual Average Daily Flow
Proposed Total Permitted Capacity:	0.800 MGD Annual Average Daily Flow

d. Description of Wastewater Treatment

An existing 0.800 Million Gallons per Day (MGD) Annual Average Daily Flow (AADF) extended aeration wastewater treatment plant. Major units include: four surge tanks (700,000 gallons), seven aeration basins (692,788 gallons), seven sludge digestors (232,544 gallons), three clarifiers (one 800,000 gpd circular clarifier and two 500,000 gpd standby rectangular clarifiers), two sand filters (1,300,000 gpd), and two chlorine contact chambers (24,687 gallons). Disinfection is provided by a liquid sodium hypochlorite solution.

e. Description of Effluent Disposal and Land Application Sites (as reported by applicant)

An existing 0.800 MGD AADF permitted capacity slow-rate public access system that irrigates the Forest Country Club Golf Course. Reclaimed water is stored in two isolated golf course ponds that do not discharge.

2. SUMMARY OF SURFACE WATER DISCHARGE

This facility does not discharge to surface waters.

3. BASIS FOR PERMIT LIMITATIONS AND MONITORING REQUIREMENTS

This facility is authorized to direct reclaimed water to Reuse System R-001, a slow-rate public access system, based on the following:

Parameter	Units	Max/ Min	Limit	Statistical Basis	Rationale
Flow	MGD	Max	0.800	Annual Average	62-600.420(2) FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	20.0	Annual Average	62-610.460 & 62-600.420(3)(a)1. FAC
		Max	30.0	Monthly Average	62-610.460 & 62-600.420(3)(a)2. FAC
		Max	45.0	Weekly Average	62-610.460 & 62-600.420(3)(a)3. FAC
		Max	60.0	Single Sample	62-610.460 & 62-600.420(3)(a)4. FAC
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	62-610.460(1) & 62-600.440(6)(a)3. FAC
Coliform, Fecal	#/100mL	Max	25	Single Sample	62-610.460 & 62-600.440(6)(a)2. FAC
Coliform, Fecal, % less than detection	percent	Min	75	Minimum Total	62-610.460 & 62-600.440(6)(a)1. FAC
pH	s.u.	Min	6.0	Single Sample	62-600.445 FAC
		Max	8.5	Single Sample	62-600.445 FAC
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	62-600.440(6)(b), 62-610.460(2), & 62-610.463(2) FAC
Chlorine, Total Residual	mg/L	Min	1.0	Single Sample	62-600.440(5)
Turbidity	NTU	Max	Report	Single Sample	62-610.463(2) FAC
Giardia	cysts/100L	Max	Report	Single Sample	62-610.463(4) FAC
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	62-610.463(4) FAC
Nitrogen, Total	mg/L	Max	3.0	Annual Average	62-600.740(2)(b)1 FAC
		Max	3.75	Monthly Average	62-600.740(2)(b)2 FAC
		Max	4.5	Weekly Average	62-600.740(2)(b)3 FAC
		Max	6.0	Single Sample	62-600.740(2)(b)4 FAC
Phosphorus, Total (as P)	mg/L	Max	1.0	Annual Average	62-600.740(2)(b)1 FAC
		Max	1.25	Monthly Average	62-600.740(2)(b)2 FAC
		Max	1.50	Weekly Average	62-600.740(2)(b)3 FAC
		Max	2.0	Single Sample	62-600.740(2)(b)4 FAC

Other Limitations and Monitoring Requirements:

Parameter	Units	Max/ Min	Limit	Statistical Basis	Rationale
Flow	MGD	Max	0.800	Annual Average	62-600.700(2)(b) FAC
		Max	Report	Monthly Average	62-600.700(2)(b) FAC

Parameter	Units	Max/ Min	Limit	Statistical Basis	Rationale
Percent Capacity, (TMADF/Permitted Capacity) x 100	percent	Max	Report	3-Month Rolling Average	62-600.405(4) FAC
BOD, Carbonaceous 5 day, 20C (Influent)	mg/L	Max	Report	Single Sample	62-600.660(1) FAC
Solids, Total Suspended (Influent)	mg/L	Max	Report	Single Sample	62-600.660(1) FAC
Monitoring Frequencies and Sample Types	-	-	-	All Parameters	62-600 FAC & 62-699 FAC and/or BPJ of permit writer
Sampling Locations	-	-	-	All Parameters	62-600, 62-610.412, 62-610.463(1), 62-610.568, 62-610.613 FAC and/or BPJ of permit writer

4. IMPAIRMENT STATUS OF RECEIVING WATERS

This facility does not discharge to surface waters. However, the R-001, rapid infiltration basins land application system is located in a nutrient-impaired basin (Everglades West Coast Basin). When effluent is land applied it infiltrates into groundwater and has the potential to deliver nutrient loads to the aquifer and hydrologically connected surface waters. Under the new Basin Management Action Plan, limits for Total Nitrogen and Total Phosphorus are included in the permit conditions.

5. DISCUSSION OF CHANGES TO PERMIT LIMITATIONS

The limit for Fecal Coliform in the groundwater was changed from 0 #/100 mL back to 4 #/100 mL. Since this facility has not modified their disposal system since the July 2015 Fecal Revision, they are grandfathered into the old rule.

6. BIOSOLIDS MANAGEMENT REQUIREMENTS

Biosolids generated by this facility may be disposed of in a Class I solid waste landfill.

See the table below for the rationale for the biosolids quantities monitoring requirements.

Parameter	Units	Max/ Min	Limit	Statistical Basis	Rationale
Biosolids Quantity (Landfilled)	dry tons	Max	Report	Monthly Total	62-640.650(5)(a)1. FAC
Monitoring Frequency		All Parameters			62-640.650(5)(a) FAC

7. GROUND WATER MONITORING REQUIREMENTS

Ground water monitoring requirements have been established in accordance with Chapters 62-520, 532, 601, 610, and 620, F.A.C.

8. PERMIT SCHEDULES

Please see section “VI. Schedules” to view the list of improvement actions.

9. INDUSTRIAL PRETREATMENT REQUIREMENTS

At this time, the facility is not required to develop an approved industrial pretreatment program. However, the Department reserves the right to require an approved program if future conditions warrant.

10. ADMINISTRATIVE ORDERS (AO) AND CONSENT ORDERS (CO)

This permit is accompanied by AO-014478-017-SD, effective upon permit issuance, which includes a schedule to establish compliance with the Everglades West Coast Basin Management Action Plan. The AO is hereby incorporated by reference.

11. REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

No variances were requested for this facility.

12. THE ADMINISTRATIVE RECORD

The administrative record including application, draft permit, fact sheet, public notice (after release), comments received and additional information is available for public inspection at https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/FLA014478/facility!search or during normal business hours at the location specified in item 13. Copies will be provided at a minimal charge per page.

13. DEP CONTACT

Additional information concerning the permit and proposed schedule for permit issuance may be obtained during normal business hours from:

Gabriela Hasher
Engineering Specialist III
South District Office

2295 Victoria Ave
Suite 364
Ft Myers, FL 33901-3875

Telephone No.: 239-344-5692
Email: Gabriela.Hasher@FloridaDEP.gov

FLORIDA DEPARTMENT OF
Environmental Protection

South District
2295 Victoria Ave., Suite 364
Fort Myers, FL 33901
SouthDistrict@FloridaDEP.gov

Ron DeSantis
Governor

Jay Collins
Lt. Governor

Alexis A. Lambert
Secretary

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

IN THE MATTER OF:

Forest Utilities, Inc.
Doris Swor, President
6341 Deer Run Rd SW
Fort Myers, Florida 33908
dorrees6@gmail.com

Lee County – Domestic Wastewater
Administrative Order No. AO-FLA014478-017-SD
Forest Utilities WWTP
Permit No. FLA014478-017-DW1P

ORDER ESTABLISHING COMPLIANCE SCHEDULE UNDER SECTION 403.088(2)(f), F.S.

I. STATUTORY AUTHORITY

The Department of Environmental Protection (Department) issues this Administrative Order (Order) under the authority of §403.087, Florida Statutes (F.S.). The Secretary of the Department has delegated this authority to the Director of District Management, who issues this Order and makes the following findings of fact.

II. FINDINGS OF FACT

1. Forest Utilities, Inc., ("Permittee") is a person under §403.031, F.S
2. The Permittee owns and operates the Forest Utilities WWTP, located at 6341 Deer Run Rd SW, Fort Myers, Florida 33908, which discharges wastewater into waters and ground water of the State as defined in §403.031 of the Florida Statutes.
3. The Department has issued OGC Case No. 25-1036 Everglades West Coast Basin Management Action Plan which establishes limits for Total Nitrogen and Total Phosphorus. The text for this order can be found at the following link:
4. The Permittee has filed an application for permit renewal of the above references Department permit under §403.087, F.S.
5. The Permittee has not provided reasonable assurance that the facility discharge will meet effluent requirements of OGC Case No. 25-1036.
6. §403.088(2)(e) and (f), F.S., authorize the Department to issue a permit for the discharge of wastes into waters of the state, accompanied by an order establishing a schedule for achieving compliance with all permit conditions if specified criteria are met.

7. The Department finds that:

    a. The applicant needs permission to pollute the waters within the state for a period of time necessary to complete research, planning, construction, installation, or operation of an approved and acceptable pollution abatement facility or alternative waste disposal system.

    b. There are no present, reasonable, alternative means of disposing of the waste other than by discharging it into the waters of the state.

III. ORDER

Based on the foregoing findings of fact,

IT IS ORDERED,

1. The Permittee shall be in full compliance with the final conditions of the permit by June 30, 2028

2. The Permittee shall comply with the following schedule:

Action Item	Due Date
Sample the effluent monthly for total nitrogen and total phosphorus concentrations. This shall be a "report" only requirement during the active administrative order.	1st day of the 2nd month following permit effective date
Retain a licensed engineer to evaluate the capacity of the facility to meet the new effluent limits. Please notify the Department that a engineer has been retained.	March 1, 2026
Submit an engineering report demonstrating that the effluent discharge complies with the new limits for Total Nitrogen and Total Phosphorus at the end of pipe prior to any land disposal.	June 1, 2027
If the report provided to the Department does not demonstrate compliance with the new limits for Total Nitrogen and Total Phosphorus, the Permittee shall: i. Submit a plan of operational changes to come into compliance with the nutrient limits, ii. Submit a complete application to modify the treatment facility for nutrient removal or Advanced Waste Treatment, iii. Submit a complete application for a domestic wastewater collection system connection to another wastewater treatment facility.	September 1, 2027

Submit a complete application to modify your facility treatment process to meet the new effluent standards.	March 1, 2028
The permittee shall commence construction of the approved modifications	9 months from modification permit issuance

3. The permittee shall report the concentrations of total Nitrogen, TKN, Nitrate and Nitrite, and Total Phosphorus in the effluent, monthly on the Interim Discharge Monitoring Report

4. The Permittee shall submit quarterly status reports (due by the 1st of January, April, July, and October) which show progress of the actions required to bring the facility into compliance.

5. Reports or other information required by this Order shall be sent electronically to SD-WWReports@FloridaDEP.gov.

6. The Permittee shall maintain and operate its facilities in compliance with all other conditions of Department Permit No. FLA014478-017.

7. This Order may be modified through revisions as set forth in Chapter 62-620, F.A.C.

8. This Order does not operate as a permit under §403.087, F.S. This Order shall be incorporated by reference into Department Permit No. FLA014478-017, which shall require compliance by the Permittee with the requirements of this order.

9. Failure to comply with the requirements of this Order shall constitute a violation of this Order and Department Permit No. FLA014478-017 and may subject the Permittee to penalties as provided in §403.161, F.S.

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing
A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rules 28-106.201 and 28-106.301, F.A.C., a petition for an administrative hearing must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, any e-mail address, any facsimile number, and telephone number of the petitioner, if the petitioner is not represented by an attorney or a qualified representative; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;
(c) A statement of when and how the petitioner received notice of the agency decision;
(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@FloridaDEP.gov. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant and persons entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the notice or within 14 days of receipt of the written notice, whichever occurs first. You cannot justifiably rely on the finality of this decision unless notice of this decision and the right of substantially affected persons to challenge this decision has been duly published or otherwise provided to all persons substantially affected by the decision. While you are not required to publish notice of this action, you may elect to do so pursuant Rule 62-110.106(10)(a), F.A.C.

The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C. If you do not publish notice of this action, this waiver may not apply to persons who have not received a clear point-of-entry.

Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@FloridaDEP.gov, before the deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation
Mediation is not available in this proceeding.

Judicial Review
Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Florida Rules of Appellate Procedure 9.110 and 9.190 with the Clerk of the Department in the Office of General Counsel (Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000) and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within 30 days from the date this action is filed with the Clerk of the Department.

Executed in Lee County, Florida.
STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Elizabeth Sweigert
Director of District Management
South District Office

CERTIFICATE OF SERVICE
The undersigned duly designated deputy clerk hereby certifies that this document and all attachments were sent on the filing date below to the following listed persons:

James P. Elliott, P.E., Source, Inc., jpelliott@source-inc.com

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.

	February 2, 2026
Clerk	Date

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When completed submit this report to: https://www.fldepportal.com/DepPortal/go/submit-report

PERMITTEE NAME: Forest Utilities WWTP
MAILING ADDRESS: 6341 Deer Run Rd SW
Fort Myers, Florida 33908

FACILITY: Forest Utilities WWTP
LOCATION: 6341 Deer Run
Fort Myers, Florida 33908

COUNTY: Lee
OFFICE: South District

PERMIT NUMBER: FLA014478-017-DW1P

LIMIT: Interim
CLASS SIZE: N/A
MONITORING GROUP NUMBER: R-001
MONITORING GROUP DESCRIPTION: slow-rate public access, including Influent
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Monthly
PROGRAM: Domestic

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow	Sample Measurement										
PARM Code 50050 Y Mon. Site No. FLW-02	Permit Requirement		0.800 (An.Avg.)	MGD						5 Days/Week	Calculated
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 Y Mon. Site No. EFA-01	Permit Requirement					20.0 (An.Avg.)		mg/L		Weekly	8-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 A Mon. Site No. EFA-01	Permit Requirement				60.0 (Max.)	45.0 (Max.Wk.Avg.)	30.0 (Mo.Avg.)	mg/L		Weekly	8-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 P Mon. Site No. EFA-02	Permit Requirement					20.0 (An.Avg.)		mg/L		Weekly	8-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 Q Mon. Site No. EFA-02	Permit Requirement				45.0 (Max.Wk.Avg.)	60.0 (Max.)	30.0 (Mo.Avg.)	mg/L		Weekly	8-hr FPC
Solids, Total Suspended	Sample Measurement										
PARM Code 00530 B Mon. Site No. EFB-01	Permit Requirement						5.0 (Max.)	mg/L		Daily; 24 hours	Grab

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: R-001 PERMIT NUMBER: FLA014478-017-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Solids, Total Suspended	Sample Measurement										
PARM Code 00530 P Mon. Site No. EFB-02	Permit Requirement						5.0 (Max.)	mg/L		Daily; 24 hours	Grab
Coliform, Fecal	Sample Measurement										
PARM Code 74055 A Mon. Site No. EFA-01	Permit Requirement						25 (Max.)	#/100mL		Daily; 24 hours	Grab
Coliform, Fecal	Sample Measurement										
PARM Code 74055 P Mon. Site No. EFA-02	Permit Requirement						25 (Max.)	#/100mL		Daily; 24 hours	Grab
Coliform, Fecal, % less than detection	Sample Measurement										
PARM Code 51005 A Mon. Site No. EFA-01	Permit Requirement				75 (Min.Mo.Total)			percent		Daily; 24 hours	Calculated
Coliform, Fecal, % less than detection	Sample Measurement										
PARM Code 51005 P Mon. Site No. EFA-02	Permit Requirement				75 (Min.Mo.Total)			percent		Monthly	Calculated
pH	Sample Measurement										
PARM Code 00400 A Mon. Site No. EFA-01	Permit Requirement				6.0 (Min.)		8.5 (Max.)	s.u.		5 Days/Week	Grab
pH	Sample Measurement										
PARM Code 00400 P Mon. Site No. EFA-02	Permit Requirement				6.0 (Min.)		8.5 (Max.)	s.u.		5 Days/Week	Grab
Chlorine, Total Residual (For Disinfection)	Sample Measurement										
PARM Code 50060 A Mon. Site No. EFA-01	Permit Requirement				1.0 (Min.)			mg/L		Continuous	Meter
Chlorine, Total Residual	Sample Measurement										
PARM Code 50060 P Mon. Site No. EFA-02	Permit Requirement				1.0 (Min.)			mg/L		Continuous	Meter
Turbidity	Sample Measurement										
PARM Code 00070 B Mon. Site No. EFB-01	Permit Requirement						Report (Max.)	NTU	0	Continuous	Meter

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: R-001 PERMIT NUMBER: FLA014478-017-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Turbidity	Sample Measurement										
PARM Code 00070 P Mon. Site No. EFB-02	Permit Requirement						Report (Max.)	NTU	0	Continuous	Meter
Nitrogen, Total	Sample Measurement										
PARM Code 00600 A Mon. Site No. EFA-01	Permit Requirement						Report (Max.)	mg/L	0	Weekly	Grab
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 A Mon. Site No. EFA-01	Permit Requirement						Report (Max.)	mg/L	0	Weekly	Grab
Nitrogen, Kjeldahl, Total (as N)	Sample Measurement										
PARM Code 00625 A Mon. Site No. EFA-01	Permit Requirement						Report (Max.)	mg/L	0	Weekly	Grab
Nitrogen, Nitrate, Total (as N)	Sample Measurement										
PARM Code 00620 A Mon. Site No. EFA-01	Permit Requirement						Report (Max.)	mg/L	0	Weekly	Grab
Nitrogen, Nitrite, Total (as N)	Sample Measurement										
PARM Code 00615 A Mon. Site No. EFA-01	Permit Requirement						Report (Max.)	mg/L	0	Weekly	Grab
Flow	Sample Measurement										
PARM Code 50050 1 Mon. Site No. FLW-01	Permit Requirement		0.800 (An.Avg.)	MGD						Continuous	Flow Totalizer
Flow	Sample Measurement										
PARM Code 50050 P Mon. Site No. FLW-01	Permit Requirement		Report (Mo.Avg.)	MGD					0	Continuous	Flow Totalizer
Percent Capacity, (TMADF/Permitted Capacity) x 100	Sample Measurement										
PARM Code 00180 P Mon. Site No. CAL-01	Permit Requirement						Report (3Mo.Avg.)	percent	0	Monthly	Calculated
BOD, Carbonaceous 5 day, 20C (Influent)	Sample Measurement										
PARM Code 80082 G Mon. Site No. INF-01	Permit Requirement						Report (Max.)	mg/L	0	Weekly	8-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP

MONITORING GROUP NUMBER: R-001

PERMIT NUMBER: FLA014478-017-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Solids, Total Suspended (Influent)	Sample Measurement										
PARM Code 00530 G Mon. Site No. INF-01	Permit Requirement						Report (Max.)	mg/L	0	Weekly	8-hr FPC

ISSUANCE/REISSUANCE DATE: February 2, 2026
DMR EFFECTIVE DATE: July 1, 2026 – June 30, 2028

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When completed submit this report to: https://www.fldepportal.com/DepPortal/go/submit-report

PERMITTEE NAME: Forest Utilities WWTP
MAILING ADDRESS: 6341 Deer Run Rd SW
Fort Myers, Florida 33908

FACILITY: Forest Utilities WWTP
LOCATION: 6341 Deer Run
Fort Myers, Florida 33908-4399

COUNTY: Lee
OFFICE: South District

PERMIT NUMBER: FLA014478-017-DW1P

LIMIT: Final
CLASS SIZE: N/A
MONITORING GROUP NUMBER: R-001
MONITORING GROUP DESCRIPTION: slow-rate public access, including Influent
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Monthly
PROGRAM: Domestic

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow	Sample Measurement										
PARM Code 50050 Y Mon. Site No. FLW-02	Permit Requirement		0.800 (An.Avg.)	MGD						5 Days/Week	Calculated
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 Y Mon. Site No. EFA-01	Permit Requirement					20.0 (An.Avg.)		mg/L		Weekly	8-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 A Mon. Site No. EFA-01	Permit Requirement				60.0 (Max.)	45.0 (Max.Wk.Avg.)	30.0 (Mo.Avg.)	mg/L		Weekly	8-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 P Mon. Site No. EFA-02	Permit Requirement					20.0 (An.Avg.)		mg/L		Weekly	8-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 Q Mon. Site No. EFA-02	Permit Requirement				45.0 (Max.Wk.Avg.)	60.0 (Max.)	30.0 (Mo.Avg.)	mg/L		Weekly	8-hr FPC
Solids, Total Suspended	Sample Measurement										
PARM Code 00530 B Mon. Site No. EFB-01	Permit Requirement						5.0 (Max.)	mg/L		Daily; 24 hours	Grab

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: R-001 PERMIT NUMBER: FLA014478-017-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Solids, Total Suspended	Sample Measurement										
PARM Code 00530 P Mon. Site No. EFB-02	Permit Requirement						5.0 (Max.)	mg/L		Daily; 24 hours	Grab
Coliform, Fecal	Sample Measurement										
PARM Code 74055 A Mon. Site No. EFA-01	Permit Requirement						25 (Max.)	#/100mL		Daily; 24 hours	Grab
Coliform, Fecal	Sample Measurement										
PARM Code 74055 P Mon. Site No. EFA-02	Permit Requirement						25 (Max.)	#/100mL		Daily; 24 hours	Grab
Coliform, Fecal, % less than detection	Sample Measurement										
PARM Code 51005 A Mon. Site No. EFA-01	Permit Requirement				75 (Min.Mo.Total)			percent		Daily; 24 hours	Calculated
Coliform, Fecal, % less than detection	Sample Measurement										
PARM Code 51005 P Mon. Site No. EFA-02	Permit Requirement				75 (Min.Mo.Total)			percent		Monthly	Calculated
pH	Sample Measurement										
PARM Code 00400 A Mon. Site No. EFA-01	Permit Requirement				6.0 (Min.)		8.5 (Max.)	s.u.		5 Days/Week	Grab
pH	Sample Measurement										
PARM Code 00400 P Mon. Site No. EFA-02	Permit Requirement				6.0 (Min.)		8.5 (Max.)	s.u.		5 Days/Week	Grab
Chlorine, Total Residual (For Disinfection)	Sample Measurement										
PARM Code 50060 A Mon. Site No. EFA-01	Permit Requirement				1.0 (Min.)			mg/L		Continuous	Meter
Chlorine, Total Residual	Sample Measurement										
PARM Code 50060 P Mon. Site No. EFA-02	Permit Requirement				1.0 (Min.)			mg/L		Continuous	Meter
Turbidity	Sample Measurement										
PARM Code 00070 B Mon. Site No. EFB-01	Permit Requirement						Report (Max.)	NTU	0	Continuous	Meter

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: R-001 PERMIT NUMBER: FLA014478-017-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Turbidity	Sample Measurement										
PARM Code 00070 P Mon. Site No. EFB-02	Permit Requirement						Report (Max.)	NTU	0	Continuous	Meter
Nitrogen, Total	Sample Measurement										
PARM Code 00600 Y Mon. Site No. EFA-01	Permit Requirement					3.0 (An.Avg.)		mg/L		Weekly	Grab
Nitrogen, Total	Sample Measurement										
PARM Code 00600 A Mon. Site No. EFA-01	Permit Requirement				6.0 (Max.)	4.5 (Max.Wk.Avg.)	3.75 (Mo.Avg.)	mg/L		Weekly	Grab
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 Y Mon. Site No. EFA-01	Permit Requirement					1.0 (An.Avg.)		mg/L		Weekly	Grab
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 A Mon. Site No. EFA-01	Permit Requirement				2.0 (Max.)	1.50 (Max.Wk.Avg.)	1.25 (Mo.Avg.)	mg/L		Weekly	Grab
Flow	Sample Measurement										
PARM Code 50050 1 Mon. Site No. FLW-01	Permit Requirement		0.800 (An.Avg.)	MGD						Continuous	Flow Totalizer
Flow	Sample Measurement										
PARM Code 50050 P Mon. Site No. FLW-01	Permit Requirement		Report (Mo.Avg.)	MGD					0	Continuous	Flow Totalizer
Percent Capacity, (TMADF/Permitted Capacity) x 100	Sample Measurement										
PARM Code 00180 P Mon. Site No. CAL-01	Permit Requirement						Report (3Mo.Avg.)	percent	0	Monthly	Calculated
BOD, Carbonaceous 5 day, 20C (Influent)	Sample Measurement										
PARM Code 80082 G Mon. Site No. INF-01	Permit Requirement						Report (Max.)	mg/L	0	Weekly	8-hr FPC
Solids, Total Suspended (Influent)	Sample Measurement										
PARM Code 00530 G Mon. Site No. INF-01	Permit Requirement						Report (Max.)	mg/L	0	Weekly	8-hr FPC

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When completed submit this report to: https://www.fldepportal.com/DepPortal/go/submit-report

PERMITTEE NAME: Forest Utilities WWTP
MAILING ADDRESS: 6341 Deer Run Rd SW
Fort Myers, Florida 33908

FACILITY: Forest Utilities WWTP
LOCATION: 6341 Deer Run
Fort Myers, Florida 33908-4399

COUNTY: Lee
OFFICE: South District

PERMIT NUMBER: FLA014478-017-DW1P

LIMIT: Final
CLASS SIZE: N/A
MONITORING GROUP NUMBER: RMP-Q
MONITORING GROUP DESCRIPTION: Biosolids Quantity
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Monthly
PROGRAM: Domestic

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Biosolids Quantity (Landfilled)	Sample Measurement										
PARM Code B0008 + Mon. Site No. RMP-1	Permit Requirement		Report (Mo.Total)	dry tons					0	Monthly	Calculated

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When completed submit this report to: https://www.fldepportal.com/DepPortal/go/submit-report

PERMITTEE NAME: Forest Utilities WWTP
MAILING ADDRESS: 6341 Deer Run Rd SW
Fort Myers, Florida 33908

FACILITY: Forest Utilities WWTP
LOCATION: 6341 Deer Run
Fort Myers, Florida 33908-4399

COUNTY: Lee
OFFICE: South District

PERMIT NUMBER: FLA014478-017-DW1P

LIMIT: Final
CLASS SIZE: N/A
MONITORING GROUP NUMBER: RWS-A
MONITORING GROUP DESCRIPTION: Annual Reclaimed Water or Effluent Analysis
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING NOT REQUIRED:* ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Annually
PROGRAM: Domestic

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Antimony, Total Recoverable (GWS = 6)**	Sample Measurement										
PARM Code 01268 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Arsenic, Total Recoverable (GWS = 10)	Sample Measurement										
PARM Code 00978 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Barium, Total Recoverable (GWS = 2,000)	Sample Measurement										
PARM Code 01009 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Beryllium, Total Recoverable (GWS = 4)	Sample Measurement										
PARM Code 00998 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Cadmium, Total Recoverable (GWS = 5)	Sample Measurement										
PARM Code 01113 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Chromium, Total Recoverable (GWS =100)	Sample Measurement										
PARM Code 01118 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC

*THE "MONITORING NOT REQUIRED" CHECKBOX SHOULD BE SELECTED WHEN A CERTIFICATION STATEMENT IN ACCORDANCE WITH SUBSECTION 62-600.680(2), F.A.C., IS SUBMITTED WITH THIS DMR. SEE CERTIFICATION STATEMENT IN COMMENTS SECTION BELOW.
**GROUND WATER STANDARD (GWS) FOR REFERENCE AND REVIEW ONLY.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):
☐ NO NEW NON-DOMESTIC WASTEWATER DISCHARGERS HAVE BEEN ADDED TO THE COLLECTION SYSTEM SINCE THE LAST RECLAIMED WATER OR EFFLUENT ANALYSIS WAS CONDUCTED.
SIGN AND DATE:

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-017-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Cyanide, Free (amen. to chlorination)(GWS = 200)	Sample Measurement										
PARM Code 00722 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
Fluoride, Total (as F) (GWS = 4.0/2.0)	Sample Measurement										
PARM Code 00951 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L	0	Annually	24-hr FPC
Lead, Total Recoverable (GWS = 15)	Sample Measurement										
PARM Code 01114 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Mercury, Total Recoverable (GWS = 2)	Sample Measurement										
PARM Code 71901 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Nickel, Total Recoverable (GWS = 100)	Sample Measurement										
PARM Code 01074 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Nitrogen, Nitrate, Total (as N) (GWS = 10)	Sample Measurement										
PARM Code 00620 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L	0	Annually	24-hr FPC
Nitrogen, Nitrite, Total (as N) (GWS = 1)	Sample Measurement										
PARM Code 00615 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L	0	Annually	24-hr FPC
Nitrite plus Nitrate, Total 1 det. (as N)(GWS = 10)	Sample Measurement										
PARM Code 00630 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L	0	Annually	24-hr FPC
Selenium, Total Recoverable (GWS =50)	Sample Measurement										
PARM Code 00981 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Sodium, Total Recoverable (GWS = 160)	Sample Measurement										
PARM Code 00923 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L	0	Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-017-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Thallium, Total Recoverable (GWS = 2)	Sample Measurement										
PARM Code 00982 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
1,1-dichloroethylene (GWS = 7)	Sample Measurement										
PARM Code 34501 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
1,1,1-trichloroethane (GWS = 200)	Sample Measurement										
PARM Code 34506 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
1,1,2-trichloroethane (GWS = 5)	Sample Measurement										
PARM Code 34511 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
1,2-dichloroethane (GWS = 3)	Sample Measurement										
PARM Code 32103 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
1,2-dichloropropane (GWS = 5)	Sample Measurement										
PARM Code 34541 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
1,2,4-trichlorobenzene (GWS = 70)	Sample Measurement										
PARM Code 34551 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Benzene (GWS = 1)	Sample Measurement										
PARM Code 34030 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
Carbon tetrachloride (GWS = 3)	Sample Measurement										
PARM Code 32102 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
Cis-1,2-dichloroethene (GWS = 70)	Sample Measurement										
PARM Code 81686 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-017-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Dichloromethane (methylene chloride)(GWS = 5)	Sample Measurement										
PARM Code 03821 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
Ethylbenzene (GWS = 700)	Sample Measurement										
PARM Code 34371 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
Monochlorobenzene (GWS = 100)	Sample Measurement										
PARM Code 34031 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
1,2-dichlorobenzene (GWS = 600)	Sample Measurement										
PARM Code 34536 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
1,4-dichlorobenzene (GWS = 75)	Sample Measurement										
PARM Code 34571 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
Styrene, Total (GWS = 100)	Sample Measurement										
PARM Code 77128 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
Tetrachloroethylene (GWS = 3)	Sample Measurement										
PARM Code 34475 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
Toluene (GWS = 1,000)	Sample Measurement										
PARM Code 34010 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
1,2-trans-dichloroethylene (GWS = 100)	Sample Measurement										
PARM Code 34546 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
Trichloroethylene (GWS = 3)	Sample Measurement										
PARM Code 39180 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-017-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Vinyl chloride (GWS = 1)	Sample Measurement										
PARM Code 39175 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
Xylenes (GWS = 10,000)	Sample Measurement										
PARM Code 81551 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
2,3,7,8-tetrachlorodibenzo-p-dioxin(GWS = 3x10^-5)	Sample Measurement										
PARM Code 34675 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
2,4-dichlorophenoxyacetic acid (GWS = 70)	Sample Measurement										
PARM Code 39730 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Silvex (GWS = 50)	Sample Measurement										
PARM Code 39760 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Alachlor (GWS = 2)	Sample Measurement										
PARM Code 39161 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Atrazine (GWS = 3)	Sample Measurement										
PARM Code 39033 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Benzo(a)pyrene (GWS = 0.2)	Sample Measurement										
PARM Code 34247 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Carbofuran (GWS = 40)	Sample Measurement										
PARM Code 81405 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Chlordane (tech mix. and metabolites)(GWS = 2)	Sample Measurement										
PARM Code 39350 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-017-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Dalapon (GWS = 200)	Sample Measurement										
PARM Code 38432 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Bis(2-ethylhexyl)adipate (GWS = 400)	Sample Measurement										
PARM Code 77903 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Bis (2-ethylhexyl) phthalate (GWS = 6)	Sample Measurement										
PARM Code 39100 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Dibromochloropropane (DBCP) (GWS = 0.2)	Sample Measurement										
PARM Code 82625 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
Dinoseb (GWS = 7)	Sample Measurement										
PARM Code 30191 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Diquat (GWS = 20)	Sample Measurement										
PARM Code 04443 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Endothall (GWS = 100)	Sample Measurement										
PARM Code 38926 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Endrin (GWS = 2)	Sample Measurement										
PARM Code 39390 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Ethylene dibromide (1,2-dibromoethane)(GWS = 0.02)	Sample Measurement										
PARM Code 77651 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	Grab
Glyphosate (GWS = 0.7)	Sample Measurement										
PARM Code 79743 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L	0	Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-017-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Heptachlor (GWS = 0.4)	Sample Measurement										
PARM Code 39410 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Heptachlor epoxide (GWS = 0.2)	Sample Measurement										
PARM Code 39420 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Hexachlorobenzene (GWS = 1)	Sample Measurement										
PARM Code 39700 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Hexachlorocyclopentadiene (GWS = 50)	Sample Measurement										
PARM Code 34386 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Gamma BHC (Lindane) (GWS = 0.2)	Sample Measurement										
PARM Code 39782 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Methoxychlor (GWS = 40)	Sample Measurement										
PARM Code 39480 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Oxamyl (vydate) (GWS = 200)	Sample Measurement										
PARM Code 38865 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Pentachlorophenol (GWS = 1)	Sample Measurement										
PARM Code 39032 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Picloram (GWS = 500)	Sample Measurement										
PARM Code 39720 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Polychlorinated Biphenyls (PCBs)(GWS = 0.5)	Sample Measurement										
PARM Code 39516 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-017-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Simazine (GWS = 4)	Sample Measurement										
PARM Code 39055 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Toxaphene (GWS = 3)	Sample Measurement										
PARM Code 39400 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Trihalomethane, Total by summation(GWS = 0.080)	Sample Measurement										
PARM Code 82080 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L	0	Annually	Grab
Radium 226 + Radium 228, Total (GWS = 5)	Sample Measurement										
PARM Code 11503 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	pCi/L	0	Annually	24-hr FPC
Alpha, Gross Particle Activity (GWS = 15)	Sample Measurement										
PARM Code 80045 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	pCi/L	0	Annually	24-hr FPC
Aluminum, Total Recoverable (GWS = 0.2)	Sample Measurement										
PARM Code 01104 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L	0	Annually	24-hr FPC
Chloride (as Cl) (GWS = 250)	Sample Measurement										
PARM Code 00940 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L	0	Annually	24-hr FPC
Iron, Total Recoverable (GWS = 0.3)	Sample Measurement										
PARM Code 00980 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L	0	Annually	24-hr FPC
Copper, Total Recoverable (GWS = 1,000)	Sample Measurement										
PARM Code 01119 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Manganese, Total Recoverable (GWS = 50)	Sample Measurement										
PARM Code 11123 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: Forest Utilities WWTP MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FLA014478-017-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Silver, Total Recoverable (GWS = 100)	Sample Measurement										
PARM Code 01079 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
Sulfate, Total (GWS = 250)	Sample Measurement										
PARM Code 00945 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L	0	Annually	24-hr FPC
Zinc, Total Recoverable (GWS = 5,000)	Sample Measurement										
PARM Code 01094 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	ug/L	0	Annually	24-hr FPC
pH (GWS = 6.5-8.5)	Sample Measurement										
PARM Code 00400 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	s.u.	0	Annually	Grab
Solids, Total Dissolved (TDS) (GWS = 500)	Sample Measurement										
PARM Code 70295 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L	0	Annually	24-hr FPC
Foaming Agents (GWS = 0.5)	Sample Measurement										
PARM Code 01288 P Mon. Site No. RWS-A	Permit Requirement						Report (Max.)	mg/L	0	Annually	24-hr FPC

DAILY SAMPLE RESULTS - PART B

Permit Number: FLA014478-017-DW1P Facility: Forest Utilities WWTP
Monitoring Period From: _____ To: _____

	BOD, Carbonaceous 5 day, 20C mg/L	BOD, Carbonaceous 5 day, 20C mg/L	BOD, Carbonaceous 5 day, 20C (Influent) mg/L	Chlorine, Total Residual (For Disinfection) mg/L	Chlorine, Total Residual mg/L	Coliform, Fecal #/100mL	Coliform, Fecal #/100mL	Coliform, Fecal, % less than detection percent	Coliform, Fecal, % less than detection percent	Flow MGD	Flow MGD
Code	80082	80082	80082	50060	50060	74055	74055	51005	51005	50050	50050
Mon. Site	EFA-01	EFA-02	INF-01	EFA-01	EFA-02	EFA-01	EFA-02	EFA-01	EFA-02	FLW-01	FLW-02
1											
2											
3											
4											
5											
6											
7											
8											
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21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator Class: _____ Certificate No: _____ Name: _____

Evening Shift Operator Class: _____ Certificate No: _____ Name: _____

Night Shift Operator Class: _____ Certificate No: _____ Name: _____

Lead Operator Class: _____ Certificate No: _____ Name: _____

DAILY SAMPLE RESULTS - PART B

Permit Number: FLA014478-017-DW1P Facility: Forest Utilities WWTP
Monitoring Period From: _____ To: _____

	Nitrogen, Kjeldahl, Total (as N) mg/L	Nitrogen, Nitrate, Total (as N) mg/L	Nitrogen, Nitrite, Total (as N) mg/L	Nitrogen, Total mg/L	Percent Capacity, (TMADF/Permitted Capacity) x 100	Phosphorus, Total (as P) mg/L	Solids, Total Suspended mg/L	Solids, Total Suspended mg/L	Solids, Total Suspended (Influent) mg/L	Turbidity NTU	Turbidity NTU
Code	00625	00620	00615	00600	00180	00665	00530	00530	00530	00070	00070
Mon. Site	EFA-01	EFA-01	EFA-01	EFA-01	CAL-01	EFA-01	EFB-01	EFB-02	INF-01	EFB-01	EFB-02
1											
2											
3											
4											
5											
6											
7											
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25											
26											
27											
28											
29											
30											
31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator Class: _____ Certificate No: _____ Name: _____

Evening Shift Operator Class: _____ Certificate No: _____ Name: _____

Night Shift Operator Class: _____ Certificate No: _____ Name: _____

Lead Operator Class: _____ Certificate No: _____ Name: _____

DAILY SAMPLE RESULTS - PART B

Permit Number: FLA014478-017-DW1P Facility: Forest Utilities WWTP
Monitoring Period From: _____ To: _____

	pH s.u.	pH s.u.									
Code	00400	00400									
Mon. Site	EFA-01	EFA-02									
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
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18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator Class: _____ Certificate No: _____ Name: _____

Evening Shift Operator Class: _____ Certificate No: _____ Name: _____

Night Shift Operator Class: _____ Certificate No: _____ Name: _____

Lead Operator Class: _____ Certificate No: _____ Name: _____

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Forest Utilities WWTP
Permit Number: FLA014478-017-DW1P
County: Lee

Monitoring Well ID: MWB-21302
Well Type: Background
Description: Background monitoring well located 0.86 miles northeast of the plant on Forrest Blvd.

Report Frequency: Quarterly
Program: Domestic

Office: South District

Re-submitted DMR: ☐

Monitoring Period From: _____ To: _____

Date Sample Obtained: _____

Time Sample Obtained: _____

Was the well purged before sampling? ___Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		Report	mg/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		Report	ug/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		Report	ug/L	Grab	Quarterly				
Chromium, Total Recoverable	01118		Report	ug/L	Grab	Quarterly				
Lead, Total Recoverable	01114		Report	ug/L	Grab	Quarterly				
Coliform, Fecal	74055		Report	#/100mL	Grab	Quarterly				
pH	00400		Report	s.u.	In Situ	Quarterly				
Sulfate, Total	00945		Report	mg/L	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Specific Conductance	00095		Report	umhos/cm	In Situ	Quarterly				
Temperature (C), Water	00010		Report	Deg C	In Situ	Quarterly				
Oxygen, Dissolved (DO)	00300		Report	mg/L	In Situ	Quarterly				

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Forest Utilities WWTP
Permit Number: FLA014478-017-DW1P
County: Lee

Monitoring Well ID: MWC-21304
Well Type: Compliance
Description: Compliance monitoring well located 0.58 miles north of the plant near Timberlakes Dr.

Report Frequency: Quarterly
Program: Domestic

Office: South District

Re-submitted DMR: ☐

Monitoring Period From: _____ To: _____

Date Sample Obtained: _____

Time Sample Obtained: _____

Was the well purged before sampling? ___Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		10.0	mg/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	ug/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	ug/L	Grab	Quarterly				
Chromium, Total Recoverable	01118		100.0	ug/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	ug/L	Grab	Quarterly				
Coliform, Fecal	74055		4.0	#/100mL	Grab	Quarterly				
pH	00400		6.5-8.5	s.u.	In Situ	Quarterly				
Sulfate, Total	00945		250.0	mg/L	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Specific Conductance	00095		Report	umhos/cm	In Situ	Quarterly				
Temperature (C), Water	00010		Report	Deg C	In Situ	Quarterly				
Oxygen, Dissolved (DO)	00300		Report	mg/L	In Situ	Quarterly				

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COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Forest Utilities WWTP
Permit Number: FLA014478-017-DW1P
County: Lee

Monitoring Well ID: MWC-80019
Well Type: Compliance
Description: Compliance well located 70 feet north of the plant.

Report Frequency: Quarterly
Program: Domestic

Office: South District

Re-submitted DMR: ☐

Monitoring Period From: _____ To: _____

Date Sample Obtained: _____

Time Sample Obtained: _____

Was the well purged before sampling? ___Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		10.0	mg/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	ug/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	ug/L	Grab	Quarterly				
Chromium, Total Recoverable	01118		100.0	ug/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	ug/L	Grab	Quarterly				
Coliform, Fecal	74055		4.0	#/100mL	Grab	Quarterly				
pH	00400		6.5-8.5	s.u.	In Situ	Quarterly				
Sulfate, Total	00945		250.0	mg/L	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Specific Conductance	00095		Report	umhos/cm	In Situ	Quarterly				
Temperature (C), Water	00010		Report	Deg C	In Situ	Quarterly				
Oxygen, Dissolved (DO)	00300		Report	mg/L	In Situ	Quarterly				

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COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Forest Utilities WWTP
Permit Number: FLA014478-017-DW1P
County: Lee

Monitoring Well ID: MWC-80020
Well Type: Compliance
Description: Compliance well located 0.2 miles east of the plant on Deer Run Road.

Report Frequency: Quarterly
Program: Domestic

Office: South District

Re-submitted DMR: ☐

Monitoring Period From: _____ To: _____

Date Sample Obtained: _____

Time Sample Obtained: _____

Was the well purged before sampling? ___Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		10.0	mg/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		10.0	ug/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		5.0	ug/L	Grab	Quarterly				
Chromium, Total Recoverable	01118		100.0	ug/L	Grab	Quarterly				
Lead, Total Recoverable	01114		15.0	ug/L	Grab	Quarterly				
Coliform, Fecal	74055		4.0	#/100mL	Grab	Quarterly				
pH	00400		6.5-8.5	s.u.	In Situ	Quarterly				
Sulfate, Total	00945		250.0	mg/L	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Specific Conductance	00095		Report	umhos/cm	In Situ	Quarterly				
Temperature (C), Water	00010		Report	Deg C	In Situ	Quarterly				
Oxygen, Dissolved (DO)	00300		Report	mg/L	In Situ	Quarterly				

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COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: Forest Utilities WWTP
Permit Number: FLA014478-017-DW1P
County: Lee

Monitoring Well ID: MWI-21303
Well Type: Intermediate
Description: Intermediate well located 0.34 miles northeast of the plant on Timberlakes Dr.

Report Frequency: Quarterly
Program: Domestic

Office: South District

Re-submitted DMR: ☐

Monitoring Period From: _____ To: _____

Date Sample Obtained: _____

Time Sample Obtained: _____

Was the well purged before sampling? ___Yes ___ No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		Report	mg/L	Grab	Quarterly				
Arsenic, Total Recoverable	00978		Report	ug/L	Grab	Quarterly				
Cadmium, Total Recoverable	01113		Report	ug/L	Grab	Quarterly				
Chromium, Total Recoverable	01118		Report	ug/L	Grab	Quarterly				
Lead, Total Recoverable	01114		Report	ug/L	Grab	Quarterly				
Coliform, Fecal	74055		Report	#/100mL	Grab	Quarterly				
pH	00400		Report	s.u.	In Situ	Quarterly				
Sulfate, Total	00945		Report	mg/L	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Specific Conductance	00095		Report	umhos/cm	In Situ	Quarterly				
Temperature (C), Water	00010		Report	Deg C	In Situ	Quarterly				
Oxygen, Dissolved (DO)	00300		Report	mg/L	In Situ	Quarterly				

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COMMENTS AND EXPLANATION (Reference all attachments here):

INSTRUCTIONS FOR COMPLETING THE WASTEWATER DISCHARGE MONITORING REPORT

Read these instructions before completing the DMR. Hard copies and/or electronic copies of the required parts of the DMR were provided with the permit. All required information shall be completed in full and typed or printed in ink. A signed, original DMR shall be mailed to the address printed on the DMR by the 28th of the month following the monitoring period. Facilities who submit their DMR(s) electronically through eDMR do not need to submit a hardcopy DMR. The DMR shall not be submitted before the end of the monitoring period.

The DMR consists of three parts--A, B, and D--all of which may or may not be applicable to every facility. Facilities may have one or more Part A's for reporting effluent or reclaimed water data. All domestic wastewater facilities will have a Part B for reporting daily sample results. Part D is used for reporting ground water monitoring well data.

When results are not available, the following codes should be used on parts A and D of the DMR and an explanation provided where appropriate. Note: Codes used on Part B for raw data are different.

CODE	DESCRIPTION/INSTRUCTIONS
ANC	Analysis not conducted.
DRY	Dry Well
FLD	Flood disaster.
IFS	Insufficient flow for sampling.
LS	Lost sample.
MNR	Monitoring not required this period.

CODE	DESCRIPTION/INSTRUCTIONS
NOD	No discharge from/to site.
OPS	Operations were shutdown so no sample could be taken.
OTH	Other. Please enter an explanation of why monitoring data were not available.
SEF	Sampling equipment failure.

When reporting analytical results that fall below a laboratory's reported method detection limits or practical quantification limits, the following instructions should be used, unless indicated otherwise in the permit or on the DMR:

1. Results greater than or equal to the PQL shall be reported as the measured quantity.
2. Results less than the PQL and greater than or equal to the MDL shall be reported as the laboratory's MDL value. These values shall be deemed equal to the MDL when necessary to calculate an average for that parameter and when determining compliance with permit limits.
3. Results less than the MDL shall be reported by entering a less than sign ("<") followed by the laboratory's MDL value, e.g. < 0.001. A value of one-half the MDL or one-half the effluent limit, whichever is lower, shall be used for that sample when necessary to calculate an average for that parameter. Values less than the MDL are considered to demonstrate compliance with an effluent limitation.

PART A -DISCHARGE MONITORING REPORT (DMR)

Part A of the DMR is comprised of one or more sections, each having its own header information. Facility information is preprinted in the header as well as the monitoring group number, whether the limits and monitoring requirements are interim or final, and the required submittal frequency (e.g. monthly, annually, quarterly, etc.). Submit Part A based on the required reporting frequency in the header and the instructions shown in the permit. The following should be completed by the permittee or authorized representative:

Resubmitted DMR: Check this box if this DMR is being re-submitted because there was information missing from or information that needed correction on a previously submitted DMR. The information that is being revised should be clearly noted on the re-submitted DMR (e.g. highlight, circle, etc.)
No Discharge From Site: Check this box if no discharge occurs and, as a result, there are no data or codes to be entered for all of the parameters on the DMR for the entire monitoring group number; however, if the monitoring group includes other monitoring locations (e.g., influent sampling), the "NOD" code should be used to individually denote those parameters for which there was no discharge.
Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Sample Measurement: Before filling in sample measurements in the table, check to see that the data collected correspond to the limit indicated on the DMR (i.e. interim or final) and that the data correspond to the monitoring group number in the header. Enter the data or calculated results for each parameter on this row in the non-shaded area above the limit. Be sure the result being entered corresponds to the appropriate statistical base code (e.g. annual average, monthly average, single sample maximum, etc.) and units. Data qualifier codes are not to be reported on Part A.
No. Ex.: Enter the number of sample measurements during the monitoring period that exceeded the permit limit for each parameter in the non-shaded area. If none, enter zero.
Frequency of Analysis: The shaded areas in this column contain the minimum number of times the measurement is required to be made according to the permit. Enter the actual number of times the measurement was made in the space above the shaded area.
Sample Type: The shaded areas in this column contain the type of sample (e.g. grab, composite, continuous) required by the permit. Enter the actual sample type that was taken in the space above the shaded area.
Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.
Comment and Explanation of Any Violations: Use this area to explain any exceedances, any upset or by-pass events, or other items which require explanation. If more space is needed, reference all attachments in this area.

PART B - DAILY SAMPLE RESULTS

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Daily Monitoring Results: Transfer all analytical data from your facility's laboratory or a contract laboratory's data sheets for all day(s) that samples were collected. Record the data in the units indicated. Table 1 in Chapter 62-160, F.A.C., contains a complete list of all the data qualifier codes that your laboratory may use when reporting analytical results. However, when transferring numerical results onto Part B of the DMR, only the following data qualifier codes should be used and an explanation provided where appropriate.

CODE	DESCRIPTION/INSTRUCTIONS
<	The compound was analyzed for but not detected.
A	Value reported is the mean (average) of two or more determinations.
J	Estimated value, value not accurate.
Q	Sample held beyond the actual holding time.
Y	Laboratory analysis was from an unpreserved or improperly preserved sample.

To calculate the monthly average, add each reported value to get a total. For flow, divide this total by the number of days in the month. For all other parameters, divide the total by the number of observations.
Plant Staffing: List the name, certificate number, and class of all state certified operators operating the facility during the monitoring period. Use additional sheets as necessary.

PART D - GROUND WATER MONITORING REPORT

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Date Sample Obtained: Enter the date the sample was taken. Also, check whether or not the well was purged before sampling.
Time Sample Obtained: Enter the time the sample was taken.
Sample Measurement: Record the results of the analysis. If the result was below the minimum detection limit, indicate that. Data qualifier codes are not to be reported on Part D.
Detection Limits: Record the detection limits of the analytical methods used.
Analysis Method: Indicate the analytical method used. Record the method number from Chapter 62-160 or Chapter 62-601, F.A.C., or from other sources.
Sampling Equipment Used: Indicate the procedure used to collect the sample (e.g. airlift, bucket/bailer, centrifugal pump, etc.)
Samples Filtered: Indicate whether the sample obtained was filtered by laboratory (L), filtered in field (F), or unfiltered (N).
Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.
Comments and Explanation: Use this space to make any comments on or explanations of results that are unexpected. If more space is needed, reference all attachments in this area.

SPECIAL INSTRUCTIONS FOR LIMITED WET WEATHER DISCHARGES

Flow (Limited Wet Weather Discharge): Enter the measured average flow rate during the period of discharge or divide gallons discharged by duration of discharge (converted into days). Record in million gallons per day (MGD).
Flow (Upstream): Enter the average flow rate in the receiving stream upstream from the point of discharge for the period of discharge. The average flow rate can be calculated based on two measurements; one made at the start and one made at the end of the discharge period. Measurements are to be made at the upstream gauging station described in the permit.
Actual Stream Dilution Ratio: To calculate the Actual Stream Dilution Ratio, divide the average upstream flow rate by the average discharge flow rate. Enter the Actual Stream Dilution Ratio accurate to the nearest 0.1.
No. of Days the SDF > Stream Dilution Ratio: For each day of discharge, compare the minimum Stream Dilution Factor (SDF) from the permit to the calculated Stream Dilution Ratio. On Part B of the DMR, enter an asterisk (*) if the SDF is greater than the Stream Dilution Ratio on any day of discharge. On Part A of the DMR, add up the days with an "*" and record the total number of days the Stream Dilution Factor was greater than the Stream Dilution Ratio.
$CBOD_5$: Enter the average $CBOD_5$ of the reclaimed water discharged during the period shown in duration of discharge.
TKN: Enter the average TKN of the reclaimed water discharged during the period shown in duration of discharge.
Actual Rainfall: Enter the actual rainfall for each day on Part B. Enter the actual cumulative rainfall to date for this calendar year and the actual total monthly rainfall on Part A. The cumulative rainfall to date for this calendar year is the total amount of rain, in inches, that has been recorded since January 1 of the current year through the month for which this DMR contains data.
Rainfall During Average Rainfall Year: On Part A, enter the total monthly rainfall during the average rainfall year and the cumulative rainfall for the average rainfall year. The cumulative rainfall for the average rainfall year is the amount of rain, in inches, which fell during the average rainfall year from January through the month for which this DMR contains data.
No. of Days LWWD Activated During Calendar Year: Enter the cumulative number of days that the limited wet weather discharge was activated since January 1 of the current year.
Reason for Discharge: Attach to the DMR a brief explanation of the factors contributing to the need to activate the limited wet weather discharge.

Florida Department of Environmental Protection

Pathogen Monitoring

Part I - Instructions

1. Completion of this report is required by Rules 62-610.463(4), 62-610.472(3)(d), 62-610.525(13), 62-610.568(11), and 62-610.652(6)(c), F.A.C., for all domestic wastewater facilities that provide reclaimed water to certain types of reuse activities. The schedule for sampling and reporting shall be in accordance with the permit for the facility. If a schedule for sampling or re-sampling is not included in the permit, the sampling and re-sampling shall be conducted every two years, or quarterly in accordance with the applicable Rule. If sampling is required once every five years, this report shall be submitted with the application for permit renewal.

2. Submit one copy of this form and a copy of the laboratory's final report for the analysis of *Giardia* and *Cryptosporidium* to each of the following two addresses:

   a. The appropriate DEP district office. Addresses for the DEP district offices are available at www.dep.state.fl.us/secretary/dist/default.htm.
   b. The DEP Water Reuse Coordinator electronically at: epost.bwfrdom@dep.state.fl.us.

3. Please type or print legibly.

4. In Part II, Items 7 through 12 need to be completed only if this is the first submittal of this report, if the information in Items 7 through 12 has changed since the last submittal, or if the information in any of these questions has not been previously provided.

5. Part III is to be used when sampling for *Giardia* and *Cryptosporidium* at the treatment plant. Part III is also to be used when sampling for *Giardia* and *Cryptosporidium* in a supplemental water supply (see Rule 62-610.472, F.A.C.).

6. For each sample, record the sample volume obtained in liters.

7. For *Giardia*, record the concentrations in cysts per 100 liters. For *Cryptosporidium*, record the concentrations in oocysts per 100 liters. Sufficient sample volumes shall be collected and processed such that the detection limit is no greater than 5 cysts or oocysts per 100 liters. Detection levels on the order of 1 cyst or oocyst per 100 liters are recommended. If an observation is less than the detection limit, make an entry in the form "<2" (where 2 per 100 liters is the detection limit in this example). The actual detection limit will be dictated by the volumes of sample obtained, filtered, and processed. Do NOT record nondetectable values as zero.

8. Rule 62-160.300, F.A.C., requires that all laboratories generating environmental data for submission to the DEP shall hold certification from the Department of Health's (DOH) Environmental Laboratory Certification Program (ELCP). Certification by the ELCP for analysis of *Giardia* and *Cryptosporidium* using EPA Method 1623.1 for non-potable waters is required. If other approved methods are used, certification by the ELCP is required for the specific method and for the test matrix. Lists of certified laboratories can be found at www.dep.state.fl.us/labs/cgi-bin/aams/index.asp

9. When sampling a supplemental water supply, obtain a grab sample for total suspended solids (TSS) that is representative of the water leaving the filters at the treatment facility during the period when pathogen samples are being obtained. In addition, record the lowest total chlorine residual observed during the period when pathogen samples are being obtained.

Part II - General Information

1. DEP wastewater facility identification number: **FLA014478**

   Wastewater facility name: Forest Utilities WWTP

   Permittee name: Forest Utilities WWTP

2. Person completing this form:

   Name: _____

   Telephone: (_____)_____

   Email address: _____

3. Sampling and analysis:

   Date samples were taken: _____

   Organization collecting the samples: _____

   Was the sample dechlorinated in the field? ☐ Yes ☐ No

   Was the sample refrigerated or kept on ice during shipment to the laboratory? ☐ Yes ☐ No

   Date samples delivered to laboratory: _____

   Date analytical work was done: _____

   Laboratory doing the analysis: _____

   Laboratory's DOH Identification Number: _____

   Approved method used:

   ☐ EPA Method 1623.1

   ☐ Other approved method: _____

   Contact person at the laboratory: _____

   Email address of the lab contact person: _____

4. Is this the first time that this form has been submitted for the facility?

   ☐ Yes [Please complete Questions 7 through 16.]

☐ No [Proceed to Question 5.]

5. Is this a report of "subsequent re-sampling" required by Item 9 in Part I of this form based on concentrations of potentially viable cysts or oocysts in a previous sampling?

☐ No [Proceed to Question 6.]

☐ Yes [Attach a description of any facility or operational changes made to the treatment facilities since the time of the previous sampling and proceed to Question 6.]

6. Has the information requested in Questions 7 through 12 (below) changed since the last submittal of this form?

☐ Yes [Please complete Questions 7 through 16.]

☐ No [Proceed to Questions 13 through 16 of Part II of this form. You do not need to complete Questions 7 through 12.]

7. Type of secondary treatment system:

☐ Conventional activated sludge ☐ Extended aeration

☐ Contact stabilization ☐ Biological nutrient removal (such as Bardenpho)

☐ Other: _____

8. Does this treatment facility nitrify (convert ammonia nitrogen to nitrate)? ☐ Yes ☐ No

9. Filter type:

☐ Deep bed, single media ☐ Deep bed, multiple media

☐ Shallow bed, automatic backwash ☐ Upflow (including Dynasand)

☐ Slow rate sand filter ☐ Diatomaceous earth filter

☐ Fabric filter ☐ Cartridge filter

☐ Membranes (microfiltration, ultrafiltration, membrane bioreactor, reverse osmosis)

☐ Other: _____

10. Filter Media (complete for each type of media provided):

Top layer of media: Media type: _____

Effective size: _____ mm

Uniformity coefficient: _____

Bed depth: _____ inches

Middle layer of media: Media type: _____

Effective size: _____ mm

Uniformity coefficient: _____

Bed depth: _____ inches

Bottom layer of media: Media type: _____

Effective size: _____ mm

Uniformity coefficient: _____

Bed depth: _____ inches

11. Filter backwash water:

☐ Backwash water is returned to the headworks of the treatment plant.

☐ Backwash water is returned to the aeration basin.

☐ Other. Please describe: _____

12. Disinfection system:

☐ Chlorination, gas ☐ Hypochlorite

☐ Chlorine dioxide ☐ Chlorination, other

☐ Ultraviolet ☐ Ozone

☐ Other: _____

13. Is chlorine added before the filters? ☐ No ☐ Yes Dose: _____ mg/L

14. During the period that samples were taken, did you add a coagulant, coagulant aid, polyelectrolyte, or other chemical to enhance filtration?

☐ No

☐ Yes. Please list the chemicals being added and their dose.

Chemical 1 - Name: _____ Dose: _____ mg/L

Chemical 2 - Name: _____ Dose: _____ mg/L

Chemical 3 - Name: _____ Dose: _____ mg/L

15. Wastewater treatment plant permitted capacity: _____ MGD

16. Wastewater flow being treated at the time samples were collected: _____ MGD

Part III - Pathogen Monitoring Report

Permittee Name: Forest Utilities WWTP

Facility ID: FLA014478

Mailing Address: 6341 Deer Run Rd SW, Fort Myers, Florida 33908

Date of Sampling:

Facility Address: 6341 Deer Run, Fort Myers, FL 33908-4399

Facility Name: Forest Utilities WWTP

Table I. Treatment Plant: After Filter

Monitoring Site No. _____

Parameter	Sample Measurement	Units
Turbidity PARM Code 00070		NTU
TSS PARM Code 00530		mg/L

Table II. Treatment Plant: After Disinfection

Monitoring Site No. _____

Volume Collected - PARM Code 71994: _____ Liters

Parameter	Sample Measurement	Units
Total Chlorine Residual PARM Code 50060		mg/L
Giardia, total count * PARM Code GIARD		total cysts/100 L
Giardia, potentially viable cysts * PARM Code VGIAR		potentially viable cysts/100 L
Cryptosporidium, total count * PARM Code CRYPT		total oocysts/100 L
Cryptosporidium, potentially viable oocysts * PARM Code VCRYP		potentially viable oocysts/100 L

Table III. Supplemental Water Supply (surface water or stormwater): After Treatment & Disinfection

Monitoring Site No. _____

Volume Collected - PARM Code 71994: _____ Liters

Parameter	Sample Measurement	Units
TSS PARM Code 00530		mg/L
Total Chlorine Residual PARM Code 50060		mg/L
Giardia, total count * PARM Code GIARD		total cysts/100 L
Giardia, potentially viable cysts * PARM Code VGIAR		potentially viable cysts/100 L
Cryptosporidium, total count * PARM Code CRYPT		total oocysts/100 L
Cryptosporidium, potentially viable oocysts * PARM Code VCRYP		potentially viable oocysts/100 L

* Data entries must be made for both total and potentially viable cysts and oocysts.

Part IV - Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

_____
Signature of Principle Executive Officer or Authorized Agent

_____
Name/Title of Principle Executive Officer or Authorized Agent (Type or Print)

Date (YY/MM/DD): _____

Phone: _____

Email: _____

EXHIBIT K

FLORIDA DEPARTMENT OF Environmental Protection

South District
2295 Victoria Avenue Suite 364
Fort Myers FL 33902-2549
SouthDistrict@FloridaDEP.gov

Ron DeSantis
Governor

Jay Collins
Lt. Governor

Alexis A. Lambert
Secretary

November 6, 2025

Wade E. Moser
6000 Forest Blvd
Fort Myers, Florida 33908- 4318
Email: wmoser23@aol.com

Re: Warning Letter
Forest Utilities WWTP
FLA014478
Lee County – DW

Dear Mr. Moser:

A Compliance Evaluation Inspection and Sanitary Sewer Overflow Preventive Inspection were conducted for your facility on **October 9, 2025,** under the authority of Section 403.061, Florida Statutes (F.S.). During these inspections, possible violations of Chapters 62-160, 62-520, 62-600, 62-610, and 62-620 of the Florida Administrative Code (F.A.C.), were observed.

During these inspections, Department personnel noted the following:

- Transcription and calculation errors were present on the Discharge Monitoring Reports (DMRs) during the review period.
- A records review revealed the facility did not submit monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal.
- The clarifier had excessive scum and floc floating at the surface of the basin.
- The rubber on the skimmer arm required adjustment to properly collect scum in the basin.
- Excessive corrosion was observed on the airlines to the aeration basins, resulting in holes that were leaking air.
- The reject tank allowed water to seep through the wall when the water level rose above half the tank's capacity.
- One of the two sand filters was inoperable.
- The handrails and platforms around the facility had excessive corrosion and rotting.
- The facility failed to submit a new written agreement to the Department at least 30 days prior to transporting biosolids.
- Groundwater exceedances were documented during the review period.
- The facility reported 13 Sanitary Sewer Overflows (SSOs) that reached the ground between August 1, 2024, and October 17, 2025.

Violations of Florida Statutes or administrative rules may result in liability for damages and restoration, and the judicial imposition of civil penalties, pursuant to Sections 403.121, Florida Statutes.

Please contact **Kaylee Turke** at **239-344-5710** or via email at: **Kaylee.Turke@FloridaDEP.gov** within **15 days** of receipt of this Warning Letter to arrange a meeting to discuss this matter. The Department is interested in receiving any facts you may have that will assist in determining whether any violations have occurred. Any document submittals can be made to our email mailbox at SD-WWinspect@FloridaDEP.gov or may be mailed to the above address. You may bring anyone with you to the meeting that you feel could help resolve this matter.

Please be advised that this Warning Letter is part of an agency investigation, preliminary to agency action in accordance with Section 120.57(5), Florida Statutes. We look forward to your cooperation in completing the investigation and resolving this matter.

Sincerely,

Elizabeth Sweigert
Director of District Management

Enclosure: Inspection Report

ec: Mitch Gilbert, FGUA (via e-mail: mitchgilbert@floridautilitysolutions.com)
Matt Gillispie, FGUA (via e-mail: matt@floridautilitysolutions.com)
Allen Slater, FRWA (via e-mail: Allen.Slater@frwa.net)

Facility Details

Facility Name	Forest Utilities WWTP			**WAFR ID**	FLA014478		
Physical Address	6341 Deer Run Road SW			**City, State, Zip**	Fort Myers, FL 33908-4318		
County	Lee			**Facility Phone #**	(239) 848-5174		
Permit Issued	12/18/2020			**Permit Expiration**	5/4/2026		
Facility Type	Domestic Wastewater			**Is the Facility NPDES (Y/N)**	No		
Latitude	**Degrees**	26	**Minutes**	29	**Seconds**	49.7586	
Longitude	**Degrees**	81	**Minutes**	52	**Seconds**	11.9426	

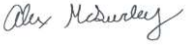
Inspection Details

Inspection Type		**Entry Date**		**Exit Date**	
CEI		10/9/2025		10/9/2025	
SSOP		**Entry Time (HH:MM AM/PM)**		**Exit Time (HH:MM AM/PM)**	
		9:10 AM		10:55 AM	
Samples Taken (Y/N)	No	**RQ#**	N/A	**QA Conducted (Y/N)**	No

Name(s) and Title of Field Representative(s)	**Operator Certification**	**Email**	**Phone Number**
Mitch Gilbert	C - 0015245	mitchgilbert@floridautilitysolutions.com	N/A
Matt Gillispie	N/A	matt@floridautilitysolutions.com	(239) 218-0933

Name(s) and address of Permittee / Designated Representative(s)	**Title**	**Email**	**Phone Number**
Wade E. Moser 6000 Forest Blvd Fort Myers, Florida 33908- 4318	Responsible Official	wmoser23@aol.com	(239) 848-5174

Inspector Information

Name(s) and Signature(s) of Inspector(s)		**District Office**	**Phone Number**	**Date**
Kaylee Turke		SD	(239) 344-5710	10/20/2025
Name and Signature of Reviewer		**District Office**	**Phone Number**	**Date**
Alexandria McSurley		SD	(239) 344-5679	11/4/2025

Facility Compliance Eval Areas

IC = In Compliance; **MC** = Minor Out of Compliance; **NC** = Out of Compliance; **SC** = Significant Out of Compliance;
NA = Not Applicable; **NE** = Not Evaluated
Significant Non-Compliance Criteria Should be Reviewed when Out of Compliance Ratings Are Given in Areas Marked by a "*"

Overall Compliance Determination	Significant Out of Compliance
*Permit	IC
*Compliance Schedules	IC
Laboratory	IC
Sampling	SC
*Records and Reports	SC
Facility Site Review	NC
Flow Measurement	IC
*Operation and Maintenance	NC
*Effluent Quality	NC
*Effluent Disposal	NC
Biosolids	NC
*Groundwater	NC
*SSO Survey	SC
Other	NE

Single Event Violations ("*" SNC SEVs)

Check For Yes	Evaluation Area	Description	Finding Description	Finding ID
☐	Permit	Effluent Violations - Unapproved Bypass	Wastewater was diverted from a portion of the treatment process without department approval.	UNBY
☐	*Permit	Permit Violations - Discharge Without a Valid Permit	The facility was operating without a permit or with an expired permit.	UPHI
☐	Permit	Permit Violations - Failure to Submit Timely Permit Renewal Application	The permittee failed to submit an application to renew the existing permit at least 180 days prior to expiration.	PFSA
☐	Laboratory	Management Practice Violations - Laboratory Not Certified	The laboratory was not certified by the National Environmental Laboratory Accreditation Conference (NELAC).	LNCE
☑	Sampling	Monitoring Violations - Analysis not Conducted	The facility failed to collect and/or analyze samples as required by permit or enforcement action.	ANCV
☐	Sampling	Monitoring Violations - Failure to Monitor for Toxicity Requirements	The facility failed to collect and/or analyze routine or follow-up toxicity samples.	FTOX
☐	Records and Reports	Management Practice Violations - Failure to Develop Adequate SPCC Plan	The facility failed to develop or maintain their Spill Prevention Control and Countermeasures (SPCC) plan.	FSPC
☐	Records and Reports	Management Practice Violations - Failure to Maintain Records	The facility failed to maintain records for the required retention period.	FMRR
☐	Records and Reports	Reporting Violations - Failure to Notify	The permittee failed to notify the department of any event or activity that requires notification as required by permit or rule.	RSWP
☐	Records and Reports	Reporting Violations - Failure to Submit DMRs	The permittee failed to submit any DMR required by rule, permit, or enforcement action in a timely manner.	FDMR
☑	Records and Reports	Reporting Violations - Failure to submit required report (non-DMR, non-pretreatment)	The facility failed to submit any report required by rule, permit, enforcement action or inspection activity except for DMRs.	FRPT
☐	Facility Site Review	Management Practice Violations - Improper Land Application (non-503, non-CAFO)	The land application system was not being maintained.	LASN
☐	Flow Measurement	Monitoring Violations - No Flow Measurement Device	The facility failed to install a flow measurement device, an approved flow measurement device, or a working flow measurement device.	NOFL
☐	Operation and Maintenance	Management Practice Violations - Improper Operation and Maintenance	The facility failed to follow their operation and maintenance plan/manual.	IONM
☐	Operation and Maintenance	Management Practice Violations - Inflow/Infiltration (I/I)	The facility had an inflow and infiltration problem causing collection system issues and/or operational issues.	ININ
☐	Operation and Maintenance	Management Practice Violations - No Licensed/Certified Operator	The facility was being operated without a certified operator or by an operator that is not licensed for the size of plant.	ONCO
☐	*Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent acute toxicity has been documented through follow-up tests.	EATX
☐	*Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent chronic toxicity has been documented through follow-up tests.	ECTX
☐	*Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent acute or chronic toxicity has been documented in the effluent through the use of routine and follow-up tests.	ETOX
☐	Effluent Quality	Effluent Violations - Narrative Effluent Violation	The facility violated a permit or enforcement narrative effluent limit.	XNEV
☐	Effluent Quality	Effluent Violations - Reported Fish Kill	The facility had a discharge of wastewater that resulted in a fish kill.	XFSH
☐	Sanitary Sewer Overflow Survey	WW SSO - Discharge to Waters	A sewage spill from any components of a collection/transmission system or from a treatment plant reached surface waters including stormwater conveyance system or drainage ditch.	SSO1
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to Maintain Records or Meet Record Keeping Requirements	The facility failed to keep routine documentation and reporting records of spills, and/or operation and maintenance activities on the collection/transmission system.	SSO2
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to monitor	The facility failed to collect and/or analyze bacteriological samples for sewage spills that reached surface waters.	SSO3
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to report violation that may endanger public health 122.41(l)(7)	The facility failed to report a sewage spill within 24 hours of discovery.	SSO4
☐	Sanitary Sewer Overflow Survey	WW SSO - Improper Operation and Maintenance	The facility failed to perform routine preventative maintenance to keep the collection/transmission system in good working order.	SSO5
☑	Sanitary Sewer Overflow Survey	WW SSO - Overflow to Dry Land	A sewage spill from any part of a collection/transmission system or treatment plant that did not make it to surface waters, i.e., stormwater collection system, drainage ditch, stream, pond, or lake.	SSO6

1. Permit

Compliance Rating	In Compliance
Does this section apply to the facility?	Yes
Questions	
*Is the facility operating with a valid permit?	Yes
Current Permit available on-site?	Yes
Date Permit Issued	18-Dec-20
Date Permit Expires	4-May-26
Permit Renewal Application Due By:	5-Nov-25
Has the facility submitted the permit renewal application at least 180 days prior to the permit expiration date?	Not Applicable
If wastewater is diverted from a portion of the treatment process, was appropriate Department approval obtained?	Not Applicable
Administrative or Judicial Orders?	N/A

	Deficiencies and Corrective Actions
1.1.1	The facility did not have any deficiencies relating to the Permit.
	Observations
1.2.1	Department records indicate that the current operating permit will expire on **May 4, 2026**. F.A.C. Rule 62-620.335(1) states that a Permittee shall submit an application to renew the existing permit at least 180 days before the expiration date of the existing permit. Timely and sufficient submittal of the renewal application and permit processing fee is important (and in your best interest) as it automatically extends the expiration date on the existing permit until the Department takes final action on the renewal application. A tardy application could result in non-compliance. Your renewal application and permit processing fee must be submitted no later than **November 5, 2025**.
1.2.2	This facility operates a domestic wastewater treatment plant that uses the extended aeration process. The permitted capacity for the annual average daily flow (AADF) is 0.800 MGD. The facility has four surge tanks and one effluent reject tank. Biological treatment occurs in seven aeration tanks and three clarifiers. The high-level disinfection system consists of two traveling bridge sand filters, and two chlorine contact basins. Biosolids are treated and stored in three anaerobic holding tanks, three aerated holding tanks, three sludge drying beds and one dried-sludge holding bin. REUSE OR DISPOSAL: Land Application R-001: An existing 0.800 MGD, AADF permitted capacity slow-rate public access system which irrigates the Forrest Country Club Golf Courses. Reclaimed water is stored in two isolated golf course ponds that do not discharge. A Permit Revision was issued on August 4, 2021 for the following: Forest Utilities, Inc. is authorized to convert the disinfection system of the wastewater treatment facility from a chlorine gas system to a bulk sodium hypochlorite disinfection system.
1.2.3	A copy of the permit is available onsite. [62-620.350(5) F.A.C.]
1.2.4	The facility is operated in accordance with the permit. [62-620.300(5) F.A.C.]
1.2.5	The facility was free from unpermitted discharge, bypass, collection system, or residuals with a high potential for water quality or health impacts. [403.161(1)(b) F.S., 62-620.300 F.A.C., 62-604.130 F.A.C., 62-640.400 F.A.C.]

2. Compliance Schedule

Compliance Rating	In Compliance
Does this section apply to the facility?	Yes
Questions	
Compliance Schedule in Permit met?	Yes
Compliance Schedules in Order are being met?	Yes

	Deficiencies and Corrective Actions
2.1.1	The facility did not have any deficiencies relating to a Compliance Schedule.
	Observations
2.2.1	The facility has completed construction and submitted a Notification of Completion of Construction for Wastewater Facilities or Activities (Form 62-620.910(12)), if required. [403.161(1)(b) F.S., 62-620.630(2) F.A.C.]
2.2.2	The Notification of Availability of Record Drawings and Final Operation and Maintenance Manuals (Form 62-620.910(13)) has been submitted as required. [403.161(1)(b) F.S., 62-620.630(2)(b) F.A.C., 62-620.630(2)(b) F.A.C.]
2.2.3	Please ensure that the Notification of Completion of Construction for Wastewater Facilities or Activities (Form 62-620.910(12)) and the Notification of Availability of Record Drawings and Final Operation and Maintenance Manuals (Form 62-620.910(13)) are available onsite during future inspections for review.

3. Laboratory

Compliance Rating	In Compliance
Does this section apply to the facility?	Yes
Questions	
Does the laboratory hold certification from the Florida Department of Health Environmental Laboratory Certification Program?	Yes
Contract Lab Name and Certification #	Sanders Laboratories, Inc. (South - E85457 & Nokomis - E84380)
Facility NELAC Certification #	N/A

	Deficiencies and Corrective Actions
3.1.1	The facility did not have any deficiencies relating to the Laboratory.
	Observations
3.2.1	The facility has a contract with **Sanders Laboratories, Inc. (South - E85457 & Nokomis - E84380)** to collect and analyze the samples outlined in their permit. The laboratory then submits the sample results back to the facility, who is responsible for properly and correctly reporting those results on their DMRs. A current copy of the laboratory certification is maintained on site. Please be aware that the DOH Certificate will expire on June 30 each year and should be replaced when expired.

4. Sampling

Compliance Rating	Significant Out of Compliance
Does this section apply to the facility?	Yes
Questions	
Does the facility collect and analyze samples as required by permit or enforcement action?	No
Sampling conducted during inspection?	Not Applicable

Sampling observed during inspection?	Not Applicable
Sampling conducted at locations identified by the permit?	Yes
Safe access to sampling locations?	Yes
Did the facility collect and/or analyze routine or follow-up toxicity samples as required by permit or enforcement action?	Not Applicable

Deficiencies and Corrective Actions		
4.1.10	The facility failed to collect and/or analyze samples as required by permit or enforcement action. [62-600.650(1) F.A.C., 62-620.610(18) F.A.C., 62-160.210(1) F.A.C., 62-600.660(1) F.A.C., DEP SOP FS 2400, ANCV]	**Deficiency (Narrative)** **A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. [62-610.463(4)] If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020 for the permit renewal. This was also included on the previous Warning Letter issued to the facility on January 18, 2024.** **January 18, 2024, Warning Letter:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1258449.1]&[profile=Enforcement_Legal]**
		Corrective Actions (Narrative) **Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future.**

Observations	
4.2.1	Please see Table A - Sampling Tables for Buffers/Standards, lot numbers, and expiration dates.
4.2.2	In facility log books or other documentation, the daily records are appropriately recorded including; composite sampler or other temperatures, and daily calibration of meters. [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FD 1000-6000]
4.2.3	The facility maintains records of their daily calibration of their pH meter and Chlorine meter. [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FD 1000-6000]
4.2.4	The facility maintains records of their daily checks of their in-line meter(s) with their field meter(s). [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FD 1000-6000]
4.2.5	Meters are calibrated and sample analysis conducted at the facility done in accordance with DEP SOP and NELAC guidelines. (Calibration frequency and sample bracketing for pH, Total Residual Chlorine (TRC), Turbidity) [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FT 1000]
4.2.6	All the primary and secondary standards used to calibrate and verify meters, are used prior to expiration dates and verified against primary standards appropriate for pH, TRC, Turbidity. [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FT 1000]
4.2.7	The inline meters are reading within established limits compared to the bench meters. (TRC = 20%, Turbidity = 20%, pH 0.2 SU). [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FT 1100]
4.2.8	Safe access points for obtaining representative influent/effluent samples are available. [62-600.650(2) F.A.C.]
4.2.9	Influent sampling points are put prior to internal facility return lines including supernatant, filter backwash and return activated sludge (RAS). [62-600.660(4)(a) F.A.C.]
4.2.10	The facility collected and/or analyzed samples as required by permit or enforcement action. [62-600.650(1) F.A.C., 62-620.610(18) F.A.C., 62-160.210(1) F.A.C., 62-600.660(1) F.A.C., DEP SOP FS 2400, ANCV]
4.2.11	Samples are being collected in the proper containers, preserved and analyzed in appropriate hold times in accordance with 40 CFR Part 136, Table II. [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., 62-620.610(18) F.A.C.]
4.2.12	The facility has a composite sampler with cooling system at the influent/effluent sampling location. There is a thermometer present in the sampler that is annually checked against NIST thermometers. [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FS 1006 3.1, DEP SOP FT 1000, DEP SOP FS 1400]
4.2.13	Composite sampling is being conducted appropriately; including purging, sampling velocity at least 2fps, clean tubing, individual sample volume of at least 100 mL, sample storage of = 6°C preservation, hold times and representative samples. [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FS 2400, 62-160.300 F.A.C., 40 C.F.R. 136 Table II]
4.2.14	The facility has their Chain of Custody records. [62-160.210(1) F.A.C.]
4.2.15	The permittee reported "NO NEW NON-DOMESTIC WASTEWATER DISCHARGERS HAVE BEEN ADDED TO THE COLLECTION SYSTEM SINCE THE LAST RECLAIMED WATER OR EFFLUENT ANALYSIS WAS CONDUCTED." on the annual Reclaimed Water and/or Effluent Analysis Report (RSW-A DMR) for the following years: 2022, 2023, and 2024. [403.161(1)(b) F.S., 62-600.680 F.A.C.]

5. Records and Reports

Compliance Rating	Significant Out of Compliance
Does this section apply to the facility?	Yes
Questions	
Discharge Monitoring Reports (DMRs) Review Period:	**September 2024 - August 2025**
Does the facility have and maintain their Spill Prevention Control and Countermeasures (SPCC) Plan?	Not Applicable
Does the facility maintain records onsite for the required retention period(s)?	Yes
During the review period, has the facility submitted all required reports other than DMRs?	No
During the review period, has the facility submitted all required DMRs in a timely manner?	Yes
Has the permittee notified the Department of any event or activity that requires notification per the permit or rule?	Yes

Deficiencies and Corrective Actions		
5.1.1	The Discharge Monitoring Reports (DMRs) are completed properly. [403.161(1)(b) F.S., 62-600.680 F.A.C.]	**Deficiency (Narrative)** **There are transcription and calculation errors present on the Discharge Monitoring Reports (DMRs) in the review period. Please see Table B - Records and Reports in the Appendix for further information.**
		Corrective Actions (Narrative) **Please correct the errors outlined in the Appendix and resubmit the corrected DMRs to the Department for review.**
5.1.2	Does the facility submit their monitoring results for Giardia and Cryptosporidium in a timely manner?[62-610.463(4) F.A.C., 62-600.680 F.A.C.]	**Deficiency (Narrative)** **A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. [62-610.463(4)] If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020 for the permit renewal. This was also included on the previous Warning Letter issued to the facility on January 18, 2024.** **January 18, 2024, Warning Letter:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1258449.1]&[profile=Enforcement_Legal]**
		Corrective Actions (Narrative) **Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future.**

5.1.3	The facility failed to submit any report required by rule, permit, enforcement action or inspection activity except for DMRs. [62-610.870(3) F.A.C., 62-610.865(11) F.A.C., 62-600.405 F.A.C., 403.161(1)(b) F.S., FRPT]	**Deficiency (Narrative)** **The facility has not submitted the latest required Pathogen Monitoring Report (DEP Form 62-610, 300(4)(a)4, with the associated Laboratory Report.**
		Corrective Actions (Narrative) **Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future.**
Observations		
5.2.1	The entries in the operator logbook are clear, concise, informative and relevant. [62-602.650(4) F.A.C.]	
5.2.2	A copy of the current O&M manual was available at the time of the inspection. [62-600.720 F.A.C., 62-620.350 F.A.C.]	
5.2.3	There is a current operator license. [62-620.350(8) F.A.C.] Please refer to Table B - Records and Reports in the Appendix for additional information.	
5.2.4	The facility does not have any RPZs onsite.	
5.2.5	All required documents and reports available at the plant are well organized and complete. [62-4.160 F.A.C., 62-160.240 F.A.C., 62-160.340 F.A.C., 62-620.350 F.A.C.]	
5.2.6	The facility is maintaining records for the required retention period. [62-620.350(2) F.A.C., FMRR]	
5.2.7	The DMRs are submitted on the proper form. [403.161(1)(b) F.S., 62-620.610(18)(a) F.A.C., 62-600.680(1) F.A.C.]	
5.2.8	An authorized representative is signing the DMRs. [62-620.305 F.A.C.]	
5.2.9	The permittee submitted an Annual Reuse Report for the October 2022 - September 2023 and October 2023 - September 2024 timeframes by January 1 following the completion of each fiscal year. [62-610.300 F.A.C.]	
5.2.10	The permittee submitted an annual Reclaimed Water and/or Effluent Analysis Report (RSW-A DMR) for the following years: 2023 and 2024. [403.161(1)(b) F.S., 62-600.680 F.A.C.]	
5.2.11	The permittee submitted all DMRs required by rule, permit, or enforcement action in a timely manner. [403.161(1)(b) F.S., 62-600.680 F.A.C., 62-620.610(18)(a) F.A.C., FDMR]	
5.2.12	The permittee notified the department of any event or activity that requires notification as required by permit or rule. [403.161(1)(b) F.S., 62-4.130 F.A.C., RSWP]	

6. Facility Site Review

Compliance Rating		Out of Compliance
Does this section apply to the facility?		Yes
Questions		
Is the land application system being maintained?		Yes
Deficiencies and Corrective Actions		
6.1.1	The clarifier is free from excessive scum, algae and/or trash overflowing the weir. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the clarifier had excessive scum and floc floating at the top of the basin. See photos 13, 14, and 16 in the photo log for reference.**
		Corrective Actions (Narrative) **Please provide documentation to the Department indicating that the clarifiers no longer have excessive scum and floc floating at the top of the basin.**
6.1.2	The skimmer appear to be functional in the clarifier. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	**Deficiency (Narrative)** **Facility representatives stated that the rubber on the skimmer arm needs to be adjusted to better collect scum in the basin. Department staff noted that excessive scum and floc were present in the clarifier during the inspection. See photos 13, 14, and 16 in the photo log for reference.**
		Corrective Actions (Narrative) **Please provide documentation to the Department indicating that the clarifiers no longer have excessive scum and floc floating at the top of the basin, and that the skimmer arm is now functioning as intended.**
6.1.3	The air line(s) to the aeration basin(s)are free from leaks. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, excessive corrosion was noted on both the air lines to the aeration basins and on the handrails surrounding the facility. This corrosion has lead to multiple holes in the air lines. See photos 17 and 18 in the photo log.**
		Corrective Actions (Narrative) **Please provide documentation to the Department indicating that the facility has had the air lines and handrails replaced, and that there are no longer holes leaking air on the air lines.**
6.1.4	All blower motors were present and operational at the time of the inspection. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, there was only one operable blower motor for the surge tank. The secondary back-up blower was missing, but facility representatives stated that it should be replaced soon. See photo 1 in the photo log for reference.**
		Corrective Actions (Narrative) **A second operable blower was installed, and documentation was provided by facility representatives on October 22, 2025, showing the newly installed blower. No further action is required at this time.** **October 22, 2025, Oculus Link:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1439691.1]&[profile=Discovery_Compliance]**
6.1.5	The Chlorine Contact Chamber (CCC) effluent is clear and free from scum, solids accumulation and debris. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the effluent in the Chlorine Contact Chamber was excessively turbid.**
		Corrective Actions (Narrative) **The facility provided photo documentation on October 17, 2025, indicating that the effluent is no longer excessively turbid. No further action is required at this time.** **October 17, 2025, Oculus Link:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1435828.1]&[profile=Discovery_Compliance]**

6.1.6	At the lift station there are two functioning pumps that alternate. [62-604.500(3) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the first lift station that Department personnel visited only had one operable pump. See photos 41 and 42 in the photo log for reference to the lift station.**
		Corrective Actions (Narrative) **Facility representatives provided documentation on October 14, 2025, indicating that there are now two functioning pumps in the lift station. No further action is required.** **October 14, 2025, Oculus Link:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1435937.1]&[profile=Discovery_Compliance]**
6.1.7	The lift station visual and audio alarm are operating satisfactory. [62-604.500(3) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the first lift station that Department personnel visited only had the audible alarm functioning properly. The visual alarm was inoperable.**
		Corrective Actions (Narrative) **Facility representatives provided documentation on October 14, 2025, indicating that the visual alarm is now operating as intended. No further action is required.** **October 14, 2025, Oculus Link:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1435937.1]&[profile=Discovery_Compliance]**
6.1.8	The exterior of the tanks, wall, and/or pipes of the facility are free from leaks. [62-600.410 F.A.C., 62-620.300 (5) F.A.C., 62-620.610(7) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, Department personnel were informed that the reject tank seeps through the wall if the tank rises above half the capacity of the tank. See photo 6 in the photo log for reference to the exact basin.**
		Corrective Actions (Narrative) **Please provide documentation to the Department indicating that the reject tank has been repaired and no longer seeps when more than halfway full.**
6.1.9	The facility is providing safety measures at all times including adequate lighting. [62-600.410 F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the handrails and platforms around the facility had excessive corrosion and rotting occurring. The holes and unsecured railings around the facility could lead to unsafe operation and navigation of the facility. See photos 15, 17, and 18 in the photo log for reference.**
		Corrective Actions (Narrative) **Please provide documentation to the Department indicating that the handrails and platforms have been replaced/repaired and no longer pose a safety risk.**
6.1.8	Is the facility free from any Facility Site Review violation not listed above that needs to be addressed? [See Deficiency Narrative for Specific Rule Violated]	**Deficiency (Narrative)** **One of the two sand filters, needed for the high-level disinfection system, was inoperable.** **[Rule 62-600.410 F.A.C., 62-620.300 (5) F.A.C.]**
		Corrective Actions (Narrative) **Please provide documentation to the Department indicating that the second sand filter has been replaced/repaired.**

Observations	
HEADWORKS	
6.2.1	The headworks was free from excessive corrosion. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.2	The headwork is free from evidence of recent overflows. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.3	The bar screen is cleaned on a routine basis. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.4	Rags, grit and/or screening are being disposed of properly. [62-640.100(6)(g) F.A.C.]
6.2.5	Screenings and grit from the headworks are being disposed at a Class I Landfill. [62-620.300 F.A.C., 62-640.100(6)(g) F.A.C.]
CLARIFIER	
6.2.6	The clarifier is free from excessive sand and/or grit accumulation. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.7	The sludge collector and pump are functional in the clarifier. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.8	The clarifier weir(s) are level. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.9	The clarifier is free from short circuiting with loss over the weir. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
AERATION	
6.2.10	The aeration basins diffusers are free from clogs and providing adequate mixing. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.11	The time clock or manual controls for the aeration system were operational at the time of the inspection. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.12	The RAS line is properly located. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.13	The RAS line was free from excessive splashing that could cause solids to be discharged outside the tank. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.14	Dual blower motors are present as required by rule. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.15	The blower motors are equipped with belt guards. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.16	The blower motors are free from excessive noise. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.17	Spare parts are stored onsite. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.18	The electrical box wiring for the blower motors is adequately protected. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
DIGESTER	
6.2.19	The tank contents in the aerobic digester(s) were well mixed. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.20	The digester(s) are free from excessive odors and/or foaming. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.21	The digester is at the appropriate operational capacity. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
SURGE TANK	
6.2.22	There are two functioning pumps in the surge tank(s). [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
CHLORINE CONTACT CHAMBER (CCC)	
6.2.23	The baffles in the CCC are functioning as intended. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.24	The chlorine injection point provides optimal mixing to occur in the CCC. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]

6.2.25	The CCC chlorine pump is operational, providing adequate chlorine supply for disinfection and at the permitted location. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
STILLING WELL	
6.2.26	The stilling well is free from a thick layer of sludge and/or trash. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
LIFT STATION(S)	
6.2.27	The area around the lift station(s) is maintained. [62-604.500(3) F.A.C.]
6.2.28	There are warning signs with emergency contact information on and/or around the lift station(s). [62-604.400(2)(d) F.A.C.]
6.2.29	The facility has a fence around their lift station(s). [62-604.400(2)(d) F.A.C.]
6.2.30	The gate around the lift station and the cover to the lift station is locked. [62-604.400(2)(d) F.A.C.]
6.2.31	The cover to the lift station(s) is free from safety hazards. [62-604.500(3) F.A.C.]
6.2.32	The electrical panel is in good working order and free from needed repair and/or replacement. [62-604.500(3) F.A.C.]
6.2.33	The collection system or lift station is free from offsite objectionable odors. [62-604.130(2) F.A.C.]
6.2.34	**Corrosion was noted on the piping in the wet and dry wells at the second lift station. While it is not currently causing operational issues, please keep a close eye on further corrosion to avoid problems in the future.**
GENERATOR	
6.2.35	An alternative power source was available at the facility. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.36	The onsite generator is tested under load on a monthly basis. [62-600.300(4) F.A.C.]
6.2.37	The records for the testing of the generator are available. [62-600.300(4) F.A.C.]
FACILITY SITE OVERVIEW	
6.2.38	There is adequate access to all monitoring locations. [62-4.160(7) F.A.C., 62-600.650(2) F.A.C.]
6.2.39	The facility grounds are clean and well maintained. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.40	The required signage is adequate. [62-610.418(1) F.A.C., 62-610.518(1) F.A.C.]
6.2.41	The facility was free from odors emanating from the facility. [62-600.400(2) F.A.C., 62-600.410(5) F.A.C.]
6.2.42	The facility was free from excessive noise which could be heard beyond the boundaries of the facility. [62-600.410(5)F.A.C., 62-604.400(2) F.A.C.]
6.2.43	The facility is disposing of sludge appropriately, with no sludge being disposed of on the facility grounds. [62-620.300 (5) F.A.C.]
6.2.44	The land application system was being maintained. [62-600.410 F.A.C., 62-620.300 (5) F.A.C., LASN]
6.2.45	The filter media was free from solids that could cause plugging and/or overflow. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]

7. Flow Measurement

Compliance Rating	In Compliance
Does this section apply to the facility?	Yes
Questions	
Flow meter present and location as per permit?	Yes
Easy access to flow meter?	Yes
Is the flow meter properly installed, maintained, and calibrated according to regulatory requirements?	Yes
Date of last flow meter calibration	9/26/2025
Deficiencies and Corrective Actions	
7.1.1	The facility did not have any deficiencies relating to Flow Measurement.
Observations	
7.2.1	There is easy access to flow meter. [62-600.650(2) F.A.C.]
7.2.2	The flow meter is in the correct location. [62-600.660(1) F.A.C.]
7.2.3	The facility has installed a flow measurement device, an approved flow measurement device, or a working flow measurement device. [62-600.660(1) F.A.C., NOFL]
7.2.4	The flow meter is calibrated at least annually and is it current. [62-600.200(25) F.A.C.]
7.2.5	The flow meters were last calibrated on **September 26, 2025**.
7.2.6	The flow measurement device is operating within +/- 10% of the actual flow.
7.2.7	The flow meter was operating properly at the time of the inspection. [62-600.660(1) F.A.C.]
7.2.8	The chart recorder and/or totalizer for the flow meter was operational at the time of the inspection. [62-600.410 F.A.C., 62-620.350(1) F.A.C., 62-600.660(1) F.A.C.]
7.2.9	The elapsed time meters on the lift station pumps were functioning. [62-600.410 F.A.C., 62-600.660(1) F.A.C.]

8. Operation and Maintenance

Compliance Rating		Out of Compliance
Does this section apply to the facility?		Yes
Questions		
Facility being operated as per permit?		Yes
Is the facility operated under the supervision of a certified operator that has the appropriate license level for the size of the plant?		Yes
Is the facility operating in accordance with its O&M Manual?		Yes
Is the facility free from an inflow and infiltration problem which would cause collection system and/or operational issues?		Yes
Deficiencies and Corrective Actions		
8.1.1	Handrails/catwalks/ladders were in good working order providing for safe conditions. [62-600.410(3) F.A.C., 62-620.300 (5) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the handrails and platforms around the facility had excessive corrosion and rotting occurring. The holes and unsecured railings around the facility could lead to unsafe operation and navigation of the facility. See photos 15, 17, and 18 in the photo log for reference.** **Corrective Actions (Narrative)** **Please provide documentation to the Department indicating that the handrails and platforms have been replaced/repaired and no longer pose a safety risk.**
Observations		
8.2.1	The facility has adequate plant staffing. [62-699.310(2) F.A.C.]	
8.2.2	The operator is performing treatment plant operation and maintenance duties in a responsible and professional manner. [62-602.650(1) F.A.C.]	
8.2.3	The plant O&M log is maintained in a hard-bound book with consecutive page numbering, or another approved format. [62-602.650(4) F.A.C.]	
8.2.4	The facility has an O&M manual, and the facility's O&M manual reflects the current configuration of the facility. [62-620.350(6) F.A.C., 62-600.720(1) F.A.C.]	
8.2.5	The facility is maintaining a log that documents routine equipment maintenance. [62-602.650(4) F.A.C., 62-620.350 F.A.C.]	
8.2.6	The plant is free of any treatment components that are in disrepair that would provide for unsafe operation. [62-600.410 F.A.C.]	
8.2.7	The facility replaces malfunctioning equipment, which can result in a high potential for water supply quality or health impacts. [62-600.410 (3) F.A.C., 62-620.300 (5) F.A.C.]	
8.2.8	The plant operator is fulfilling the minimum site requirements as required by the Permit. [62-699.310(2) F.A.C.]	
8.2.9	The facility maintains an adequate spare parts inventory. [62-600.720(1)(b) F.A.C.]	

9. Effluent Quality

Compliance Rating	Out of Compliance
Does this section apply to the facility?	Yes
Questions	
DMRs review period	**12/01/2023 - 08/31/2025**
Were the DMRs free from any exceedances?	**No**
Was the facility free of a discharge of wastewater that resulted in a fish kill?	Yes
*Was the effluent free from persistent acute toxicity documented through follow-up tests?	Not Applicable
*Was the effluent free from persistent chronic toxicity documented through follow-up tests?	Not Applicable
*Was the effluent free from persistent acute or chronic toxicity documented through the use of routine and follow-up tests?	Not Applicable
Is the facility's discharge in compliance with all applicable narrative effluent limitations?	Yes
Was sampling conducted by Department personnel?	Sampling was not conducted by Department personnel.

Deficiencies and Corrective Actions		
9.1.1	A review of the Discharge Monitoring Reports revealed the following effluent exceedance(s). [62-4 F.A.C., 62-302 F.A.C., 62-600 F.A.C., 62-610 F.A.C., 62-620 F.A.C.]	**Deficiency (Narrative)** **There are effluent exceedances present in the review period. Please see the DMR Exceedance Table below for further information.**
		Corrective Actions (Narrative) **The facility has not had an effluent exceedance since October 2024, and comments were provided on the Part A DMR to explain all exceedances in the review period. No further action is required at this time, but please continue to provide comments on the Part A DMR for any future exceedances.**
9.1.2	The effluent is free from excessive (suspended solids, foam, grease, scum) in the discharge stream. [62-620.300(4) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the effluent in the Chlorine Contact Chamber was excessively turbid.**
		Corrective Actions (Narrative) **The facility provided photo documentation on October 17, 2025, indicating that the effluent is no longer excessively turbid. No further action is required at this time.** **October 17, 2025, Oculus Link:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1435828.1]&[profile=Discovery_Compliance]**

Observations	
9.2.1	The Total Residual Chlorine was found to be in excess of >2.2 mg/L (as measured with DEP Meter #5).
9.2.2	Sampling was not conducted by Department personnel.
9.2.3	The effluent limits are without exceedances four out of six months (chronic criteria). [40 CFR Part 123.45]
9.2.4	The Total Residual Chlorine levels meet disinfection limits. [62-600.440(1) F.A.C., 600.510(1) F.A.C.]
9.2.5	The facility was free from any other violation with a high potential for water quality or health impacts. [62-620.300(4) F.A.C., 62-600.400(2)(a) F.A.C.]

Table 9.1: Exceedances Table

Monitoring Group	Date	Monitoring Location	Parameter	Description	Result	Limit	Units	Statistical Base	Comments
R-001	10/31/2024	EFB-01	P 00530	Solids, Total Suspended	12.2	5.0	mg/L	MB - Maximum	Hurricane Helene caused some flooding and power outages at the plant. This caused damage to the blowers and the generator was temporarily offline. These issues caused temporarily elevated TSS levels. The plant was in reject at this time and all substandard effluent was sent to a holding tank for retreatment.
R-001	8/31/2024	EFA-01	P 74055	Coliform, Fecal	200	25.0	#/100mL	MB - Maximum	The chlorine pump tubing failed and was replaced. Plant went into reject while the chlorine levels were below acceptable levels.
R-001	4/30/2024	EFB-01	P 00530	Solids, Total Suspended	8.4	5.0	mg/L	MB - Maximum	One of the blower motors went bad and caused the dissolved oxygen level to drop. Once the new blower motor was installed, the plant bounced back to normal operations.
R-001	12/31/2023	EFA-01	P 51005	Coliform, Fecal, % less than detection	67.74	75.0	percent	TM - Minimum Total Monthly	We upgraded the chlorine system to prevent exceeding in the future.

Table 9.2: Sampling Exceedances Table

Monitoring Group	Date	Monitoring Location	Parameter	Description	Result	Limit	Units	Statistical Base	Comments
Sampling was not conducted by Department personnel during this inspection.									

10. Effluent Disposal

Compliance Rating		Out of Compliance
Does this section apply to the facility?		Yes
Questions		
Facility discharging?		Yes
Discharge location(s) as per permit?		Yes
Deficiencies and Corrective Actions		
10.1.1	Are advisory signs posted in English and Spanish in areas where non-potable Public Access Reuse water is being applied (Part III, VII)? [62-610.468(2) F.A.C., 62-610.658(1) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, facility representatives and Department personnel were unable to locate reuse advisory signage on the non-potable Public Access Reuse water application areas. According to 62.610.468(2) F.A.C., advisory signage should be located at the 1st and 10th tees of the golf course and at the reuse ponds, or a statement could be provided on the scorecards for patrons of the golf course. Advisory signage was not seen at the 1st or 10th tees of the golf course, and advisory language was not provided on the scorecards as required.** **Corrective Actions (Narrative)** **Facility representatives provided documentation on October 27, 2025, indicating that signage has been added at the reuse ponds at holes 1 and 10, and that the verbiage on the scorecards is currently being worked on. Follow-up documentation will be provided once completed. No further actions.** **October 27, 2025, Oculus Link:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1439701.1]&[profile=Discovery_Compliance]**
Observations		
10.2.1	The discharge location(s) are as per permit. [62-620.300(3) F.A.C.]	
10.2.2	The facility is approved for a Part III Public Access Reuse System.	
10.2.3	All reclaimed water piping and equipment is color-coded Pantone purple (522C). [62-610.469(7)(f) F.A.C.]	
10.2.4	No significant ponding was observed on the reclaimed water application site. [62-610.500(2)(c) F.A.C.]	
10.2.5	There was no aerosol mist leaving the boundaries of the land application. [62-600.400(2)(a) F.A.C., 62-600.410(5) F.A.C., 62-610.419(1)(e) F.A.C.]	
10.2.6	There was no evidence of solids loss in the treatment process or from the plant. [62-610.523(6) F.A.C., 62-610.320(1) F.A.C.]	
10.2.7	The reclaimed water storage ponds have adequate freeboard. [62-610.414(7) F.A.C.]	
10.2.8	There was no evidence of a bypass or failure at the effluent storage and/or disposal site(s). [62-600.410(3) F.A.C., 62-620.610(22) F.A.C.]	
10.2.9	There was no evidence of a bypass or failure from the storage ponds observed during the inspection. [62-610.419(1)(b) F.A.C., 62-600.410(3) F.A.C.]	
10.2.10	No unauthorized discharge to waters of the state was observed during the inspection. [62-620.300(1)F.A.C.]	
10.2.11	The facility is meeting the minimum setback distances. [62-610.421 F.A.C.]	
10.2.12	The effluent disposal and/or storage area was free from sinkholes.	
10.2.13	The disposal system was being operated as designed with a low potential for water quality or health impacts. [62-302.500 F.A.C., 62-600.410(4) F.A.C.]	
10.2.14	There was no unauthorized operation or modification of the disposal system. [62-610.100(9)(b) F.A.C., 403.161(1)(b) F.S.]	
10.2.15	There were no dead animals observed in the discharge stream. [62-610.418(1) F.A.C., 62-610.518(1) F.A.C.]	

11. Biosolids

Compliance Rating		Out of Compliance
Does this section apply to the facility?		Yes
Deficiencies and Corrective Actions		
11.1.10	Did the permittee (source or receiving facility) submit all new written agreements to DEP within 30 days before transporting biosolids (unless approval given otherwise)? [62-640.880(1)(c)F.A.C.]	**Deficiency (Narrative)** **The permit states that "Biosolids generated by this facility may be disposed of in a Class I solid waste landfill. [62-620.320(6), 62- 640.880(1)". The facility's recent hauling slips indicate that hauling has been conducted by Karle Enviro Organic Recycling, Inc., but the location hauled to was only indicated as "shop". It cannot be determined if the facility is abiding by the permit and disposing of biosolids in a Class I solid waste landfill, as the hauling location is not indicated on the hauling slips and a hauling agreement has not been received by the Department.** **Corrective Actions (Narrative)** **Please provide documentation to the Department indicating where the facility is currently hauling their biosolids and provide a copy of the hauling agreement between the transferring and receiving facilities.**
Observations		
11.2.1	Biosolids generated by this facility may be disposed of in a Class I solid waste landfill. [62-620.320(6), 62- 640.880(1)]	
11.2.2	The facility last hauled 5,000 gallons of biosolids with Karle Enviro Organic Recycling, Inc.	
11.2.3	The facility's method of biosolids use or disposal match what is allowed in the facility permit (i.e., landfill, land application, distribution and marketing, transfer to another facility, biofuel/bioenergy). [62-640.100(6)(g) F.A.C.]	
11.2.4	The permittee keep records of biosolids quantities for five years, as applicable (quantities generated, received from source facilities, treated, distributed and marketed, land applied, used as a biofuel or for bioenergy, transferred to another facility, or landfilled. [62-640.650(4)(a) F.A.C.]	
11.2.5	Biosolids quantities are reported on the facility RMP-Q DMR. [62-640.650(5)(a)1. F.A.C.]	
11.2.6	The biosolids quantities reported on the RMP - Q DMRs are correct and accurate. [62-640.650(5)(a)1. F.A.C.]	
11.2.7	The facility's treatment, management, transportation, use, land application, or disposal of biosolids does not result in objectionable odors, i.e., does not result in a violation of the odor prohibition in subsection 62-296.320(2) [62-640.400(6) F.A.C.]	
11.2.8	Grit and screenings, etc., from the headworks are properly disposed of in a landfill. [62-640.100(6)(g) F.A.C.]	
11.2.9	The facility ensures no biosolids are spilled from or tracked off the treatment facility property by the hauling vehicle. [62-640.400(9) F.A.C.]	

12. Groundwater

Compliance Rating	Out of Compliance
Does this section apply to the facility?	Yes
Questions	
DMRs review period	**10/01/2023 - 08/31/2025**
Were the DMRs free from any exceedances?	No
All monitoring wells accessible, secured & locked?	No

Deficiencies and Corrective Actions		
12.1.1	After a review of the Discharge Monitoring Reports, are the compliance well parameters meeting the groundwater standards in the time period reviewed (12 months or greater)? [62-520.420 F.A.C.]	**Deficiency (Narrative)** **There are groundwater exceedances present in the review period. Please see the Groundwater Exceedance Table below for further information.**
		Corrective Actions (Narrative) **Please provide documentation to the Department indicating why the exceedances may have occurred, as well as how the facility plans to work towards mitigating future exceedances.**
12.1.2	Do the groundwater monitoring wells meet DEP requirements including; tamper-proof locks, unique well label(s), concrete well pad with protective bumpers not containing numerous cracks, and is free of clutter for sampling purposes? [62-520.600(6)(e) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the groundwater monitoring wells had rusted, inoperable locks. Department personnel were unable to provide a full inspection of all five wells since some of them could not be unlocked.**
		Corrective Actions (Narrative) **Facility representatives provided photo documentation on October 17, 2025, indicating that the locks have been replaced and that all groundwater wells are in satisfactory condition. No further action is required at this time.** **October 17, 2025, Oculus Link:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1435828.1]&[profile=Discovery_Compliance]**

Observations	
12.2.1	The groundwater monitoring results were sent to the Department on Discharge Monitoring Report, Form 62-620.910(10), F.A.C. and submitted by the DMR due date. [403.161(1)(b) F.S., 62-600.680 F.A.C.]
12.2.2	The facilities purging logs are on DEP Form FD 9000-24 and indicate that purging was done properly; including sufficient volume, purge rate, depth to water, and stability criteria (pH, Temperature, Conductivity, Dissolved Oxygen, Turbidity). [62-620.610(18)(e) F.A.C., 62-160 F.A.C.]
12.2.3	The groundwater monitoring reports are complete and accurate, including analysis method, laboratory method detection limits, static water level, purging logs, sample collection procedures and treatment. [62-520.900(2) F.A.C.]
12.2.4	The well(s) that the facility is sampling at are part of the approved groundwater monitoring plan. [62-610.412(2)(a) F.A.C., 62-552.600 F.A.C.]
12.2.5	The monitoring wells are operable to the extent that sampling is possible. [62-620.410(5) F.A.C.]
12.2.6	Groundwater samples are being collected and analyzed as required by the permit or enforcement action; including location, well type, sample type (grab/composite), time, and frequency. [62-600.670(1) F.A.C., 62-610.412(2)(a) F.A.C.]

Table 12.1: Groundwater Exceedances Table

Date	Monitoring Location	Parameter	Description	Result	Background Well Results	Limit	Units	Statistical Base	DMR Comments
3/31/2025	MWC-21304	P 00400	pH	6.44	7.06	6.5-8.5	s.u.	RG - RANGE	pH of groundwater is naturally low
3/31/2025	MWC-80019	P 74055	Coliform, Fecal	9	<1	0.0	#/100mL	MB - Maximum	Monitoring well needs new seal to prevent intrusion. And needs disinfection.
3/31/2025	MWC-80020	P 00620	Nitrogen, Nitrate, Total (as N)	12.6	<0.01	10.0	mg/L	MB - Maximum	Elevated nitrogen levels could be caused by fertilizer on the golf course and water intrusion into the well
6/30/2024	MWC-80019	P 74055	Coliform, Fecal	9	<1	0.0	#/100mL	MB - Maximum	Resample was taken from 5/2 to 6/22/24. Our max is 0 so we will always be in exceedance.
3/31/2024	MWC-80019	P 74055	Coliform, Fecal	1	<1	0.0	#/100mL	MB - Maximum	Our limit is 0 so we will always be in exceedance.
12/31/2023	MWC-80019	P 74055	Coliform, Fecal	2	<2	0.0	#/100mL	MB - Maximum	Our permit limit is 0.
12/31/2023	MWC-80020	P 74055	Coliform, Fecal	7	<2	0.0	#/100mL	MB - Maximum	The permit limit is 0.

13. SSO Survey

Compliance Rating	Significant Out of Compliance
Does this section apply to the facility?	Yes
Questions	
Collection System Action Plan update submitted annually by June 30?	Not Applicable
Does the facility have an Operation and Maintenance Manual for their collection system?	Yes
Does the facility track spills in their collection system?	Yes
Does the facility have procedures for minimizing spills?	Yes
Are those procedures included in the Operation and Maintenance Manual or in a separate document?	Yes
How often is the manual updated?	As needed.
Does the facility keep routine documentation and reporting records of spills, and/or operation and maintenance activities on the collection/transmission system(s)?	Yes
Does the facility perform routine preventative maintenance necessary to keep the collection/transmission system in good working order?	Yes
Was the facility free from any sewage spills which discharged to ground only (i.e., did not make it to surface waters)?	No
Was the facility free from any sewage spills that reached surface waters (including wetlands, stormwater collection/conveyance features or drainage ditches, or waterbodies such as streams, ponds, or lakes)?	Yes
Did the facility report spill(s) to the Department within 24 hours of discovery?	Yes
Did the facility collect and/or analyze bacteriological samples for sewage spills that reached surface waters?	Not Applicable

Deficiencies and Corrective Actions		
13.1.1	A sewage spill from any part of a collection/transmission system or treatment plant that did not make it to surface waters, i.e., stormwater collection system, drainage ditch, stream, pond, or lake. [62-604.130(1) F.A.C., SSO6]	Deficiency (Narrative) The facility has reported **13** Sanitary Sewer Overflows (SSOs) that reached the ground between August 1, 2024 and October 17, 2025. Please see the SSO Details Table below for additional information. Corrective Actions (Narrative) The facility has submitted all required documentation to address the eleven SSOs that occurred between August 1, 2024 and October 17, 2025. Please continue to notify the Department and submit all required documents for any future spills. **No further action required at this time, but The Department may require formal enforcement on the SSOs, pursuant to your permit conditions, Chapter 62-620, Fla. Admin. Code, and Chapter 403, Fla. Stat.**
Observations		
13.2.1	The facility has had **13** spills in the review period. The Department has developed new guidance on how Sanitary Sewer Overflows (SSO) are addressed statewide, which was implemented July 1, 2019. According to the guidance, each SSO incident is evaluated and rated and the appropriate document is filed/issued. Either a memo to file, a Compliance Assistance Offer, or Warning Letter is sent for each incident, if not covered by a current inspection report for the facility.	
13.2.2	Please note that Rule 62-600.705(1), F.A.C. and Rule 62-600.705(2), F.A.C., became effective on June 28, 2023. These rules require that each facility develop a Collection System Action Plan (CSAP) and a Power Outage Contingency Plan (POCP). These plans will be due at the time of new permit, permit renewal, substantial permit revision or in accordance with the schedule outlined in any substantial permit modification. Please note that a permit modification with a schedule to address these items may be issued at any time.	
13.2.3	The O&M manual reflect the current collection system configuration.	
13.2.4	The SORP and collection system maps are immediately available to SSO response staff, including during power failures. [62-604.300(5) F.A.C.]	
13.2.5	The facility maintains a ready-to-use supply of equipment, tools and materials for responding to SSOs. [62-604.300(5) F.A.C.]	
13.2.6	The facility does follow up on spills according to their procedures. [62-604.300(5) F.A.C.]	

Table 13.1: SSO Details Table

LOCATION	DATE DISCHARGE OCCURRED	DATE DISCHARGE REPORTED	SWO NUMBER	SPILL VOLUME (GAL)	SPILL VOLUME RECOVERED (GAL)	SPILL CHARACTERISTIC	CAUSE	AREA AFFECTED	CLEAN UP
16992 Timberlakes Drive	10/17/2025	10/17/2025		31300	100	RAW WASTEWATER	Blockage	Ground	Vac Truck; Applied lime
16992 Timberlakes Drive	10/12/2025	10/13/2025		31238	50	RAW WASTEWATER	Blockage	Ground	Applied lime
16992 Timberlakes Drive	10/4/2025	10/6/2025	2025-8586	1,500	1,500	RAW WASTEWATER	Blockage	Ground	VAC; Lime
16992 Timberlake Dr	10/3/2025	10/3/2025		500	500	RAW WASTEWATER	Overflow	Ground	VAC; Lime
16682 Bobcat Dr	9/10/2025	9/11/2025		Unknown (1,000)	0	RAW WASTEWATER	Overflow	Ground	Lime
67 Umber Ct	7/29/2025	7/29/2025		600	600	RAW WASTEWATER	Equipment	Ground	VAC; Lime
34 Umber Ct	7/9/2025	7/9/2025		300	300	RAW WASTEWATER	Blockage	Ground	VAC; Lime
16712 Bobcat Dr	6/25/2025	6/25/2025		200	200	RAW WASTEWATER	Blockage	Ground	VAC; Lime
16992 and 16994 Timberlakes Drive	6/13/2025	6/13/2025		600	500	RAW WASTEWATER	Blockage	Ground	VAC; Lime
15989 Old US Highway 41	5/16/2025	5/16/2025		700	600	REUSE/RECLAIM /TREATED	Power Outage	Ground	VAC; Lime
16556 BEAR CUB COURT	11/21/2024	11/21/2024		200	200	RAW WASTEWATER	EQUIPMENT	Ground	VAC; Lime
15235 S. Tamiami Trl	10/13/2024	10/14/2024		200	0	RAW WASTEWATER	Hurricane Milton	Ground	Lime
6308 Sugar Bush Ln	8/30/2024	8/30/2024		300	300	RAW WASTEWATER	Power Outage	Ground and Roadway	VAC; Lime

14. Other

Compliance Rating	Not Evaluated
Does this section apply to the facility?	Yes
Deficiencies and Corrective Actions	
14.1.1	Not evaluated during this inspection.
Observations	
14.2.1	Not evaluated during this inspection.

Appendix for Compliance Evaluation Inspection conducted on October 9, 2025

Forest Utilities, Inc. is authorized to convert the disinfection system of the wastewater treatment facility from a chlorine gas system to a bulk sodium hypochlorite disinfection system.

The following specific conditions are hereby added to Section VI., SCHEDULES of the current permit:

c. The permittee shall submit notification of completion of construction on DEP Form 62-620.910(12) prior to placing the newly constructed or modified portion of an existing facility into operation or any individual unit processes into operation, for any purpose other than testing for leaks and equipment operation. Provide notification to the Department on DEP Form 62-620.910(12) that construction has been completed. **RECEIVED OCTOBER 5, 2021.**

d. Within six months after a facility is placed in operation, the permittee shall provide written certification to the Department on Form 62-620.910(13) that record drawings pursuant to Chapter 62-600, F.A.C., and that an operation and maintenance manual pursuant to Chapters 62-600 and 62-610, F.A.C., as applicable, are available at the location specified on the form. [62-620.410(6) and 62-620.630(7) **RECEIVED OCTOBER 5, 2021.**

Table A - Sampling Tables

Reagent Expiration Dates		
Standard/Buffer	**Lot No.**	**Expiration Date**
pH 4.00	H1225A	8/12/2027
pH 7.00	H0125A	8/1/2027
pH 10.00	G2925A	1/29/2027
Chlorine Low Range Secondary Standards Kit	A3320	Nov-25
0.02 NTU	240157	Jan-26
10.0 NTU	240166	Jan-26
100 NTU	240169	Jan-26

Table B - Records and Reports

Operator Names and License Numbers			
Operator Name	**License Class**	**License Number**	**Expiration Date**
Adrian Charlton	A	0014895	4/30/2027
Ivory Gilbert	C	0015245	4/30/2027

DMR Transcription and Calculation Errors	
Monitoring Period	**Monthly (R-001 and R-002) DMR Deficiencies**
August 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.9 mg/L, while the Department calculated 5.06 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 5 mg/L, while the Department calculated 3.75 mg/L.
	Flow (FLW-01) Annual Average incorrect. The facility reported 0.479 MGD, while the Department calculated 0.487 MGD.
	Flow (FLW-01) Monthly Average incorrect. The facility reported 0.497 MGD, while the Department calculated 0.514 MGD.
	Percent Capacity incorrect. The facility reported 70.86%, while the Department calculated 64.38%.
July 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.83 mg/L, while the Department calculated 5.31 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 5 mg/L, while the Department calculated 2.75 mg/L.
	Percent Capacity incorrect. The facility reported 70.23%, while the Department calculated 59.46%.
June 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.92 mg/L, while the Department calculated 5.31 mg/L.
	CBOD (Effluent) Max Weekly Average incorrect. The facility reported 2 mg/L, while the Department indicated 7 mg/L.
	CBOD (Effluent) Maximum incorrect. The facility reported 2 mg/L, while the Department indicated 7 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 2 mg/L, while the Department calculated 4.2 mg/L.
	Flow (FLW-01) Monthly Average incorrect. The facility reported 0.483 MGD, while the Department calculated 0.499 MGD.
	Percent Capacity incorrect. The facility reported 68.75%, while the Department calculated 55.33%.
May 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.8 mg/L, while the Department calculated 5.4 mg/L.
	CBOD (Effluent) Max Weekly Average incorrect. The facility reported 2 mg/L, while the Department indicated 6 mg/L.
	CBOD (Effluent) Maximum incorrect. The facility reported 2 mg/L, while the Department indicated 6 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 2 mg/L, while the Department calculated 4.25 mg/L.
	Percent Capacity incorrect. The facility reported 61.21%, while the Department calculated 54.79%.
April 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.72 mg/L, while the Department calculated 5.48 mg/L.
	CBOD (Effluent) Max Weekly Average incorrect. The facility reported 5 mg/L, while the Department indicated 6 mg/L.
	CBOD (Effluent) Maximum incorrect. The facility reported 5 mg/L, while the Department indicated 6 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 5 mg/L, while the Department calculated 5.75 mg/L.
	Flow (FLW-01) Monthly Average incorrect. The facility reported 0.419 MGD, while the Department calculated 0.433 MGD.
	Percent Capacity incorrect. The facility reported 67.89%, while the Department calculated 57.29%.
March 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.63 mg/L, while the Department calculated 5.65 mg/L.
	CBOD (Effluent) Max Weekly Average incorrect. The facility reported 3.75 mg/L, while the Department indicated 7 mg/L.
	CBOD (Effluent) Maximum incorrect. The facility reported 3.75 mg/L, while the Department indicated 7 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 3.75 mg/L, while the Department calculated 4.75 mg/L.
	Percent Capacity incorrect. The facility reported 67.18%, while the Department calculated 57.63%.
February 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.49 mg/L, while the Department calculated 5.76 mg/L.
	CBOD (Effluent) Max Weekly Average incorrect. The facility reported 3.5 mg/L, while the Department indicated 8 mg/L.
	The facility indicated that no flow was received for the EFA-02 sampling location. Instead of indicating "NODI" (No Discharge) on the Part A DMR, the facility recorded "0" for each EFA-02 monitoring parameter. When no flow is received at a particular sampling location, the code "NODI" should be recorded for each corresponding parameter since sampling could not be conducted at an area with no effluent flow.
	Flow (FLW-01) Annual Average incorrect. The facility reported 0.412 MGD, while the Department calculated 0.486 MGD.
	Flow (FLW-01) Monthly Average incorrect. The facility reported 0.416 MGD, while the Department calculated 0.456 MGD.
	Percent Capacity incorrect. The facility reported 66.62%, while the Department calculated 59.88%.
January 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.45 mg/L, while the Department calculated 5.51 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 8 mg/L, while the Department calculated 5.5 mg/L.
	Flow (FLW-01) Monthly Average incorrect. The facility reported 0.554 MGD, while the Department calculated 0.441 MGD.
	Percent Capacity incorrect. The facility reported 66.19%, while the Department calculated 62.92%.
December 2024	CBOD (Effluent) Annual Average incorrect. The facility reported 3.41 mg/L, while the Department calculated 5.34 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 7 mg/L, while the Department calculated 3.6 mg/L.
November 2024	CBOD (Effluent) Annual Average incorrect. The facility reported 3.29 mg/L, while the Department calculated 5.34 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 5 mg/L, while the Department calculated 3.25 mg/L.
	Percent Capacity incorrect. The facility reported 63.88%, while the Department calculated 64.29%.
October 2024	CBOD (Effluent) Annual Average incorrect. The facility reported 3.17 mg/L, while the Department calculated 5.13 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 6 mg/L, while the Department calculated 3.5 mg/L.
	Percent Capacity incorrect. The facility reported 61.93%, while the Department calculated 62.33%.
September 2024	CBOD (Effluent) Annual Average incorrect. The facility reported 3.12 mg/L, while the Department calculated 4.87 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 8 mg/L, while the Department calculated 4.6 mg/L.
	Percent Capacity incorrect. The facility reported 61.43%, while the Department calculated 60.29%.

Late DMRs			
Monitoring Period	**Due Date**	**Submittal Date**	**Number of Days Late**
There are no late or missing Effluent or Groundwater DMRs in the review period.			

Backflow Preventer (RPZ) Annual Certifications			
Manufacturer	**Serial Number**	**Date Calibrated**	**Passed?**
Facility representatives stated that there are no Backflow Preventers (RPZs) located onsite.			

Flow Meter Annual Certifications			
Monitoring Site Number	**Serial Number**	**Date Calibrated**	**Passed?**
Influent Flowmeter (Tektrol Tek-Flux 1400A)	1400S-V20021004	9/26/2025	Yes
North Contact Chamber Effluent Flowmeter (Prosonic S Channel 1 - 90 Degree V-Notch Weir)	S7006F150E6	9/26/2025	Yes
South Contact Chamber Effluent Flowmeter (Prosonic S Channel 2 - 90 Degree V-Notch Weir)	S7006F150E6	9/26/2025	Yes

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



1. Operable Blower (Right) & Location for Second Blower (Left)



2. Influent Piping (Right)



3. Influent Composite Sampler



4. Inside Influent Composite Sampler

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



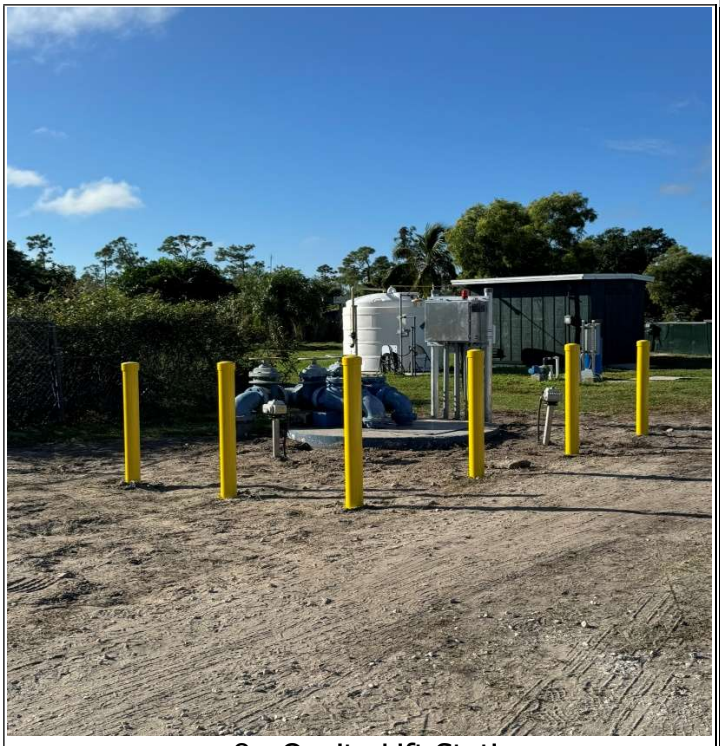
5. Splitter Box/Bar screen



6. Tank Overview (Far Tank = Seeping Reject Tank)



7. Facility Piping



8. Onsite Lift Station

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



9. Anoxic Zone



10. Exposed Rebar in Basin



11. Aeration Basin



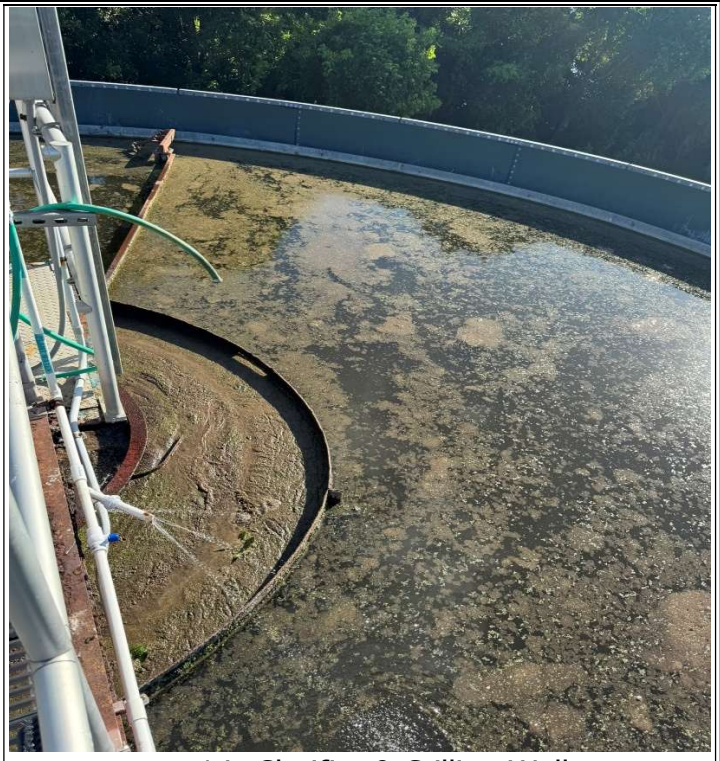
12. Digester

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

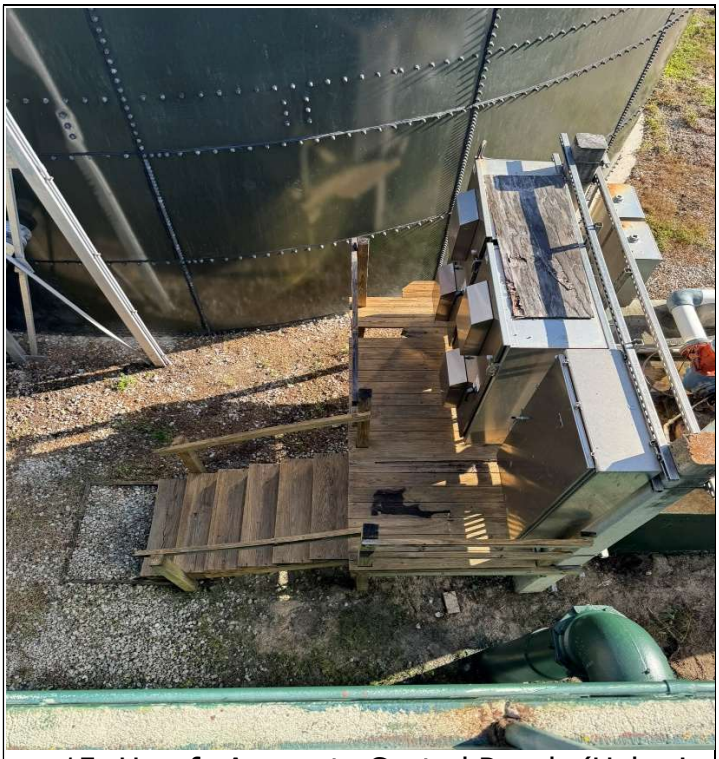
I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



13. Clarifier



14. Clarifier & Stilling Well



15. Unsafe Access to Control Panels (Holes in Floor/Rotting Wood)



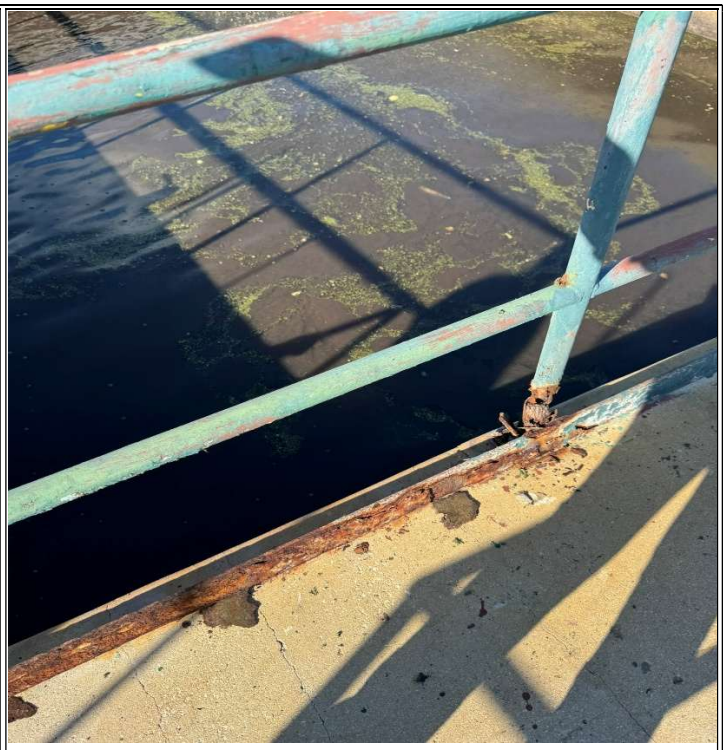
16. Clarifier Overview & View of Skimmer Arm

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



17. Excessive Corrosion & Holes on Airline Piping



18. Excessive Corrosion on Handrails



19. Unused Basins



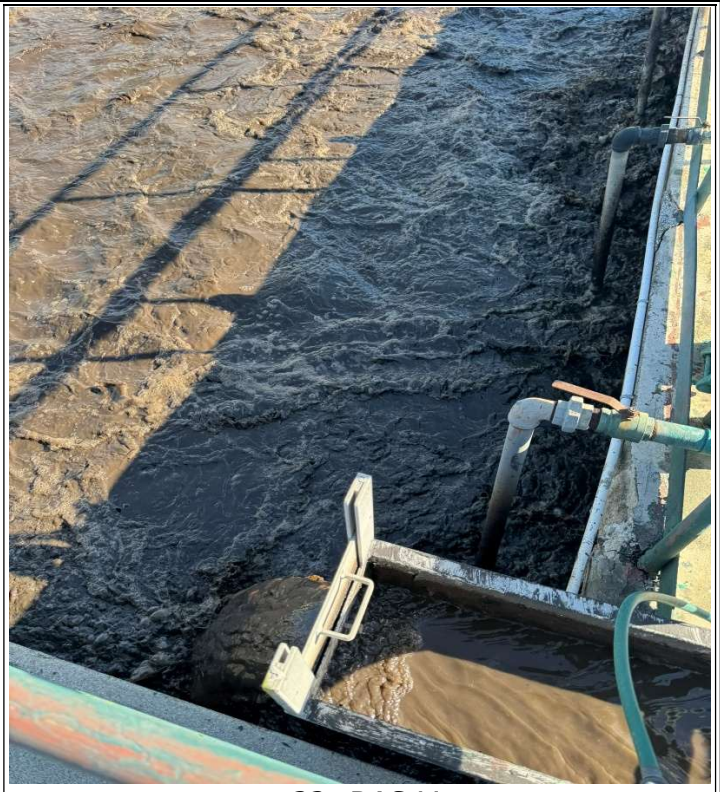
20. Unused Basins

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



21. Recently Replaced Airline Piping



22. RAS Line



23. Blower Motors



24. Sludge Drying Beds

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



25. Sand Filters (One online, one inoperable)



26. Chlorine Storage



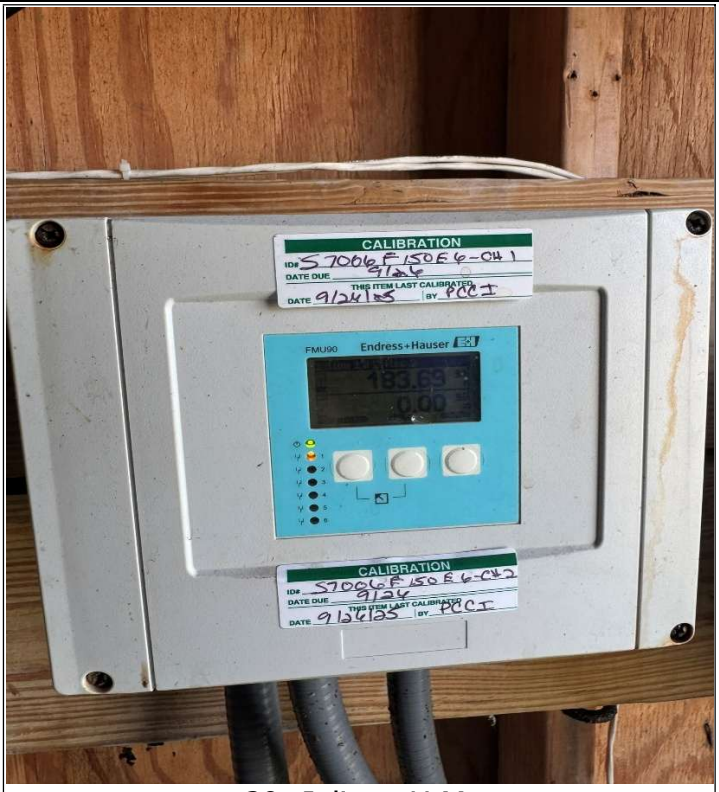
27. Inline Turbidimeter



28. Inline Chlorine Meter

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



29. Inline pH Meter


30. Chlorine Pumps


31. Ultrasonic Flowmeter @ CCC


32. CCC Effluent Outfall

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



33. Offline CCC



34. Effluent Composite Sampler



35. Inside Effluent Composite Sampler



36. Compliance Groundwater Monitoring Well (MWC-80019)

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



37. Compliance Groundwater Monitoring Well (MWC-80020)



38. Intermediate Groundwater Monitoring Well (MWI-21303)



39. Compliance Groundwater Monitoring Well (MWC-21304)



40. Background Groundwater Monitoring Well (MWB-21302)

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



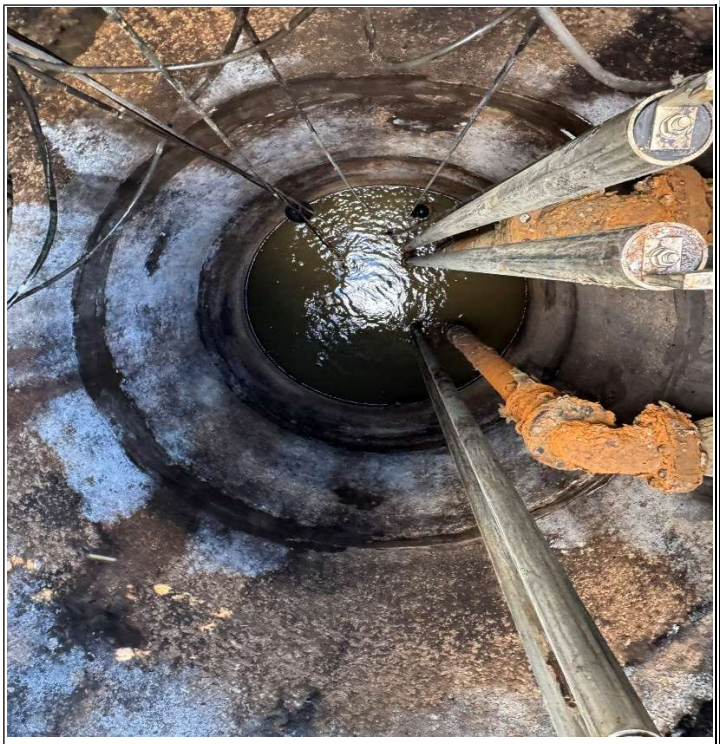
41. Lift Station Overview



42. Lift Station Wet Well



43. Lift Station Control Panel



44. Lift Station Wet Well

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025



45. Lift Station Dry Well

EXHIBIT L

From: Chang, Louise
To: SD-WWinspect
Subject: FW: Forest Utilities GWMP
Date: Monday, May 4, 2020 10:54:22 AM
Attachments: Eff Qtr 1 FDEP Rpt 2004337 Final v1.pdf

This may have already been uploaded to Oculus.

Kody, please double check before uploading.

From: Andrew McThenia <andy@wsaconsult.com>
Sent: Friday, May 1, 2020 10:39 AM
To: Devine, Nicole <Nicole.Devine@FloridaDEP.gov>; wade moser <wademoser23@gmail.com>
Cc: Starrach, Gabriele <Gabriele.Starrach@floridadep.gov>; Moon, Nolin <Nolin.Moon@FloridaDEP.gov>; Kugler, Noah <Noah.Kugler@FloridaDEP.gov>; Chang, Louise <Louise.Chang@floridadep.gov>; Wachob, Hayden <Hayden.Wachob@FloridaDEP.gov>
Subject: RE: Forest Utilities GWMP

Good Morning:
As discussed in a teleconference meeting with the Department on 04/07/20, Forest Utilities is initiating supplemental samplings of effluent for Chlorides and Total Dissolved Solids. Please find attached the results of the first supplemental effluent sampling. An additional supplemental sampling of the effluent for TDS and chloride was conducted in mid April; however, those results are not yet available.
The intent of this supplemental effluent sampling is to provide a basis to determine whether the WWTP effluent is contributing to groundwater quality exceedances of chloride and TDS standards. The utility intends to continue temporary quarterly sampling of effluent in conjunction with the established quarterly groundwater sampling performed as a requirement of groundwater monitoring plan (GWMP). This supplemental monitoring will be performed for the two remaining quarters of 2020. At the end of 2020, the results of the effluent samples will be compared to the quarterly groundwater sample results to determine whether or not the effluent can be determined to be contributing to the elevated groundwater chloride and TDS levels.
I apologize for the delayed response to submitting these results; we were hoping the laboratory results of the 2nd effluent sampling would be available. When those analyses are completed, we will transmit them to FDEP as part of the supplemental effluent monitoring. Please let me know if you have any questions.

Thanks
Andy McThenia

From: Devine, Nicole <Nicole.Devine@FloridaDEP.gov>
Sent: Friday, April 24, 2020 10:12 AM
To: Andrew McThenia <andy@wsaconsult.com>; wade moser <wademoser23@gmail.com>
Cc: Starrach, Gabriele <Gabriele.Starrach@floridadep.gov>; Moon, Nolin <Nolin.Moon@FloridaDEP.gov>; Kugler, Noah <Noah.Kugler@FloridaDEP.gov>; Chang, Louise <Louise.Chang@floridadep.gov>; Wachob, Hayden <Hayden.Wachob@FloridaDEP.gov>

Subject: RE: Forest Utilities GWMP

Good Morning,

I am reaching out to get an update for Forest Utilities on the remaining outstanding items (see below) from the CAO letter issued on 10/30/2019.

- The facility has had multiple groundwater exceedances. Per the last meeting on 04/07/2020 between the facility and the Department, a formal response was going to be submitted to the Department by 04/21/2020. The Department has no record of this response. Please submit the formal response to the Department **within the next week**.

If any additional time is needed for the items above, please submit a timeline for Department review. It is the Department's desire that you are able to adequately address the aforementioned issues so that this matter can be closed. Your failure to respond promptly may result in the initiation of formal enforcement proceedings.

If you have any questions or concerns, please do not hesitate to reach out to me.

Thanks,

Nicole Devine
Environmental Specialist I
2295 Victoria Avenue, Suite 364
Fort Myers, FL 33902
Main: (239) 344-5675
Office: (239) 344-5600

From: Andrew McThenia <andy@wsaconsult.com>
Sent: Tuesday, April 7, 2020 10:57 AM
To: Moon, Nolin <Nolin.Moon@FloridaDEP.gov>; Kugler, Noah <Noah.Kugler@FloridaDEP.gov>
Cc: Devine, Nicole <Nicole.Devine@FloridaDEP.gov>; Starrach, Gabriele <Gabriele.Starrach@floridadep.gov>
Subject: Forest Utilities GWMP

Hello Nolin and Noah:
Attached are the two maps we were referencing on the call.

Andy McThenia, P.G.

Water Science Associates

13620 Metropolis Avenue, Suite 110

Fort Myers, Florida 33912
239.529.4396 - Direct
239.246.1972 - Cell
andy@wsaconsult.com



Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

April 13, 2020

Wade Moser
Forest Utility
6000 Forest Blvd
Ft Myers, FL 33908
TEL: 941-481-5333
FAX:

RE: Forest - Effluent Testing Order No.: 2004337

Dear Wade Moser:

Sanders Laboratories, Inc received 1 sample(s) on 4/8/2020 for the analyses presented in the following report.

These results only pertain to the samples as received. These pages may include, but are not limited to: Analytical Data, Chains of Custodies, Subcontracted Data and Case Narratives for samples. Results relate only to the samples in the report.

Reports are archived for a minimum of 5 years. Copies of reports are available for a fee of $50.00. Copies will be provided within 2 weeks of the time of the request.
Laboratory PQL's are available upon request.

Test results meet all the requirements of the NELAP standards, unless otherwise noted.
Nokomis Certificate # E84380 Fort Myers Certificate # E85457

A statement of estimated uncertainty of results is available upon request.
Laboratory report shall not be reproduced except in full, without the written approval of Sanders Laboratories.
Sanders Laboratories follows DEP standard operating procedures for field sampling, unless otherwise noted.

Katie Strothman
Laboratory Director

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

Definition Only

WO#: **2004337**

Date: **4/13/2020**

Definitions:

B: Results based upon colony counts outside the acceptable range.

G: Sample value indicates that the analyte was detected at or above the method detection limit in both the sample and the associated field blank, equipment blank, or trip blank, and the blank value was greater than 10% of the associated sample value. The value in the blank shall not be subtracted from associated samples.

I: The reported value is greater than or equal to the laboratory MDL but less than the laboratory PQL.

J: Estimated Value.

J7: Excessive amounts of Sodium Sulfite used to dechlorinate the sample due to high levels of chlorine present.

K: Off scale low, actual value is known to be less than the value given.

L: Off scale high, actual value is known to be greater than the value given.

NC: Not Certified. Parameter was ran but is not covered under laboratory accredited scopes.

Q: Sample held beyond acceptable holding time.

U: The compound was analyzed for, but not detected.

V: Indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.

Y: The laboratory analysis was from an improperly preserved sample.

Z: Too many colonies were present for accurate counting.

Sanders Laboratories
Environmental Testing Services

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

Analytical Report

(continuous)

WO#: **2004337**

Date Reported: **4/13/2020**

CLIENT: Forest Utility **Lab Order:** 2004337

Project: Forest - Effluent Testing

Lab ID: 2004337-001 **Collection Date:** 4/8/2020 9:00:00 AM

Client Sample ID: CCC, EFF **Matrix:** WASTE WATER

Analyses	Result	MDL	Qual	Units	DF	Date Analyzed
CHLORIDE				**A4500-CL-E**		Analyst: **EH**
Chloride	130	3.00		mg/L	1	4/13/2020 10:35:00 AM
TOTAL DISSOLVED SOLIDS				**A2540C**		Analyst: **SP**
Total Dissolved Solids (Residue, Filterable)	440	20		mg/L	1	4/9/2020 10:20:00 AM

Qualifiers:				
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	PL	Permit Limit	RL	Reporting Detection Limit
	U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as specified at testcode

DBPix Evaluation

Sanders Laboratories
Environmental Testing Services

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 2004 337

Client: Forest Util
Address:
Phone:
Fax:

Email: Wade
Report To:
Bill to:
P.O. #

Project Name: WWTP
Project Location:
Customer Type:
Kit #:
Requested Due Date:

Preservative: HCL = H, HNO_3 = N, $Na_2S_2O_3$ = ST
H_2SO_4 = S, NaOH = SH, NH_4Cl = NH

Sampled By (PRINT): Neil Harden
Sampler Signature:

Matrix	Sample Description	Sample Date	Sample Time	Sample Type	Preservatives pH	Preservatives Ice	Analysis Requested CL-	Analysis Requested TDS	Sample ID # (Lab Use Only)
WW	CCC, EFF	4/8/20	0900	G		✓	X		1A
"	CCC, EFF	"	"	"		✓		X	B

Bottle Lot #:

Okay to Run As Is... Client Initial:

Samples On Ice: Yes / No
2.9

Relinquished By/Affiliation	Date	Time	Accepted By/Affiliation	Date	Time
Neil Harden	4/8/20	1025		4/8/20	1025

1050 Endeavor Ct, Nokomis, FL 34275-3623 (941) 488-8103 fax(941) 484-6774
10090 Bavaria Rd., Fort Myers, FL 33913 (239) 590-0337 fax (239) 590-0536

Form #: RCF -02 Approved by: KS 7/11/2018

www.ammara.com

Wachob, Hayden

From: James P Elliott <jpelliott@source-inc.com>
Sent: Monday, June 1, 2020 9:52 AM
To: Devine, Nicole; 'Andrew McThenia'; 'wade moser'
Cc: Wachob, Hayden; Chang, Louise
Subject: RE: Forest Utilities GWMP-Request for Clarification SI Proj. #170-01-20

Nicole, Our schedule for the the Permit Minor Revision is to submit electronically this Thursday, 6/4/20. Please call if you have any questions. Jim

---

From: Devine, Nicole [mailto:Nicole.Devine@FloridaDEP.gov]
Sent: Friday, May 29, 2020 2:38 PM
To: James P Elliott; Andrew McThenia; wade moser
Cc: Wachob, Hayden; Chang, Louise
Subject: RE: Forest Utilities GWMP-Request for Clarification SI Proj. #170-01-20

Good Afternoon,

I am reaching out to get an update for the timeline submittal for Forest Utilities (FLA014478) in regards to the remaining non-compliant item(s) (groundwater exceedances) addressed in the CAO letter mailed to the facility on 10/30/2019. Please submit a timeline to the Department **by 06/02/2020.**

If any additional time is needed for the items above, please submit a timeline for Department review. It is the Department's desire that you are able to adequately address the aforementioned issues so that this matter can be closed. Your failure to respond promptly may result in the initiation of formal enforcement proceedings.

If you have any questions or concerns, please do not hesitate to reach out to me.

Thanks,

Nicole Devine
Environmental Specialist I
2295 Victoria Avenue, Suite 364
Fort Myers, FL 33902
Main: (239) 344-5675
Office: (239) 344-5600

SOURCE, INC.
Engineers - Planners
FL Eng. Business #2627

James P. Elliott, P.E., President
Timothy E. Pugh, P.E., Vice President

1334 Lafayette Street
Cape Coral, FL 33904-9770
(239) 549-2345
Fax (239) 549-6779
E-mail address: Mail@source-inc.com

Submitted Electronically
June 3, 2020

Received Electronically
June 3, 2020
South District

Ms. Nicole Devine, Environmental Specialist I
Florida Department of Environmental Protection
2295 Victoria AVE, Suite 364
Ft. Myers, FL 33902

Re: Request for MINOR REVISION – GWM Plan for Forest Utilities -TO A
Permit No. FLA014478-012
Source, Inc. Project No. 170-01-20

Dear Ms. Devine:

We respectfully request your review and approval of a minor revision to the referenced permit, specifically to add effluent monitoring to the groundwater monitoring requirements. Enclosed for your review is the following:

1. DEP Form 62-620.910(9) APPLICATION FOR A MINOR REVISION TO A WASTEWATER FACILITY OR ACTIVITY PERMIT.
2. One (1) copy of a Water Science Associates memorandum dated June 1, 2020 titled Effluent Monitoring Plan to Supplement Groundwater Monitoring Plan for Forest Utilities WWTP.

The permit revision request is to include supplemental quarterly monitoring of the wastewater final effluent, sampling and testing for the parameters chlorides and total dissolved solids for the remainder of calendar year 2020. We trust the information provided in the WSA memorandum is sufficient.

Should you have any questions, do not hesitate to contact us.

Very truly yours,
SOURCE, INC.

James P. Elliott, P.E.
FL License No. 21022

JPE/jbd
Enclosures
cc: Andy McThenia
Nolin Moon
Wade Moser

JAMES P. ELLIOTT LICENSE No. 21022 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by James P. Elliott, P.E, Date: 2020.06.03 11:52:34 -04'00'

APPLICATION FOR A MINOR REVISION TO A WASTEWATER FACILITY OR ACTIVITY PERMIT

1. Instructions

a. In accordance with Rule 62-620.325, F.A.C., this form must be submitted to the appropriate Department district office or approved local program when requests for minor revisions to a permit or minor modifications to a facility are made by a permittee, except for transfer of a permit to a new permittee and addition of a major user of reclaimed water to a Part III reuse system. Application for transfer of a permit to a new permittee shall be made on DEP Form 62-620.910(11). Application for addition of a major user of reclaimed water shall be made on DEP Form 62-610.300(4)(a)1.
b. Each applicable item must be completed in full in order to avoid delay in processing of this form. Where attached sheets or other technical documentation are provided, indicate appropriate cross-references.
c. Three (3) copies of this application with supporting documentation shall be submitted with this form.
d. All information is to be typed or printed in ink. Dates are to be entered in MM/DD/YR format.
e. This application and attachments shall be signed in accordance with Rule 62-620.305, F.A.C. Also, as applicable, this application and all attachments shall be signed and sealed by a professional engineer registered in Florida in accordance with Rule 62-620.310, F.A.C.

2. Facility Information

a. Permit Number: FLA014478-012 b. Facility Identification Number: FLA014478
c. Project/Facility Name: Forest Utilities WWTP
d. Contact Name: Wade E. Moser, General Manager
Number and Street: 6000 Forest BLVD
City/State/Zip Code: Fort Myers, FL 33908
Telephone 239-848-5174

3. Type of Revision

☐ **Correct Typographical Errors**[1] - Submit one copy of each page of the permit showing revisions being requested.

☐ **Change Improvement Schedule**[1] - Provide a description of the improvement, a list of the dates to be revised, and a reason for the proposed change in each date.

☐ **Change Expiration Date of Permit**[1] - Provide the current and proposed expiration dates for the permit and the reasons for the proposed change.

☐ **Change Staffing Requirements**[2] - Describe the proposed change and submit justification for the change in accordance with Chapter 62-699, F.A.C.

[1]A processing fee is not required.
[2]A processing fee is required with the application in accordance with Rule 62-4.050, F.A.C.

☐ **Change Monitoring and Reporting Requirements**[2] - Describe the proposed change and submit justification for the change in accordance with Chapter 62-601, F.A.C.

☐ **Modify Approved Pretreatment Program**[1] - Describe the proposed modification and provide the information required by Rule 62-625.540, F.A.C.

☐ **Delete Point Source Outfall**[1] - Identify the outfall and explain why the outfall is being eliminated.

☐ **Modify or Expand Approved Residuals Land Application Sites**[2] - Attach a new or updated Agricultural Use or Dedicated Site Plan as required by Chapter 62-640, F.A.C.

☐ **Minor Modification to the Facility**[2] - Provide a description of the proposed modification. If applicable, attach any reports, plans, and specifications which have been developed to implement this modification.

☒ **Other**[2] - Provide appropriate documentation. Describe.

4. Certifications

a. Applicant or Authorized Representative

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

wade moser Digitally signed by wade moser Date: 2020.06.02 14:08:23 -04'00' 6-2-2020

(Signature of Applicant or Authorized Representative[3]) (Date)

Name (please type) Wade E. Moser Company Name Forest Utilities, Inc.
Title General Manager Company Address: 6000 Forest BLVD
Phone: 239-848-5174 City/State/Zip Code: 33908
Email (optional): forestu@aol.com

b. Professional Engineer Registered in Florida

I certify that the engineering features of this project have been (designed) (examined) by me and found to conform to engineering principles applicable to such projects. In my professional judgement, this facility, when properly constructed, operated, and maintained, will comply with all applicable statutes of the State of Florida and rules of the Department.

Name (please type): James P. Elliott
Florida Registration Number: 21022
Company Name: Source, Inc.
Company Address: 1334 Lafayette ST
City/State/Zip Code: Cape Coral, FL 33904
Phone Number: 239-549-2345

Digitally signed by James P. Elliott, P.E, Date: 2020.06.03 11:47:41 -04'00'

(Seal, Signature, Date, and Registration Number)

Email (optional): jpelliott@source-inc.com

[3]If signed by the authorized representative, attach a letter of authorization in accordance Rule 62-620.305, F.A.C.

Effluent Monitoring Plan to Supplement Groundwater Monitoring Plan for Forest Utilities WWTP

To: Wade Moser - Forest Utilities, Jim Elliot P.E. - Source Engineering
From: Andy McThenia, P.G. Water Science Associates
Date June 1, 2020
Re: Supplemental Effluent Monitoring Plan

Background

Following a Compliance Evaluation Inspection conducted by the Florida Department of Environmental Protection (FDEP) at the Forest Utilities Wastewater Treatment Plant (WWTP) facility on September 25, 2019, FDEP issued a Compliance Assistance Offer (CAO) on October 30, 2019 which, in part, highlighted exceedances of groundwater monitoring parameters of chlorides and total dissolved solids (TDS) in several of the groundwater monitoring wells (see Figure 1) which are part of the Forest Utilities Groundwater Monitoring Plan (GWMP). The CAO requested that the Utility submit documentation to the Department outlining how the



facility will address the groundwater exceedances.

Figure 1. Map Showing Forest Utilities Groundwater Monitoring Sites

The following summary timeline indicates pertinent communications between FDEP and Forest Utilities.

- 11/20/2019 - Forest Utilities submitted a response to the FDEP's CAO indicating that the source of excessive chlorides and TDS to groundwater originates from Forest Country Club irrigation source wells and lakes; and that mixing with effluent prior to application by the Country Club serves to dilute the water used for irrigation.

- 11/22/2019 - FDEP Interoffice Memorandum states that ***"the facility should sample the effluent with the groundwater requirements to provide additional information about the quality of the effluent versus the irrigation water."***

- 2/6/2020 – Forest Utilities meets with FDEP to discuss compliance issues.

- 2/12/2020 - Forest Utilities indicates that additional effluent sampling would be performed and monitoring well sampling would be conducted prior to irrigation of the area around each well. Forest Utilities also indicated that it would research relocating intermediate monitoring well F2 and abandoning compliance monitor well F3.

Water Science Associates was contracted by Forest Utilities Inc. to investigate the potential sources of chlorides and TDS in the water table aquifer which have been detected at elevated levels in groundwater monitoring wells. After conducting an investigation of groundwater quality including two site visits, a meeting and discussions with golf course staff, reviewing existing chlorides monitoring by the Golf Course, and review of private well water quality; Water Science Associates determined that Golf Course irrigation water from lake and well sources and Middle Hawthorn Aquifer water from private homeowner irrigation wells were the most probable sources of elevated chloride and TDS in the Water Table Aquifer onsite. Water Science Associates presented the results of the groundwater quality investigation to FDEP in maps and data submitted by Andrew McThenia to FDEP staff via e-mail on March 20, 2020 and April 1, 2020.

On April 7, 2020, a teleconference was held by FDEP with Forest Utilities, Water Science Associates, and Source Engineering in attendance. Water Science Associates indicated that the Utility was requesting removal of chlorides and TDS from the list of compliance parameters due to the contribution of these contaminants from the Golf Course and private homeowner irrigation sources beyond the control of Forest Utilities. FDEP indicated that Forest Utilities would need to demonstrate that the effluent was not contributing to levels of these contaminants in the Water Table Aquifer. In response to this request, Water Science submitted correspondence to FDEP on May 1, 2020 indicating that Forest Utilities would be conducting quarterly supplemental effluent sampling for chlorides and TDS through the remainder of the calendar year 2020 with the intention to determine whether the WWTP effluent is contributing to groundwater quality exceedances for those parameters. FDEP responded on May 13, 2020 stating the ***"The Department finds the timeline and proposed plan sufficient if a permit modification is submitted to the Department detailing the plan and timeline."***

Based on that guidance from FDEP, the plan for supplemental monitoring of effluent is as follows:

Proposed Supplemental Sampling of Effluent

The proposed modification to the Forest Utilities WWTP permit consists of supplemental quarterly monitoring of the effluent for chlorides and TDS for the remainder of calendar year 2020. Upon completion of these supplemental effluent samples, the results will be compared to concurrent groundwater monitoring results

conducted as part of the existing permitted GWMP to determine if the effluent is negatively impacting the levels of chloride and TDS in the Water Table Aquifer. The quarterly effluent samples are to be collected by Sanders Laboratory on the same day as the quarterly groundwater samples are collected from the existing monitor wells if possible. The quarterly effluent samples for chlorides and TDS are to be collected from the EFA-01 location which corresponds to the West Chlorine Contact Tanks Outfall. The following table provides the proposed sample parameters, units, limits, frequency, and site designation.

Parameter	Units	Limit	Frequency of Analysis	Monitoring Site Number
Chloride	mg/l	Report	Quarterly	EFA -01
Total Dissolved Solids (TDS)	mg/l	Report	Quarterly	EFA -01

The proposed supplemental sampling of the effluent will continue through the 4th quarter of 2020. The results of the effluent water quality will be compared to concurrent groundwater quality sampling results of the existing monitor wells to determine whether the effluent can be determined to be contributing to groundwater degradation with respect to the monitored parameters.

From: wmoser23@aol.com
To: Kugler, Noah
Subject: Permit modification application.
Date: Tuesday, June 9, 2020 1:56:20 PM

Noah, good to speak to you today regarding the above subject. Forest Utilities wishes to withdraw our permit modification application at this time. We will resubmit the application should it become necessary at a later date. Thank you for your consideration regarding this matter.
Wade Moser

Effluent Monitoring Plan to Supplement Groundwater Monitoring Plan for Forest Utilities WWTP

To: Wade Moser - Forest Utilities, Jim Elliot P.E. - Source Engineering
From: Andy McThenia, P.G. Water Science Associates
Date July 22, 2020
Re: Supplemental Effluent Monitoring Plan

Background

Following a Compliance Evaluation Inspection conducted by the Florida Department of Environmental Protection (FDEP) at the Forest Utilities Wastewater Treatment Plant (WWTP) facility on September 25, 2019, FDEP issued a Compliance Assistance Offer (CAO) on October 30, 2019 which, in part, highlighted exceedances of groundwater monitoring parameters of chlorides and total dissolved solids (TDS) in several of the groundwater monitoring wells (see Figure 1) which are part of the Forest Utilities Groundwater Monitoring Plan (GWMP). The CAO requested that the Utility submit documentation to the Department outlining how the facility will address the groundwater exceedances.



Figure 1. Map Showing Forest Utilities Groundwater Monitoring Sites

The following summary timeline indicates pertinent communications between FDEP and Forest Utilities.

- 11/20/2019 - Forest Utilities submitted a response to the FDEP's CAO indicating that the source of excessive chlorides and TDS to groundwater originates from Forest Country Club irrigation source wells and lakes; and that mixing with effluent prior to application by the Country Club serves to dilute the water used for irrigation.

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- 2/12/2020 - Forest Utilities indicates that additional effluent sampling would be performed and monitoring well sampling would be conducted prior to irrigation of the area around each well. Forest Utilities also indicated that it would research relocating intermediate monitoring well F2 and abandoning compliance monitor well F3.

Water Science Associates was contracted by Forest Utilities Inc. to investigate the potential sources of chlorides and TDS in the water table aquifer which have been detected at elevated levels in groundwater monitoring wells. After conducting an investigation of groundwater quality including two site visits, a meeting and discussions with golf course staff, reviewing existing chlorides monitoring by the Golf Course, and review of private well water quality; Water Science Associates determined that Golf Course irrigation water from lake and well sources and Middle Hawthorn Aquifer water from private homeowner irrigation wells were the most probable sources of elevated chloride and TDS in the Water Table Aquifer onsite. Water Science Associates presented the results of the groundwater quality investigation to FDEP in maps and data submitted by Andrew McThenia to FDEP staff via e-mail on March 20, 2020 and April 1, 2020.

On April 7, 2020, a teleconference was held by FDEP with Forest Utilities, Water Science Associates, and Source Engineering in attendance. Water Science Associates indicated that the Utility was requesting removal of chlorides and TDS from the list of compliance parameters due to the contribution of these contaminants from the Golf Course and private homeowner irrigation sources beyond the control of Forest Utilities. FDEP indicated that Forest Utilities would need to demonstrate that the effluent was not contributing to levels of these contaminants in the Water Table Aquifer. In response to this request, Water Science submitted correspondence to FDEP on May 1, 2020 indicating that Forest Utilities would be conducting quarterly supplemental effluent sampling for chlorides and TDS through the remainder of the calendar year 2020 with the intention to determine whether the WWTP effluent is contributing to groundwater quality exceedances for those parameters. FDEP responded on May 13, 2020 stating the ***"The Department finds the timeline and proposed plan sufficient if a permit modification is submitted to the Department detailing the plan and timeline."***

Based on that guidance from FDEP, the plan for supplemental monitoring of effluent is as follows:

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The proposed modification to the Forest Utilities WWTP permit consists of supplemental quarterly monitoring of the effluent for chlorides and TDS for the remainder of calendar year 2020. Upon completion of these supplemental effluent samples, the results will be compared to concurrent groundwater monitoring results conducted as part of the existing permitted GWMP to determine if the effluent is negatively impacting the levels of chloride and TDS in the Water Table Aquifer. The quarterly effluent samples are to be collected by Sanders

Laboratory on the same day as the quarterly groundwater samples are collected from the existing monitor wells if possible. The quarterly effluent samples for chlorides and TDS are to be collected from the EFA-01 location which corresponds to the West Chlorine Contact Tanks Outfall. The following table provides the proposed sample parameters, units, limits, frequency, and site designation.

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Total Dissolved Solids (TDS)	mg/l	Report	Quarterly	EFA -01

The proposed supplemental sampling of the effluent will continue through the 4th quarter of 2020. The results of the effluent water quality will be compared to concurrent groundwater quality sampling results of the existing monitor wells to determine whether the effluent can be determined to be contributing to groundwater degradation with respect to the monitored parameters.

Florida Department of Environmental Protection
Twin Towers Office Bldg., 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

ANNUAL REUSE REPORT

Part I - Instructions

1. This form is to be submitted on or before January 1 following the completion of each fiscal year (October 1 through September 30). Submittal is required by Rule 62-610.870, F.A.C. This report will be used to develop and maintain a reuse inventory. It will not be used for determination of compliance with permit limitations, other than requirements to submit this report. If flow monitoring information is not available for individual reuse types or types of users, please provide your best estimates of flows allocated to individual reuse types or types of users.

2. Submit one copy (including all attachments) to each of the following three addresses:

   a. DEP Water Reuse Coordinator
   Mail Station 3540
   2600 Blair Stone Road
   Tallahassee, Florida 32399-2400

   b. The appropriate DEP district office (attention Domestic Wastewater Program).

   c. The appropriate water management district.

3. Please type or print legibly. Submit all pages of this form.

4. Completion of this report is required for all domestic wastewater facilities having permitted capacities of 0.1 mgd or larger which contribute reclaimed water to one or more reuse systems permitted under Chapter 62-610, F.A.C. This form is to be completed annually for each separate reuse system. For purposes of this form, "reuse system" means a network of pipes, pumping facilities, storage facilities, and appurtenances designed to convey and distribute reclaimed water from one or more domestic wastewater treatment facilities to one or more users of reclaimed water.

5. Use the units specified in the form. For flows, show annual average flows (in mgd). This can be obtained by averaging daily flows over a 365-day period, dividing the total annual volume by 365, or by averaging the 12 monthly average flow values.

6. Be sure to submit the required attachments (see Part X on pages 8 and 9 of this form).

7. The cover sheet of your permit will identify portions of your project classified as "reuse" and portions classified as "effluent disposal." Rule 62-610.810, F.A.C., lists the criteria for classifying projects (or portions of projects) as "reuse" or "effluent disposal."

Part II - General Information

1. Reporting Period: October 1, 2020 through September 30, 2021
2. Date Submitted 10/02/2020
3. Person Completing This Form

   Name Ivory Gilbert

   Title President

   Organization Florida Utility Solutions

   Mailing Address 15275 Collier Blvd

   City/State/Zip Code Naples, FL 34119

   Telephone (239) 513-0445

   E-mail alana@floridautilitysolutions.com
4. Reuse System Name Forest Utilities WWTP
5. Domestic Wastewater Treatment Facilities Providing Reclaimed Water to This Reuse System

   a. Location of Facilities City

   Fort Myers County Lee

DEP District (check one):

- [ ] Northwest (Pensacola)
- [ ] Northeast (Jacksonville)
- [ ] Southwest (Tampa)
- [ ] Central (Orlando)
- [ ] Southeast (West Palm Beach)
- [x] South (Ft. Myers)

Water Management District (check one):

- [ ] Northwest Florida (Havana)
- [ ] Suwannee River (Live Oak)
- [ ] Southwest Florida (Brooksville)
- [ ] St. Johns River (Palatka)
- [x] South Florida (West Palm Beach)

b. Domestic Wastewater Treatment Facility Information

Enter the name of the facility, the DEP identification number, disinfection level,[a] permitted capacity, and annual average flow for each treatment facility providing reclaimed water to this reuse system.

Facility Name	DEP Identification Number	Disinfection Level [a]	Permitted Capacity (mgd)	Average Flow (mgd)
Please see the attached sheet.	Please see the attached sheet.	Please see the attached sheet.	Please see the attached sheet.	Please see the attached sheet.
Total Treated Wastewater				0.39

[a] Enter one of the following codes for disinfection level for each treatment facility:
HI = High-level disinfection, as described in Rule 62-600.440(5), F.A.C.
IM = Intermediate disinfection, as described in Rule 62-600.440(6), F.A.C.
BA = Basic disinfection, as described in Rule 62-600.440(4), F.A.C.
LL = Low-level disinfection, as described in Rule 62-600.440(7), F.A.C.
HB = High-level disinfection & basic disinfection for portions of the treated flow.
FT = Full treatment disinfection, as described in Rule 62-610.563(3)(b), F.A.C.

Part III - Reclaimed Water and/or Effluent Available for Reuse or Disposal

Source of Water	Average Flow (mgd)
Treated Wastewater [Enter the total from bottom of table in Part II]	0.39
Supplemental Water Supplies (Enter the flow for each supplemental water source added by the utility)	
Surface Water	N/A
Stormwater	N/A
Ground Water	N/A
Drinking Water	N/A
Demineralization Concentrate (Blended with final reclaimed water only)	N/A
Water Recovered from ASR [b]	N/A
Total Water Available for Reuse or Disposal [Should equal the total in Part VI of this form]	0.3900

[b] Aquifer Storage and Recovery (ASR) - This activity is described in Rule 62-610.466, F.A.C. If you have an ASR system included in your permit for the reuse system, please make separate entries in both Part III (for the total average flow withdrawn from the ASR well) and in Part VI (for the total average flow injected into the ASR well).

Part IV - Reuse

For each reuse activity, enter the permitted capacity, average flows, and acreage. Do not duplicate any of these entries in Part V of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the reuse types listed in this part. Make discrete entries (do not show ranges). Show totals at the bottom of the table.

Reuse Type	Reuse Sub-Type	Part	Capacity (mgd)	Flow (mgd)	Area (acres)
Public Access Areas & Landscape Irrigation	Golf Course Irrigation	III	2.0	0.39	280
	Residential Irrigation	III	0.0	0.0	0.0
	Other Public Access Areas	III	0.0	0.0	0.0
Agricultural Irrigation & Sprayfields	Edible Crops (Be sure to attach the inventory of edible crop irrigation. See Part X of this form.)	III	0.0	0.0	0.0
	Grass, Pasture, Other Crops	II	0.0	0.0	0.0
Ground Water Recharge & Indirect Potable Reuse	Rapid Infiltration Basins (Including Some Perc Ponds) [c]	IV	0.00	0.0	0.0
	Absorption Fields [c]	IV	0.0	0.0	0.0
	Surface Water Augmentation (Discharge to Class I Waters)	V	0.00	0.0	0.0
	Injection to Potable Aquifers	V	N/A	N/A	N/A
Industrial	At Treatment Plant	VII	N/A	N/A	N/A
	At Other Facilities	VII	N/A	N/A	N/A
Toilet Flushing		III	N/A	N/A	
Fire Protection		III	N/A	N/A	
Wetlands			N/A	N/A	N/A
Other (Specify)			N/A	N/A	N/A
Total Reuse **[Enter total flow on Line 1 in Part VI of this form.]**			2.0	0.39	280.0

[c] To be considered "reuse," either of the following conditions must exist:

* There are multiple basins or absorption fields that are routinely wetted, dried, and maintained in accord with Part IV of Chapter 62-610, F.A.C., or
* Continuously-loaded ponds must meet the higher treatment/disinfection requirements in Rule 62-610.525, F.A.C.

If neither condition is met, the perc pond or absorption field is "effluent disposal" and should be recorded in Part V in this form (under "Other").

Part V - Effluent Disposal

For each effluent disposal activity, enter the permitted capacity and average flow. Do not duplicate any of these entries in Part IV of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the effluent disposal types listed in this part. Make discrete entries (do not show ranges) for capacity and flow. Show totals at the bottom of the table.

Disposal Type	Disposal Sub-Type	Permitted Capacity (mgd)	Average Flow (mgd)
Surface Water Discharges	Ocean Outfall	N/A	N/A
	To Coastal or Estuarine Waters	N/A	N/A
	To Wetlands	N/A	N/A
	To Other Surface Waters	N/A	N/A
Deep Well Disposal		N/A	N/A
Other (specify)		N/A	N/A
Total Flow Disposed [Enter total flow on Line 2 in Part VI of this form.]		0.0	0.0

Part VI - Summary of Reuse and Disposal

Reuse or Disposal Activity	Average Flow (mgd)
1. **Reuse** (From bottom of Part IV of this form)	0.39
2. **Effluent Disposal** (From bottom of Part V)	0.0
3. **Flow Stored in ASR** (See note [b] on ASR in Part III.)	0
Total (Should equal the total in Part III of this form.) [d]	0.39

[d] The totals in Parts III and VI will not be equal if one of the following conditions exists (check as appropriate):

- ☐ The reuse system includes an ASR system and the amounts injected and withdrawn during the year differ.
- ☐ The reuse system includes one or more reuse activities in which reclaimed water is returned to the treatment facility after its use, where it is then available for reuse or disposal.

Part VII – Reuse Activities, Numbers of Customers, and Backup Discharges

1. How many single-family residences have reclaimed water service? 0

2. How many golf courses are irrigated using reclaimed water? 2

3. How many parks or playgrounds are irrigated using reclaimed water? 0

4. How many schools are irrigated using reclaimed water? 0

5. Is reclaimed water used to flush toilets? ☐ Yes ☑ No If yes, list locations where reclaimed water is used for toilet flushing.

6. Is reclaimed water used for fire protection? ☑ No ☐ Yes, in sprinkler systems
   ☐ Yes, in fire hydrants ☐ Yes, other (please describe)

7. How many cooling towers use reclaimed water from this reuse system? 0

8. List or describe any unique or unusual uses of reclaimed water.
   NA

9. Is there a surface water discharge that serves as a backup discharge for the reuse system?
   ☑ No ☐ Yes, a Limited Wet Weather Discharge permitted under Rule 62-610.860, F.A.C.
   ☐ Yes, permitted under the APRICOT Act [Section 403.086(7), F.S.]
   ☐ Yes, permitted under other rules governing surface water discharges

10. Do you require construction of reclaimed water piping in new residential or other developments?
    ☐ Yes ☑ No

11. Do you require connection to the reclaimed water system when reclaimed water service becomes available?
    ☐ Yes ☑ No

Part VIII – Cross-Connection Control Activities

Rule 62-610.469, F.A.C., imposes cross-connection control requirements on reuse systems permitted under Part III of Chapter 62-610, F.A.C. This includes requirements for the implementation of cross-connection control programs by all public water supply systems serving areas that are within the general reclaimed water service area. Color-coding, labeling, and separation distance requirements are included. In addition, inspections within the reclaimed water service area are required. For purposes of this form, "cross-connection" means a pipe-to-pipe connection between drinking water pipes and reclaimed water pipes.

1. Are all public water supply systems serving areas that are within the general reuse service area actively implementing and enforcing their cross-connection control programs? ☑ Yes ☐ No

   Have all of these cross-connection control programs been accepted by the DEP or the approved county health department? ☑ Yes ☐ No

2. How many illegal cross-connections have been identified during the reporting period? 0

   How many of these cross-connections have been eliminated? 0

   Please, attach a description of identified cross-connections and efforts taken to eliminate them.

3. How many new connections were made to the reclaimed water system during the reporting period? 0

   How many of the new reclaimed water connections were inspected at the time of initial connection? 0

4. How often are the reclaimed water connections of existing residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)? Not Inspected

   How often are the reclaimed water connections of existing non-residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)? Not Inspected

5. In addition to the number of new connections inspected in Item 3 above, how many existing connections were inspected during the reporting period? 0

Part IX - Rates Charged for the Use of Reclaimed Water

Please, list the fees charged for the use of reclaimed water. Please do not enter wastewater or sewer charges. If reclaimed water is provided at no cost, enter zeroes in both blanks. If the fee structure includes both flat rate and gallonage charge components, make a positive entry in both spaces. Make all entries in the units shown.

1. How much do you charge a single-family residential customer (assume a 0.2-acre lot) for the use of reclaimed water?

   Flat rate ($/month/connection) _____

   Gallonage charge (cents/1000 gal.) _____

2. How much do you charge non-residential customers, such as golf courses, (assume 0.1 mgd on a 50-acre site) for the use of reclaimed water?

   Flat rate ($/month/connection) _____

   Gallonage charge (cents/1000 gal.) _____

Part X - Required Attachments

Check, as appropriate, and attach the required documentation.

☐ **Inventory of Edible Crop Irrigation** - If reclaimed water is used to irrigate edible crops at commercial agricultural sites, attach a copy of the current edible crop irrigation inventory as required by Rules 62-610.475 and 62-610.870, F.A.C. The inventory shall include the following information:

a. Name of the agricultural operation.
b. Name and telephone number of the owner or operator of the agricultural operation.
c. Address of the agricultural operation.
d. Edible crops irrigated using reclaimed water.
e. Type of application (irrigation) method used.
f. Approximate area (acres) under irrigation using reclaimed water on which edible crops are grown.

☑ **Inventory of Storage Facilities** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a copy of the current inventory of storage facilities, as required by Rules 62-610.464, 62-610.830, and 62-610.870, F.A.C. The inventory shall include the following information:

a. Name or identifier for the storage system.
b. Location.
c. Function of the storage system (system storage or reject storage).
d. Type of facility (covered tank, uncovered tank, lined pond, unlined pond).
e. Indication of whether or not the storage facility is a water of the state or discharges to a water of the state.
f. Distance to the nearest public water supply well.
g. Distance to the nearest potable water supply well, which is not a public water supply well.
h. Volume of each storage tank/pond and the total storage volume of all storage tanks and ponds (in units of million gallons).

☑ **Summary of Public Notification Program** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a summary of the public notification program activities during the reporting period, as required by Rule 62-610.468(6), F.A.C. The summary shall include the following:

a. Details of written public notification activities (include copies of written notices).
b. Summary of activities involving the news media.
c. Use of advisory signs.
d. Other public notification activities.

☐ **Summary of Metering and Rate Structure** – As noted in 403.064(16), Florida Statutes, utilities implementing reuse projects are encouraged to meter use of reclaimed water by all end users and to charge for the use of reclaimed water based on the actual volume used when such metering and charges can be shown to encourage water conservation. Metering and the use of volume-based rates are effective water management tools for the following reuse activities: residential irrigation, agricultural irrigation, industrial uses, landscape irrigation, irrigation of other public access areas, commercial and institutional uses such as toilet flushing, and transfers to other reclaimed water utilities. As required by 403.064(16),

F.S., if this reuse system provides reclaimed water for any of the uses listed above, attach a summary of the utility's metering activities and the rate structure that the utility currently employs or plans to employ. The summary shall include the following:

a. Number of meters employed to monitor volume of reclaimed water used by customers.
b. If information is available, please provide per capita reclaimed water use for areas that meter and for unmetered areas. If available, please provide historical per capita usage data for before and after the utility began metering reclaimed water.
c. Provide information on the type of rate structure (i.e., inclining or declining block rates) for reclaimed water employed by the utility.
d. Provide a description of the utility's use of master meters (i.e., for a subdivision) or the use of individual meters (i.e., for single-family residential customers).
e. Provide a summary of the utility's plans for metering reclaimed water customers.

☐ **None of these items are required for this reuse system.**

Part XI - Permittee's Certification

I certify that the statements made in this report of reclaimed water utilization are true, correct, and complete to the best of my knowledge and belief.

Date: 12/23/21 _____ Signature

Phone: (239) 513-0445 Ivory M Gilbert, Operator and Director
Name and Title (please print/type)

Company Name: Florida Utility Solutions

Address: 15275 Collier Blvd

City/State/Zip Code: Naples, FL 34119

E-Mail: alana@floridautilitysolutions.com

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

DW Treatment Facilities

Facility Name	DEP Identification Number	Disinfection Level	Permitted Capacity (mgd)	Average Flow (mgd)
Forest Utilities WWTP	FLA014478	HI	.8	0.39

SOURCE, INC.
Engineers - Planners
FL Eng. Business #34338

James P. Elliott, P.E., President
Timothy E. Pugh, P.E., Vice President

1334 Lafayette Street
Cape Coral, FL 33904-9770
(239) 549-2345
Fax (239) 549-6779
E-mail address: Mail@source-inc.com

Submitted Electronically
October 22, 2020

Received
Electronically
Oct 27, 2020
South District

Mr. Nolin Moon, P.E., Environmental Manager
Florida Department of Environmental Protection
2295 Victoria AVE, Suite 364
Ft. Myers, FL 33902-2549

Re: Operation Permit Renewal Application Submittal
Forest Utilities WWTP – ID No. FLA014478
Source, Inc. Project No. 170-02-20

Dear Mr. Moon:

We respectfully request the Department's review and approval of the Forest Utilities wastewater treatment facility operation permit renewal application. Enclosed are the following documents:

1. DEP Form 62-620.910(1) WASTEWATER FACILITY OR ACTIVITY PERMIT APPLICATION FORM 1 GENERAL INFORMATION.
2. DEP Form 62-620.910(2) WASTEWATER APPLICATION FORM 2A FOR A DOMESTIC WASTEWATER FACILITY PERMIT.
3. SECTION 8 DOCUMENTATION 1. GENERAL APPLICATION REQUIREMENTS–
   a. Process Flow Diagram
4. SECTION 8 DOCUMENTATION 1. GENERAL APPLICATION REQUIREMENTS–
   b. Site Plan Exhibit 3
5. SECTION 8 DOCUMENTATION 1. GENERAL APPLICATION REQUIREMENTS–
   c. Location Map
6. SECTION 8 DOCUMENTATION 3. ADDITIONAL APPLICATION REQUIREMENTS FOR PERMIT RENEWALS–
   b. Effluent Analysis Report Dated 2/12/20
7. SECTION 8 DOCUMENTATION 1. GENERAL APPLICATION REQUIREMENTS–
   e. Capacity Analysis Update
8. SECTION 8 DOCUMENTATION 1. GENERAL APPLICATION REQUIREMENTS-
   g. Reuse Feasibility Study
9. SECTION 8 DOCUMENTATION 1. GENERAL APPLICATION REQUIREMENTS–
   h. Binding Agreements and Documentation of Controls on Individual Users of Reclaimed Water
10. ADDITIONAL DOCUMENTS:
    a. Authorization Letter;
    b. Operational Protocol;
    c. Effluent Monitoring Plan to Supplement Groundwater Monitoring Plan for Forest Utilities WWTP;
    d. Wastewater Collection System Operation and Maintenance Plan; and

e. Operation and Maintenance Performance Report

When the application submittal receipt is acknowledged, we will deliver the $5,000.00 fee.

We trust the application forms and documentation provided is sufficient.

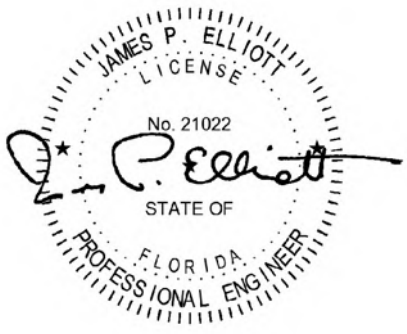
Let us know if you have any questions.

Very truly yours,
SOURCE, INC.

James P. Elliott, P.E.
FL License No. 21022

JPE/jbd*
Attachments
cc: Wade Moser
Tim Pugh





Digitally signed by James P Elliott
Date: 2020.10.22 14:28:40 -04'00'

WASTEWATER FACILITY OR ACTIVITY PERMIT APPLICATION FORM 1 GENERAL INFORMATION

I IDENTIFICATION NUMBER:

Facility ID FLA014478

II CHARACTERISTICS:

INSTRUCTIONS: Complete the questions below to determine whether you need to submit any permit application forms to the Department of Environmental Protection. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the blank in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements. See Section B of the instructions. See also, Section C of the instructions for definitions of the terms used here.

SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED
A. Is this facility a domestic wastewater facility which results in a discharge to surface or ground waters?	X		X
B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters?		X	
C. Does or will this facility (other than those describe in A. or B.) discharge process wastewater, or non-process wastewater regulated by effluent guidelines or new source performance standards, to surface waters?		X	
D. Does or will this facility (other than those described in A. or B.) discharge process wastewater to ground waters?		X	
E. Does or will this facility discharge non-process wastewater, not regulated by effluent guidelines or new source performance standards, to surface waters?		X	
F. Does or will this facility discharge non-process wastewater to ground waters?		X	
G. Does or will this facility discharge stormwater associated with industrial activity to surface waters?		X	
H. Is this facility a non-discharging/closed loop recycle system?		X	
I. Is this facility a public water system whose primary purpose is the production of potable water for public consumption and which discharges demineralization concentrate to surface water or groundwater?		X	

DEP Form 62-620.910(1)
(Effective July 7, 2006 Revised July 30, 2010)

III NAME OF FACILITY: (40 characters and spaces)

Forest Utilities WWTP

Facility ID FLA014478

IV FACILITY CONTACT: (A. 30 characters and spaces)

A. Name and Title (Last, first, & title)	B. Phone (area code & no.)
Moser, Wade, General Manager	239-481-5333

V FACILITY MAILING ADDRESS: (A. 30 characters and spaces; B. 25 characters and spaces)

A. Street or P.O. Box: 6341 Deer Run RD, SW		
B. City or Town: Ft. Myers	State: FL	Zip Code: 33908

VI FACILITY LOCATION: (A. 30 characters and spaces; B. 24 characters and spaces; C. 3 spaces (if known); D. 25 characters and spaces; E. 2 spaces; F. 9 spaces)

A. Street, Route or Other Specific Identifier: 6341 Deer Run RD, SW		
B. County Name: Lee	C. County Code (if known): 36	
D. City or Town: Ft. Myers	E. State: FL	F. Zip Code: 33908

VII SIC CODES: (4-digit, in order of priority)

1. Code #: 4952	(Specify) Sewage System	2. Code #:	(Specify)
3. Code #: 4971	(Specify) Irrigation System	4. Code #:	(Specify)

VIII OPERATOR INFORMATION: (A. 40 characters and spaces; B. 1 character; C. 1 character (if other, specify); D. 12 characters; E. 30 characters and spaces; F. 25 characters and spaces; G. 2 characters; H. 9 characters)

A. Name: Forest Utilities, Inc. - Wade Moser		B. Is the name in VIII A. the owner? ☒Yes ☐No	
C. Status of Operator: F = Federal; S = State; P = Private; O = Other; M = Public (other than F or S)	(code) P	(specify) Private	D. Phone No.: 239-481-5883
E. Street or P. O. Box: 6341 Deer Run RD, SW			
F. City or Town: Ft. Myers		G. State: FL	H. Zip Code: 33908

DEP Form 62-620.910(1)
(Effective July 7, 2006 Revised July 30, 2010)

IX INDIAN LAND: Is the facility located on Indian lands? ☐ Yes ☒ No

Facility ID FLA014478

X EXISTING ENVIRONMENTAL PERMITS:

A. NPDES Permit No.	B. UIC Permit No.	C. Other (specify)	D. Other (specify)

XI MAP: Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII NATURE OF BUSINESS (provide a brief description)

Provides treatment for domestic wastewater collected from residential subdivisions and commercial properties. Treated effluent is discharged to adjacent golf courses and used to supplement irrigation water for golf course irrigation. Stabilized sludge is dried and hauled to landfill.

XIII CERTIFICATION (see instructions)

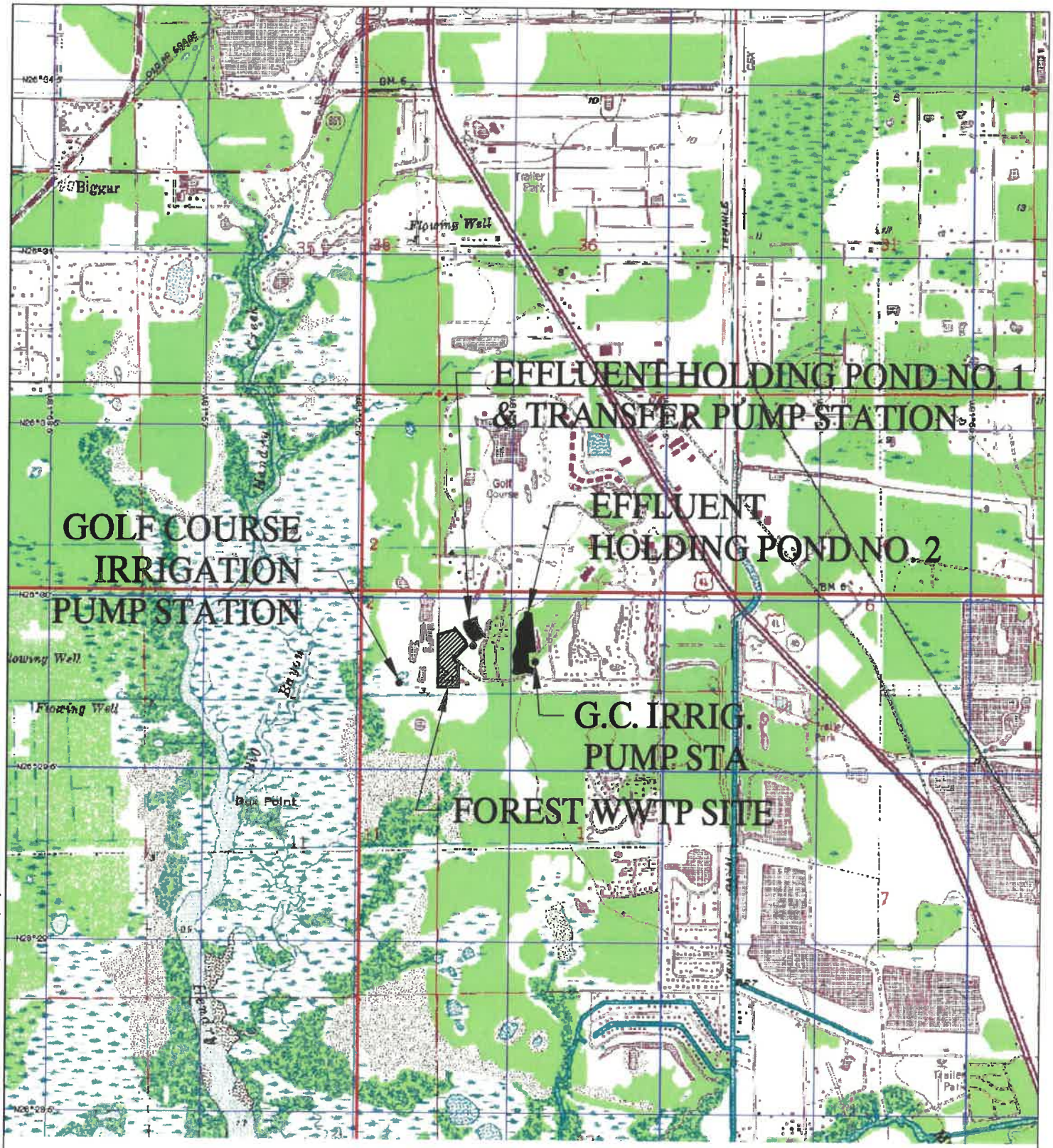
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Wade Moser
A. Name (type or print)

B. Signature

General Manager
Official Title (type or print)

10-21-20
C. Date Signed



LOCATION MAP

N

FOREST UTILTIES WWTP

TWP. 46S. - RNG. 24E.

SOUTHEAST. QUADRANT

LEE COUNTY, FLORIDA

PROJECT NO. 170-02-20

SOURCE, INC.
ENGINEERS - PLANNERS
Engineering Business #34338

1334 LAFAYETTE STREET * CAPE CORAL, FL 33904
TELEPHONE (239)549-2345 FAX (239)549-6779

Aug 10, 2020 - 11:44am Joe Nuccio
X:\Projects\Current Projects\100's\170-02-20 FUI WWTP Permit Renewal\00 170-02-20 Location Map USGS Map.dwg

WASTEWATER APPLICATION FORM 2A FOR A DOMESTIC WASTEWATER FACILITY PERMIT

Instructions for selected items are included in the "INSTRUCTIONS FOR FORM 2A". Refer to these instructions before filling out each item.

SECTION 1. APPLICANT AND FACILITY DESCRIPTION

1. Application Type

- ☐ New
- ☐ Substantial Modification
- ☒ Permit Renewal

2. Facility Type

- ☒ Wastewater Treatment
- ☒ Reuse or Disposal
- ☐ Limited Wet Weather Discharge
- ☐ Residuals/Septage Management

3. Treatment Facility Information

a. Name: FOREST UTILITIES WWTP.

b. Facility Identification Number: FLA014478

c. Location

Number and Street: 6341 Deer Run RD, SW

City/State/Zip Code: Ft. Myers, FL 33908

Telephone: (239) 481-5333

Latitude	26°	29'	13"N
Longitude	81°	52'	12"W

Dates Coordinates Determined: 08/11/20

Method Used to Obtain Coordinates: Scaled from USGS Quad Map

d. Ownership Type

- ☐ Municipal
- ☐ County
- ☐ State
- ☒ Private

e. Contact

Name	Wade Moser
Title	General Manager
Telephone	(239) 481-5333

f. Facility Mailing Address

Number and Street	6341 Deer Run RD, SW
City/State/Zip Code	Ft. Myers, FL 33908

g. Year Facility Began Operation 1979-1980

4. Applicant or Authorized Representative

Legal Name	Forest Utilities, Inc.
Number and Street	6000 Forest BLVD
City/State/Zip Code	Ft. Myers, FL 33908
Telephone	(239) 482-1300
Contact Person	Wade Moser
Title	General Manager
Telephone Number	(239) 481-5333

Is the applicant the owner or operator (or both) of the facility? ☒ Owner ☒ Operator

Indicate whether correspondence regarding this facility should be directed to the facility or the applicant.
☒ Facility ☐ Applicant

5. Project Name and Description

Forest Utilities Wastewater Treatment Facility. Existing 0.800 MGD capacity wastewater treatment facility providing treatment and disposal service to an existing Florida PSC sewer franchise service area.

6. Municipalities or Areas Served

Name of Municipality or Area	Ownership	Population Served
Forest Utilities, Inc. PSC Franchise Area	Private	6,500 +/-
	Total Population Served	6,500 +/-

7. Reclaimed Water Reuse and Effluent Disposal

Method of Reuse or Disposal	Number of Reuse or Disposal Points	Total Design Capacity (mgd)	Basis of Design Flow
Surface Waters - Excluding Ocean Outfalls and Wetlands (Rule 62-600.510, F.A.C.)			
Ocean Outfalls (Rule 62-600.520, F.A.C.)			
Wetlands (Rule 62-600.620, F.A.C.)			
Reuse of Reclaimed Water and Land Application (Rule 62-600.530, F.A.C.)	1	0.800	100% of treated effluent
Ground Water Disposal by Underground Injection (Rule 62-600.540, F.A.C.)			
Other (Describe)			
Total	1	0.800	100%

8. Flows to Another Wastewater Facility

a. Does the facility discharge or transport treated or untreated wastewater to another treatment facility?
☐ Yes ☒ No

b. If yes, describe the mean(s) by which the wastewater from the treatment facility is discharged or transported to the other treatment facility (e.g., collection/transmission system, reclaimed water distribution system)?
N/A

If transport is by a party other than the applicant, provide the following:
Transporter name: N/A
Mailing Address: _____
_____
Contact person: _____
Title: _____
Telephone number: _____

c. For each treatment facility that receives this discharge, provide the following:
Name: N/A
Mailing Address: _____
_____
Contact person: _____
Title: _____
Telephone number: _____

d. Facility Identification Number of Facility Which Receives the Flow: N/A

e. Average Daily Flow Rate to the Receiving Facility: N/A mgd

9. Residuals Use or Disposal

a. Amount of Residuals Generated by the Facility: 19.6 (Estimated) dry tons/year

b. Does this facility receive residuals from another facility for further treatment and disposal? ☐ Yes ☒ No

c. Method of Residuals Use or Disposal

Method	Number of Sites or Number of Receiving Facilities	Dry Tons Used or Disposed per Year
Land Application (Chapter 62-640, F.A.C.)		
Distribution and Marketing (Chapter 62-640, F.A.C.)		
Landfill Disposal (Chapter 62-701, F.A.C.)	1	9.8 (estimated)
Incineration (Chapter 62-200 Series, F.A.C.)		
Transport to Another Treatment Facility		
Other (Describe)	1 – compost facility	9.8 (estimated)
	Total	19.6 (estimated)

d. If residuals are transported to another facility for landfill disposal, incineration, or treatment, provide the facility name, Facility identification number and address.

Name	Karle Enviro Organic Recycling, Inc.
Facility Identification Number	N/A
Number and Street	2991 South ST
City/State/Zip Code	Ft. Myers, FL 33916
County	Lee
Telephone	239-693-7027
Treatment Processes Used by Receiving Facility	Dewatering/Thickening

10. Permits and Applications

a. Expiration Date of Current NPDES Permit _____

b. Expiration Date of Current DEP Permit May 4, 2021

c. Permit Number of Any Existing Environmental Permits

NPDES		PSD	
UIC		Other	
RCRA		Other	

d. Orders and Notices

Type or Order or Notice	Issuing Agency	Date of Order or Notice
Notice or Violation		
Consent Order		
Administrative Order		
Other (Describe.) Compliance Assistance Offer	FDEP	October 30, 2019

SECTION 2. TREATMENT FACILITY DESCRIPTION

1. Flow

a. Design Capacity

Current Design Capacity	0.800	mgd
Proposed Incremental Design Capacity	+ 0.000	mgd
Proposed Total Design Capacity	= 0.800	mgd

b. Basis of Design Flow

- ☒ Annual Average Daily Flow
- ☐ Maximum Monthly Average Daily Flow
- ☐ Three-Month Average Daily Flow
- ☐ Other. If other, specify.

	Two Years Ago	Last Year	This Year	
c. Annual Average Daily Flow Rate	0.411	0.402	0.409	mgd
d. Maximum Daily Flow Rate	0.524	0.530	0.542	mgd

2. Design Treatment Levels

Parameter	Effluent Concentration	Units	Basis	Percent Removal
pH	6.0 – 8.5	Standard Units		
$CBOD_5$	Mean 20 Max 30	mg/L	Grab (7 days/week)	95
TSS	5.0	mg/L	Grab (7 days/week)	95
Chlorine Residual	Min. 1.0	mg/L	Continuous	-
Fecal Coliform	25 max (75% BDL)	Colonies/100 mL	Grab (7 days/week)	-
Turbidity	Max. 3.0	NTU	Continuous	-

3. Disinfection Level Provided

- ☐ Low-level
- ☐ Basic
- ☐ Intermediate
- ☒ High-level
- ☐ High-level Alternative

If the facility disinfects by chlorination and the discharge is to surface waters, is dechlorination provided? N/A

☐ Yes ☐ No

4. Residuals Treatment

a. Class of Residuals

- ☐ Class AA (Rule 62-640.850, F.A.C.)
- ☐ Class A (Rule 62-640.600, F.A.C.)
- ☒ Class B (Rule 62-640.600, F.A.C.)
- ☐ Other

If other, describe N/A

b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge:

N/A – Sludge is hauled and processed off-site.

☐

☐

c. Which vector attraction reduction option is met for the sewage sludge at your facility? N/A

- ☐ Option 1 (Minimum 38 percent reduction in volatile solids)
- ☐ Option 2 (Anaerobic process, with bench-scale demonstration)
- ☐ Option 3 (Aerobic process, with bench-scale demonstration)
- ☐ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
- ☐ Option 5 (Aerobic processes plus raised temperature)
- ☐ Option 6 (Raise pH to 12 and retain at 11.5)
- ☐ Option 7 (75 percent solids with no unstabilized solids)
- ☐ Option 8 (90 percent solids with unstabilized solids)
- ☐ Option 9 (Injection below land surface)
- ☐ Option 10 (Incorporation into soil within 6 hours)
- ☐ Option 11 (Covering active sewage sludge unit daily)
- ☐ None or unknown

d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge:

N/A – Sludge residuals are hauled off-site for processing and disposal.

e. Parameter Concentrations

POLLUTANT	CONC.	UNITS mg/L
Total Nitrogen	-	% dry weight
Total Phosphorus	-	% dry weight
Total Potassium	-	% dry weight
Arsenic	0.10u	mg/L
Cadmium	0.010u	mg/L
Chromium	0.050u	mg/L
Copper	-	mg/kg dry weight
Lead	-	mg/kg dry weight
Mercury	0.0010u	mg/L
Molybdenum	-	mg/kg dry weight
Nickel	-	mg/kg dry weight
Selenium	0.10u	mg/L
Zinc	-	mg/kg dry weight
pH	-	standard units
Total Solids	-	%
Other Parameters ☐ Barium Sliver	☐ 0.10u 0.050u	☐ mg/L mg/L

Date of Sample 8/4/16

5. Reliability Class

☒ Class I
☐ Class II
☐ Class III
☐ Other Equivalent Reliability

SECTION 3. A. DISCHARGES TO SURFACE WATERS (including wetlands) N/A

1. Discharge Serial Number and Name

Discharge Serial Number _____

2. Discharge Location

County _____
Street or Description _____
City or Town (if applicable) _____
Zip Code _____
Latitude ____ ° ____ ' ____ "N
Longitude ____ ° ____ ' ____ "W
Dates Coordinates Determined _____
Method Used to Obtain Coordinates _____

3. Design Capacity of the Outfall

Current Design Capacity _____ mgd
Proposed Incremental Design Capacity + _____ mgd
Proposed Total Design Capacity = _____ mgd

4. Basis of Design Flow

☐ Annual Average Daily Flow
☐ Maximum Monthly Average Daily Flow
☐ Three-Month Average Daily Flow
☐ Other

If other, specify _____

5. Basis for Effluent Limitations

☐ TBEL
☐ Level I WQBEL
☐ Level II WQBEL
☐ Other

If other, specify _____

Date Effluent Limitations Established _____

6. Description of Receiving Waters

a. Name of Receiving Water _____

b. Type of Receiving Waterbody

☐ Fresh
☐ Brackish or Marine

c. Classification of Receiving Waterbody

☐ Class I
☐ Class II
☐ Class III
☐ Class IV
☐ Class V

Is the receiving waterbody contiguous to, or identified as, an Outstanding Florida Water (OFW) or an Outstanding National Resource Water? ☐ Yes ☐ No

If yes, name and locate on a USGS map. _____

Does this facility discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flow through) Indian Country? ☐ Yes ☐ No

d. Name of Watershed (if known) _____

United States Soil Conservation Service 14-digit Watershed Code (if known) _____

e. Name of State Management/River Basin (if known) _____

United States Geological Survey 8-digit Hydrologic Cataloging Unit Code (if known) _____

f. Critical low flow of receiving stream (if applicable)

acute _____ cfs chronic _____ cfs

g. Total hardness of receiving stream at critical low flow (if applicable) _____ mg/l of $CaCO_3$

7. Outfall Information

Description of Outfall and Diffuser _____

Construction Materials _____

Length From Shore _____ feet

Diameter _____ inches

Discharge Depth Below Water Surface _____ feet

Receiving Water Bottom Depth Below Water Surface _____ feet

Is the outfall equipped with a diffuser? ☐ Yes ☐ No

8. Surface Water Improvement and Management (SWIM)

a. Will the discharge affect any SWIM plan waterbodies? ☐ Yes ☐ No

b. If yes, name the waterbody _____

c. Has the SWIM plan been approved by a water management district and the Department? ☐ Yes ☐ No

d. If yes, attach documentation that the proposed discharge is consistent with the SWIM plan.

9. Additional Information Required for Intermittent or Periodic Discharges

Frequency _____ Times Per Year
Duration _____ Days
Volume _____ Thousand Gallons Per Incident
Occurrence

	Jan		May		Sep
	Feb		Jun		Oct
	Mar		Jul		Nov
	Apr		Aug		Dec

10. Additional Information Required for Limited Wet Weather Discharges Permitted in Accordance with Rule 62-610.860, F.A.C.

a. Downstream Waterbody

Name of nearest downstream lake, estuary, reservoir, OFW, or Class I water. Show location on a USGS map. _____

Classification of Downstream Waterbody
☐ Class I
☐ Class II
☐ Class III
☐ Class IV
☐ Class V

Distance Downstream _____ miles

Average Flow Velocity During Anticipated Periods of Discharge _____ feet per second

Travel Time During Anticipated Periods of Discharge _____ hours

b. Rainfall Information

Rainfall Gauging Station Location _____

Period of Record Analyzed:
Beginning Year _____
Ending Year _____
Number of Years _____
Average Annual Rainfall _____ inches per year

c. Simulation of Operation of the Reuse, Storage, and Limited Wet Weather Discharge for an Average Rainfall Year

Year Simulated _____

Annual Rainfall During Average Year _____ inches

Number of Days Limited Wet Weather Discharge is Used During Average Rainfall Year (N) _____ days

Percent of the Days of the Year that the Limited Wet Weather Discharge will Occur During Average Rainfall Year (P) _____ %

Note:
P = [(N) / (365)] x 100%.
P cannot exceed 25% or be less than 1%.

d. Reclaimed Water Quality (maximum monthly average)

$CBOD_5$ _____ mg/L
TKN (as Nitrogen) _____ mg/L

e. Minimum Acceptable Stream Dilution Factor (SDF) _____

Note:
SDF = P(0.085 x $CBOD_5$ + 0.272 x TKN - 0.484)
The values for $CBOD_5$ and TKN should be in terms of maximum monthly average limitations as provided in 14.d. above. The value of P should be as calculated in 14.c. above.

f. Adjusted Stream Dilution Factor _____

Note:
If the travel time shown in 14.a., above, is less than 24 hours, provide the adjusted minimum acceptable stream dilution factor.
Adjusted SDF = SDF x (24 hours)/(travel time in hours)

11. Additional Information Required for Wetland Discharges

a. Is the wetland a jurisdictional wetland (i.e. within the landward extent of waters as defined in Rule 62-301.400. F.A.C., or isolated and not owned entirely by one person, or owned entirely by the State)? ☐ Yes ☐ No

b. Will the wetland be used as a treatment wetland or receiving wetland?

If the wetland is to be used as a treatment wetland, attach documentation showing ownership or the applicant's legal interest in the treatment wetland.

☐ Treatment
☐ Receiving

c. If the wetland is to be used for treatment, identify the type.

☐ Man-made
☐ Hydrologically Altered
☐ Unaltered

d. Is the wetland herbaceous or woody?

☐ Herbaceous
☐ Woody

e. Identify the classification of surface waters within the wetland.

☐ Class I
☐ Class II
☐ Class III
☐ Class IV
☐ Class V

f. Are the waters within the wetland part of an OFW?

☐ Yes ☐ No

12. Effluent Testing Information.

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)		s.u.	-	-	-
pH (Maximum)		s.u.	-	-	-
Flow Rate					
Temperature (Winter)					
Temperature (Summer)					
* For pH, please report a minimum and maximum daily value.					

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	MDL/ PQL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
CARBONACEOUS BIOCHEMICAL OXYGEN DEMAND (CBOD)							
TOTAL SUSPENDED SOLDS (TSS)							
FECAL COLIFORM							

13. Additional Application Information for Applicants with a Design Flow Greater Than or Equal to 0.1 mgd

a. Effluent Testing Data

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	MDL/ PQL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)							
CHLORINE (TOTAL RESIDUAL, TRC)							
DISSOLVED OXYGEN							
TOTAL KJELDAHL NITROGEN (TKN)							
NITRATE PLUS NITRITE							
NITROGEN							
OIL and GREASE							
PHOSPHORUS (Total)							
TOTAL DISSOLVED SOLIDS (TDS)							
OTHER PARAMETERS							

b. Inflow and Infiltration

Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration _____ gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

_____

_____

c. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ☐ Yes ☐ No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: _____

Mailing Address: _____

_____

Telephone Number: _____

Responsibilities of Contractor: _____

14. Expanded Effluent Testing Data: 1.0 mgd and Pretreatment Treatment Works.

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.											
ANTIMONY											
ARSENIC											
BERYLLIUM											
CADMIUM											
CHROMIUM											
COPPER											
LEAD											
MERCURY											
NICKEL											
SELENIUM											
SILVER											
THALLIUM											
ZINC											
CYANIDE											
TOTAL PHENOLIC COMPOUNDS											
HARDNESS (AS CaCO 3)											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.											
VOLATILE ORGANIC COMPOUNDS.											
ACROLEIN											
ACRYLONITRILE											
BENZENE											
BROMOFORM											
CARBON TETRACHLORIDE											
CLOROBENZENE											
CHLORODIBROMO-METHANE											
CHLOROETHANE											
2-CHLORO-ETHYLVINYL ETHER											
CHLOROFORM											
DICHLOROBROMO-METHANE											
1,1-DICHLOROETHANE											
1,2-DICHLOROETHANE											
TRANS-1,2-DICHLORO-ETHYLENE											
1,1-DICHLORO-ETHYLENE											
1,2-DICHLOROPROPANE											
1,3-DICHLORO-PROPYLENE											
ETHYLBENZENE											
METHYL BROMIDE											
METHYL CHLORIDE											
METHYLENE CHLORIDE											

1,1,2,2-TETRACHLORO-ETHANE											
TETRACHLORO-ETHYLENE											
TOLUENE											
1,1,1-TRICHLOROETHANE											
1,1,2-TRICHLOROETHANE											
TRICHLOR-ETHYLENE											
VINYL CHLORIDE											
Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.											
ACID-EXTRACTABLE COMPOUNDS											
P-CHLORO-M-CRESOL											
2-CHLOROPHENOL											
2,4-DICHLOROPHENOL											
2,4-DIMETHYLPHENOL											
4,6-DINITRO-O-CRESOL											
2,4-DINITROPHENOL											
2-NITROPHENOL											
4-NITROPHENOL											
PENTACHLORO-PHENOL											
PHENOL											
2,4,6-TRICHLOROPHENOL											
Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.											
BASE-NEUTRAL COMPOUNDS.											
ACENAPHTHENE											
ACENAPHTHYLENE											
ANTHRACENE											
BENZIDINE											
BENZO(A)-ANTHRACENE											
BENZO(A)PYRENE											
3,4 BENZO-FLUORANTHENE											
BENZO(GHI)-PERYLENE											
BENZO(K)-FLUORANTHENE											
BIS (2-CHLOROETHOXY) METHANE											
BIS (2-CHLOROETHYL)-ETHER											
BIS (2-CHLOROISO-PROPYL) ETHER											
BIS (2-ETHYLHEXYL) PHTHALATE											
4-BROMOPHENYL PHENYL ETHER											
BUTYL BENZYL PHTHALATE											
2-CHLORO-NAPHTHALENE											
4-CHLORPHENYL PHENYL ETHER											
CHRYSENE											
DI-N-BUTYL PHTHALATE											

DI-N-OCTYL PHTHALATE											
DIBENZO(A,H) ANTHRACENE											
1,2-DICHLOROBENZENE											
1,3-DICHLOROBENZENE											
1,4-DICHLOROBENZENE											
3,3-DICHLOROBENZIDINE											
DIETHYL PHTHALATE											
DIMETHYL PHTHALATE											
2,4-DINITROTOLUENE											
2,6-DINITROTOLUENE											
1,2-DIPHENYL-HYDRAZINE											
FLUORANTHENE											
FLUORENE											
HEXACHLORO-BENZENE											
HEXACHLORO-BUTADIENE											
HEXACHLORO-CYCLO-PENTADIENE											
HEXACHLORO-ETHANE											
INDENO(1,2,3-CD)PYRENE											
ISOPHORONE											
NAPHTHALENE											
NITROBENZENE											
N-NITROSODI-N-PROPYLAMINE											
N-NITROSODI-METHYLAMINE											
N-NITROSODI-PHENYLAMINE											
PHENANTHRENE											
PYRENE											
1,2,4-TRICHLORO-BENZENE											
Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.											
Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.											

SECTION 3. B. REUSE AND LAND APPLICATION SYSTEMS

1. Reuse or Land Application System Serial Number and Name

Reuse or Land Application System Serial Number	R-001
	The Forest Country Club Golf Courses
	(The Bear and The Bobcat)

2. Reuse or Land Application System Location

County	Lee		
City or Town (if applicable)	Ft. Myers		
Street or Description	Adjacent to the WWTF within The Forest Subdivision		
Latitude	26°	29'	13"N
Longitude	81°	52'	12"W
Dates Coordinates Determined	Re-checked 8/11/20		
Method Used to Obtain Coordinates	Scaled from USGS Quad Map		

3. Design Capacity of the Reuse or Land Application System

Current Design Capacity	0.800	mgd
Proposed Incremental Design Capacity	+ 0.000	mgd
Proposed Total Design Capacity	= 0.800	mgd

4. Basis of Design Flow

- ☒ Annual Average Daily Flow
- ☐ Maximum Monthly Average Daily Flow
- ☐ Three-Month Average Daily Flow
- ☐ Other

If other, specify _____

5. Is land application continuous or intermittent? ☐ Continuous ☒ Intermittent

6. Underdrains and Perimeter Ditches

a. Is the reuse or land application system underdrained? ☐ Yes ☒ No

b. Are perimeter ditches used? ☐ Yes ☒ No

If yes, will they be excavated to a depth which will intersect the seasonal high ground water table or the ground water mound during any portion of the year? ☐ Yes ☒ No

7. Type of Reuse or Land Application System

- ☐ Slow-rate land application system/restricted public access (Chapter 62-610, F.A.C., Part II)
- ☒ Slow-rate land application system/public access areas, residential irrigation, and edible crop irrigation (Chapter 62-610, F.A.C., Part III)
- ☐ Rapid-rate land application system (Chapter 62-610, F.A.C., Part IV)
- ☐ Absorption field system (Chapter 62-610, F.A.C., Part V)
- ☐ Overland flow system (Chapter 62-610, F.A.C., Part VI)
- ☐ Other land application system with additional levels of preapplication treatment (Rule 62-610.660, F.A.C.)
- ☐ Other land application system with lower levels of preapplication treatment (Rule 62-610.670, F.A.C.)

8. Application Areas and Rates

Site/Use Type/Major User	Area (acres)	Rate (inches/week)	Capacity (mgd)
The Forest Country Club Golf Courses	160	1.29	0.800
Total	160	1.29	0.800

9. Additional Information Required for Reuse Systems Permitted Under Part III of Chapter 62-610, F.A.C.

a. Areas Irrigated

- ☐ Residential lawns
- ☒ Golf courses
- ☐ Cemeteries
- ☐ Parks, playgrounds
- ☐ Landscape areas
- ☐ Highway medians, rights-of-way
- ☐ Edible crops
- ☐ Others

If other, specify _____

b. Other Uses of Reclaimed Water

- ☐ Toilet flushing
- ☐ Fire protection
- ☐ Construction dust control
- ☐ Aesthetic purposes (decorative ponds, fountains, etc.)
- ☐ Others

If other, specify. _____

c. How many hours per day, seven days per week, is or will an operator be on-site at the wastewater treatment facility?

6 hours per day

If the treatment facility is or will be staffed by an operator less than 24 hrs/day, describe the additional levels of reliability included within the treatment or reuse systems (See Rule 62-610.462, F.A.C.)

Continuous monitoring of total chlorine residual & turbidity with automatic operating valves upon default. Effluent is diverted to substandard storage for recycling to the treatment process, if necessary.

d. For permit renewals, list the dates on which the operating protocols (as described in Rule 62-610.463, F.A.C.) were submitted to the Department and the date of the Department's approvals during the last five years.

Date Submitted	Date Approved
04/18/16	-

e. For each site where edible crops are or will be irrigated with reclaimed water, describe the crops grown; the type of application system used; provisions for crop washing and for processing, if any; and provisions for control of public access, if any. (See Rule 62-610.475, F.A.C.)

N/A

SECTION 3. C. GROUND WATER DISPOSAL BY UNDERGROUND INJECTION N/A

1. Underground Injection Well Facility Serial Number and Name

Underground Injection Well Facility Serial Number _____

2. Underground Injection Well Facility Location

County _____
City or Town (if applicable) _____
Street or Description _____

Latitude ° ' "N
Longitude ° ' "W
Dates Coordinates Determined _____
Method Used to Obtain Coordinates _____

3. Underground Injection Well Facility DEP Identification Number or Permit Application Number _____

4. Design Capacity of the Underground Injection Well Facility

Current Design Capacity _____ mgd
Proposed Incremental Design Capacity + _____ mgd
Proposed Total Design Capacity = _____ mgd

5. Basis of Design Flow

☐ Annual Average Daily Flow
☐ Maximum Monthly Average Daily Flow
☐ Three-Month Average Daily Flow
☐ Other

If other, specify. _____

6. Is injection continuous or intermittent? ☐ Continuous ☐ Intermittent

SECTION 4. SCHEDULED IMPROVEMENTS AND SCHEDULES OF IIMPLEMENTATION N/A

1. Improvements Required

a. Discharge Serial Numbers, Reclaimed Water Reuse or Land Application System Serial Numbers, and Underground Injection Well Facility Serial Numbers Affected _____

b. Authority Imposing Requirement

- ☐ Local
- ☐ State
- ☐ Federal
- ☐ Developed by Applicant
- ☐ Other

If other, specify. _____

2. Implementation Schedule and Actual Completion Dates

Implementation Steps	Schedule	Actual Completion
a. Preliminary Plans Complete		
b. Final Plans and Specifications Complete		
c. Financing Complete		
d. Site Acquired		
e. Begin Construction		
f. End Construction		
g. Begin Reuse or Disposal		
h. Operational Level Attained		

3. Have appropriate permits/clearances concerning other Federal/State requirements been obtained?

☐ Yes ☐ No

If so, describe briefly:

_____

_____

SECTION 5. INDUSTRIAL WASTEWATER CONTRIBUTIONS N/A

1. Does the treatment works have, or is it subject to, an approved pretreatment program? ☐ Yes ☐ No

2. Provide the number of each of the following types of industrial users that discharge to the treatment works.

a. Number of non-categorical SIUs. _____
b. Number of CIUs. _____

3. Significant Industrial User Information

Name _____
Number and Street _____
City/State/Zip Code _____
County _____

4. Industrial processes Affecting or Contributing to the SIU's Discharge

_____
_____
_____

4. Principal Product(s) and Raw Material(s)

Principal product(s): _____
Raw material(s): _____

6. Flow Rate

a. Process wastewater flow rate.

_____ gpd ☐ Intermittent ☐ Continuous

b. Non-process wastewater flow rate.

_____ gpd ☐ Intermittent ☐ Continuous

7. Pretreatment Standards. Indicate whether the SIU is subject to the following:

a. Local limits ☐ Yes ☐ No

b. Categorical pretreatment standards ☐ Yes ☐ No

If subject to categorical pretreatment standards, which category and subcategory?

_____

8. **Problems at the Treatment Works Attributed to Waste Discharged by the SIU.** Has the SIU caused or contributed to any problems (e.g. upsets, interference) at the treatment works in the past three years?

☐ Yes ☐ No

If yes, describe each episode.

_____

_____

9. **RCRA Waste.** Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe?

☐ Yes ☐ No If no, go to question 12.

10. **Waste Transport.** Method by which RCRA waste is received (check all that apply):

☐ Truck ☐ Rail ☐ Dedicated Pipe

11. **Waste Description.** Give EPA hazardous waste number and amount (volume or mass, specify units).

EPA Hazardous Waste Number	Amount	Units

12. **Remediation Waste.** Does the treatment works currently (or has it been modified that it will) receive waste from remedial activities?

☐ Yes (complete 13. through 15.) ☐ No

Provide a list of sites and the requested information (13. – 15.) for each current and future site.

13. **Waste Origin.** Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

_____

_____

_____

14. **Pollutants.** List the hazardous constituents that are received (or are expected to be received). Include data on volume and concentration, if known. (Attach additional sheets if necessary).

_____

_____

15. Treatment.

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

☐ Yes ☐ No

If yes, describe the treatment (provide information about the removal efficiency):

b. Is the discharge (or will the discharge be) continuous or intermittent?

☐ Continuous ☐ Intermittent

If intermittent, describe discharge schedule.

SECTION 6. ADDITIONAL INFORMATION REQUIRED FOR PERMIT RENEWALS

1. Have there been any modifications to the treatment facilities or reuse or disposal system, since the issuance of the current permit? If yes, describe on a separate sheet and attach. ☐ Yes ☒ No

2. For limited wet weather discharges, have any modifications been made to the operation, frequency of discharge, or stream hydrology since the original limited wet weather discharge permit or the most recent permit. If yes, describe on a separate sheet and attach. ☐ Yes ☐ No ☒ NA

3. Have there been any violations during the last six months? If yes, describe on a separate sheet and attach. ☐ Yes ☒ No

4. Have there been any treatment facility interferences due to the discharge of industrial wastewater to the treatment facility during the last six months? If yes, describe on a separate sheet and attach. ☐ Yes ☒ No

5. Is there any enforcement action pending against these treatment, reuse, or disposal facilities? If yes, describe on a separate sheet and attach. ☐ Yes ☒ No

6. Have all previous permit conditions, including pretreatment requirements, monitoring requirements, and operator attendance been complied with? If no, describe on a separate sheet and attach. ☒ Yes ☐ No

7. For permit renewals involving a limited wet weather discharge permitted under Rule 62-610.860, F.A.C., list the number of days during each of the last five years that the limited wet weather discharge was used. Also, list the total annual rainfall for each year.

Year	Number of Days Used	P (%)	Annual Rainfall (inches)
1.			
2.			
3.			
4.			
5.			
Total/Average			

8. For permit renewals involving a limited wet weather discharge permitted under Rule 62-610.860, F.A.C., provide the number of days during each of the last five years that the actual dilution ratio, as defined in Rule 62-610.860, F.A.C., was less than the minimum SDF and the number of months in which the monthly average $CBOD_5$ or TKN in the limited wet weather discharge exceeded the permit limitations.

Year	Number of Days the Dilution Ratio Was Less Than SDF	Number of Months the Limits Were Exceeded	
		$CBOD_5$	TKN
1.			
2.			
3.			
4.			
5.			

SECTION 7. ADDITIONAL INFORMATION REQUIRED FOR RESIDUALS/SEPTAGE MANAGEMENT FACILITIES N/A

1. Location of Residuals Treatment Processes _____

(Describe in relation to the wastewater treatment processes.)

_____
_____
_____
_____
_____
_____

2. Type and Amount of Waste Treated at this Facility

Type	Amount (dry tons/day)	Amount (gallons/day)
Residuals	or	
Septage		
Food Establishment Sludge		
Portable Toilet Waste		
Holding Tank Waste		
Boat or Marina Waste		
Other (Describe.)	or	
Total	or	

Is the total amount estimated or actual? ☐ Estimated ☐ Actual

3. Information on Treatment Facilities Transporting Residuals

a. DEP Permit Number _____

b. Facility Name _____
Number and Street _____
City/State/Zip Code _____
County _____
Telephone _____

c. Facility Type ☐ Type I ☐ Type II ☐ Type III

d. Amount of Residuals Received From This Facility _____ dry tons/day or _____ gpd

Is this amount estimate or actual? ☐ Estimated ☐ Actual

e. Describe the treatment provided by this facility before transport

f. Parameter Concentrations

POLLUTANT	CONC.	UNITS
Total Nitrogen		% dry weight
Total Phosphorus		% dry weight
Total Potassium		% dry weight
Arsenic		mg/kg dry weight
Cadmium		mg/kg dry weight
Chromium		mg/kg dry weight
Copper		mg/kg dry weight
Lead		mg/kg dry weight
Mercury		mg/kg dry weight
Molybdenum		mg/kg dry weight
Nickel		mg/kg dry weight
Selenium		mg/kg dry weight
Zinc		mg/kg dry weight
pH		standard units
Total Solids		%
Other Parameters		

Date of Sample

4. Describe the manifest system used for tracking residuals during transport from the facilities.

SECTION 8. DOCUMENTATION SUBMITTED

1. General Application Requirements	Attached	
	Yes	No
a. Process Flow Diagram	X	
b. Site Plan	X	
c. Location Map	X	
d. Agricultural Use Plan or Dedicated Site Plan		X
e. Capacity Analysis Report	X	
f. Results of Whole Effluent Biological Toxicity Testing		X
g. Reuse Feasibility Study	X	
h. Binding Agreements and Documentation of Controls on Individual Users of Reclaimed Water	X	

2. Additional Application Requirements for New Facilities and Modifications to Existing Facilities	Yes	No
a. Preliminary Design Report		X
b. Documentation of Compliance with Antidegradation Requirements		X
c. Public Service Commission Certification Number and Copy of Certificate or Order Number and Copy of Order		X
d. Letter from the Management and Storage of Surface Waters Permitting Agency		X
e. Request for Approval of Monitoring Plans for Discharge of Domestic Wastewater to Wetlands		X
f. Concurrent Application for Ground Water Disposal by Underground Injection		X
g. Application for Monitoring Plan Approval		X

3. Additional Application Requirements for Permit Renewals	Yes	No
a. Operation and Maintenance Performance Report	X	
b. Reclaimed Water or Effluent Analysis Report	X	
c. Technical Evaluation of Need to Revise Local Pretreatment Limits		X
d. Results of Mechanical Integrity Testing		X

SECTION 9. CERTIFICATIONS N/A

1. Certifications for Construction of New Facilities or Modifications to Existing Facilities

a. Applicant or Authorized Representative

I certify that the statements made in this application for a permit and all attachments are true, correct, and complete to the best of my knowledge and belief. I agree to retain the design engineer, or another professional engineer registered in Florida, to conduct on-site observation of construction, to prepare a notification of completion of construction, and to review record drawings for adequacy as referenced in Rule 62-620.630, F.A.C. Further, I agree to provide an appropriate operation and maintenance manual for the facilities pursuant to Rule 62-620.630, F.A.C., and to retain a professional engineer registered in Florida to examine (or to prepare or revise, if necessary) the manual. For projects regulated by Chapter 62-610, F.A.C., I agree to provide the additional operation requirements of that Chapter.

(Signature of Applicant or Authorized Representative[1])	Date
Name (please type)	Company Name
Title	Company Street Address or P O Box
Telephone No. (including area code)	City, State, Zip Code

b. Professional Engineer Registered in Florida

I certify that the engineering features of this domestic wastewater project have been (designed) (examined) by me and found to conform to engineering principles applicable to such projects. In my professional judgment, this facility, when properly constructed, operated, and maintained, will comply with all applicable statutes of the State of Florida and rules of the Department.

Name (please type):	Company Name:
Florida Registration Number:	Company Street Address or P O Box
Telephone No. (including area code)	City/State/Zip Code:
	(Seal, Signature, Date, Registration No.)

[1] If signed by the authorized representative, attach a letter of authorization.

c. Professional Engineer Registered in Florida

I certify that this firm or individual has been retained by the applicant to prepare a notification of completion of construction, to prepare operation and maintenance manuals, and to review record drawings for adequacy as referenced in Rules 62-620.630, 62-600.717, and 62-600.720, F.A.C.

Name (please type):	Company Name:
Florida Registration Number:	Company Street Address or P O Box
Telephone No. (including area code)	City/State/Zip Code:
	(Seal, Signature, Date, Registration No.)

2. Certifications for Permit Renewals

a. Applicant or Authorized Representative

I certify that the statements made in this application for a permit and all attachments are true, correct and complete to the best of my knowledge and belief. I agree to operate and maintain these wastewater facilities in such a manner as to comply with the provisions of Chapter 403, F.S., Chapter 62-600, F.A.C., and all other applicable rules of the Department. Further, an appropriate operation and maintenance manual which has been examined by a professional engineer as certified below is available and located at 6341 Deer Run RD, SW, Ft. Myers, FL and can be submitted upon request as part of the permit procedure. A copy of the record drawings or other plans (as applicable) showing modifications to existing facilities, as referenced in Rule 62-600.717, F.A.C., is available at the same location. I also understand that a permit if granted by the Department, is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C., and I will notify the Department in accordance with this rule upon sale or legal transfer of the permitted facilities. In the event of abandonment or inactivation of the facilities, I will notify the Department and ensure that public health and safety are protected as required by Rule 62-620.610, F.A.C.

Wade E. Moser	10-21-20
(Signature of Applicant or Authorized Representative[2])	Date
Wade E. Moser	Forest Utilities, Inc.
Name (please type)	Company Name
General Manager	6000 Forest BLVD
Title	Company Street Address or P O Box
(239) 481-5333	Ft. Myers, FL 33908
Telephone No. (including area code)	City, State, Zip Code

wmoser23@aol.com
Email: (optional)

[2] If signed by the authorized representative, attach a letter of authorization.

b. Professional Engineer

I certify that the engineering features of these domestic wastewater facilities have been examined by me and found to conform to engineering principles applicable to such projects. I certify that the operation and maintenance manual for these wastewater facilities has been prepared or examined by me or by individual(s) under my direct supervision and that there is reasonable assurance, in my professional judgment, that the facilities, when properly operated and maintained in accordance with this manual, will comply with all applicable statutes of the State of Florida and rules of the Department.

James P. Elliott	Source, Inc.
Name (please type):	Company Name:
21022	1334 Lafayette Street
Florida Registration Number:	Company Street Address or P O Box
(239) 549-2345	Cape Coral, FL 33904
Telephone No. (including area code)	City/State/Zip Code:
jpelliott@source-inc.com	
Email: (optional)	
October 22, 2020	(Seal, Signature, Date, Registration No.)

JAMES P. ELLIOTT LICENSE No. 21022 STATE OF FLORIDA PROFESSIONAL ENGINEER

JAMES P. ELLIOTT LICENSE No. 21022 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by James P Elliott
Date: 2020.10.22 14:48:14 -04'00'

SECTION 8. DOCUMENTATION

1. GENERAL APPLICATION REQUIREMENTS

a. Process Flow Diagram Exhibit 2

EXHIBIT 2

Received Electronically
Oct 27, 2020
South District

MOTORIZED CONTROL VALVES

CONTROL VALVE MV#1 – NORMALLY OPEN CLOSES ON DEFAULT CONDITION.

CONTROL VALVE MV#2 – NORMALLY CLOSED, OPENS ON DEFAULT CONDITION

MANUAL VALVES – FOR RETREATMENT OF SUBSTANDARD EFFLUENT

VALVE M10 – RECYCLE FOR TOTAL TREATMENT

VALVE M11 – RECYCLE FOR FILTRATION AND CHLORINATION ONLY

M 10
M 11
800,000 GAL. SUBSTANDARD EFFL. STORAGE
325,000 GAL. ADDITIONAL SURGE TANK
SURGE TANK 375,000 GAL. ±
SURGE TANK CELL NO. 2
SURGE TANK CELL NO. 1
PUMP CHAMBER
PRIMARY BAR SCREEN
MAGNETIC FLOW METER
OVERFLOW FLAP VALVE
OVERFLOW
MASTER INFLUENT PUMP STATION
SURGE PUMPING UNITS
MAGNETIC FLOW METER
PLANT INFLUENT FROM COLLECTION SYSTEM
COLLECTION SYSTEM
PLANT PUMPING STATION
DRIED SLUDGE HOLDING BIN
DRIED SLUDGE TRUCKED TO SANITARY LANDFILL
MANUAL REMOVAL OF SLUDGE CAKE
SLUDGE DRYING BED #4
SLUDGE DRYING BED #3
SLUDGE DRYING BED #2
SLUDGE DRYING BED #1
SLUDGE DRYING BED DRAIN LINES
SECONDARY BAR SCREEN
AERATION TANK 1 (ANOXIC ZONE)
AERATION TANK 2
AERATION TANK 3
AERATION TANK 4
AERATION TANK 5
AERATION TANK 6
AERATION TANK 7
CONTACT CHAMBER 1
CHLORINE CONTACT TANKS
CHLORINE CONTACT TANK CONTROL WEIR
RETURN ACTIVATED SLUDGE
TRAVELING BRIDGE SAND FILTERS
FILTER NO. 2
FILTER NO. 1
SLUDGE TRANSFER WETWELL
CONTROL GATES
CLARIFIER 1
CLARIFIER 2
TELESCOPING VALVES
CLARIFIER TANK NO. 3
SLUDGE HOLDING TANK NO. 3 (ANAEROBIC)
SLUDGE HOLDING TANK NO. 2 (ANAEROBIC)
SLUDGE HOLDING TANK NO. 1 (ANAEROBIC)
AEROBIC DIGESTER NO. 3
AEROBIC DIGESTER NO. 2
AEROBIC DIGESTER NO. 1
MV #2
MV #1
MV #3
PLANT EFFLUENT PUMPING STATION
R.A.S./W.A.S. PUMPING
WASTE ACTIVATED SLUDGE
TO BOBCAT G.C. IRRIGATION
BOBCAT G.C. LAKE
TO BEAR G.C. IRRIGATION
BOBCAT STANDARD EFFLUENT STORAGE POND 1.96 MG±
AUGMENTATION FROM BOBCAT G.C. LAKE
BEAR STANDARD EFFLUENT STORAGE POND 2.34 MG±
AUGMENTATION FROM BEAR G.C. LAKE

REVISION	DATE	REMARKS	CHG. BY

FOREST UTILITIES WASTEWATER TREATMENT FACILITY

FOREST UTILITIES, INC.
6341 DEER RUN, S.W.
FORT MYERS, FLORIDA 33908

SECTION 1, TWP. 46S, RNG. 24E
LEE COUNTY, FLORIDA

PROCESS FLOW DIAGRAM

(REDUCED TO HALF SCALE)

JAMES P. ELLIOTT LICENSE No. 21022 STATE OF FLORIDA PROFESSIONAL ENGINEER

JAMES P. ELLIOTT, P.E.
FLORIDA LICENSE NUMBER 21022
DATE: October 22, 2020

SOURCE, INC.
ENGINEERS - PLANNERS
Engineering Business #34338
1334 LAFAYETTE STREET * CAPE CORAL, FL 33904
TELEPHONE (239)549-2345 FAX (239)549-6779

JOB NO.	SHEET NO.
170-02-20	2 OF
DATE	DRAWN BY:
08-25-20	JN
	FILE NAME: 02-170.DWG

Oct 22, 2020 – 9:10am C.O. Nojorno
X:\Projects\Current Projects\100X\170-02-20 FU WWTP Permit Renewal\02 170-02-20 Exhibit 2.dwg

SECTION 8. DOCUMENTATION

1. GENERAL APPLICATION REQUIREMENTS

b. Site Plan Exhibit 3

EXHIBIT 3

FROM TANK DRAIN
MV 11
MV 10
DETAIL "A"
HEAVY UNDERBRUSH WOODS
TOP OF BERM
3.5' ± HIGH
ELEC. X-FORMER
NEW 6" PVC DECANT TO DRAIN
GRAVEL DRIVE
8" PVC FORCE MAIN
POND OVERFLOW STRUCTURE
SLOPE
NEW DRY SLUDGE STORAGE
TRENCH DRAIN
STORMWATER LAKE
STORAGE BUILDING
SLUDGE DRYING BED #2
SLUDGE DRYING BED #1
SLUDGE DRYING BED #4
SLUDGE DRYING BED #3
GEN-SET
SLUDGE HOLDING TANK 3
SLUDGE HOLDING TANK 2
AERATION TANK 4
AERATION TANK 6
AERATION TANK 5
SLUDGE HOLDING TANK 4
ONE WAY
AERATION TANK 3
AERATION TANK 7
CLARIFIER 3
SCUM BOX
800,000 GAL. SUBSTANDARD EFFL. STORAGE
AERATION TANK 2
AERATION TANK 1
DIGESTER 3
DIGESTER 2
CLARIFIER 1
SLUDGE TRANSFER
CLARIFIER 2
SLUDGE HOLDING TANK NO. 1
800,000 GPD CLARIFIER
RAS/WAS PUMPS
BLOWER EQUIPMENT
SEE DETAIL "A"
PLANT SITE L.S.
325,000 GAL. ADDITIONAL SURGE TANK
FILTER NO. 1
FILTER NO. 2
OFFICE/GARAGE
NEW 12" TEE
12" CLARIFIER EFFLUENT
ONE WAY GRAVEL DRIVE
EXISTING 6" DIP WM
8" PVC FORCE MAIN
SURGE TANK 375,000 GAL. ±
GRAVEL DRIVE
PUMP CHAMBER
CHLORINE BUILDING
IRRIGATION TRANSFER PUMPS
CONTACT CHAMBER 1
SEE DETAIL "B"
METER
POND INLET
BAR SCREEN FACILITIES
EFFLUENT PUMPING STATION
CL2
CHLORINE CONTACT TANK #2
TO BOBCAT IRRIGATION PUMP STATION/ BEAR REUSE POND
EXISTING GOLF COURSE MAINTENANCE BLDG

N

20 10 0 20
SCALE IN FEET
1" = 20'

BOBCAT
1.96 MGD STANDARD EFFLUENT STORAGE POND

PLANT SITE LS
LS
MV 2
MV 1
DETAIL "B"

WHEN EFFLUENT MEETS PERMIT REQUIREMENTS:
MOTORIZED VALVE NO. MV-1 – NORMALLLY OPEN
MOTORIZED VALVE NO. MV-2 – NORMALLY CLOSED

NOTE: TRANSFER PUMP ENERGIZES WHEN G.C. IRRIGATION PUMPS ARE STARTED.

REVISION	DATE	REMARKS	CHG. BY

(REDUCED TO HALF SCALE)

FOREST UTILITY WASTEWATER TREATMENT FACILITY

FOR
FOREST UTILITIES, INC.
6341 DEER RUN, S.W.
FORT MYERS, FLORIDA 33908
IN
SECTION 1, TWP. 46S, RNG. 24E
LEE COUNTY, FLORIDA

WWTP SITE PLAN

JAMES P. ELLIOTT LICENSE No 21022 STATE OF FLORIDA PROFESSIONAL ENGINEER

JAMES P. ELLIOTT, P.E.
FLORIDA LICENSE NUMBER 21022
DATE October 22, 2020

SOURCE, INC.
ENGINEERS - PLANNERS
Engineering Business #34338
1334 LAFAYETTE STREET * CAPE CORAL, FL 33904
TELEPHONE (239)549-2345 FAX (239)549-6779

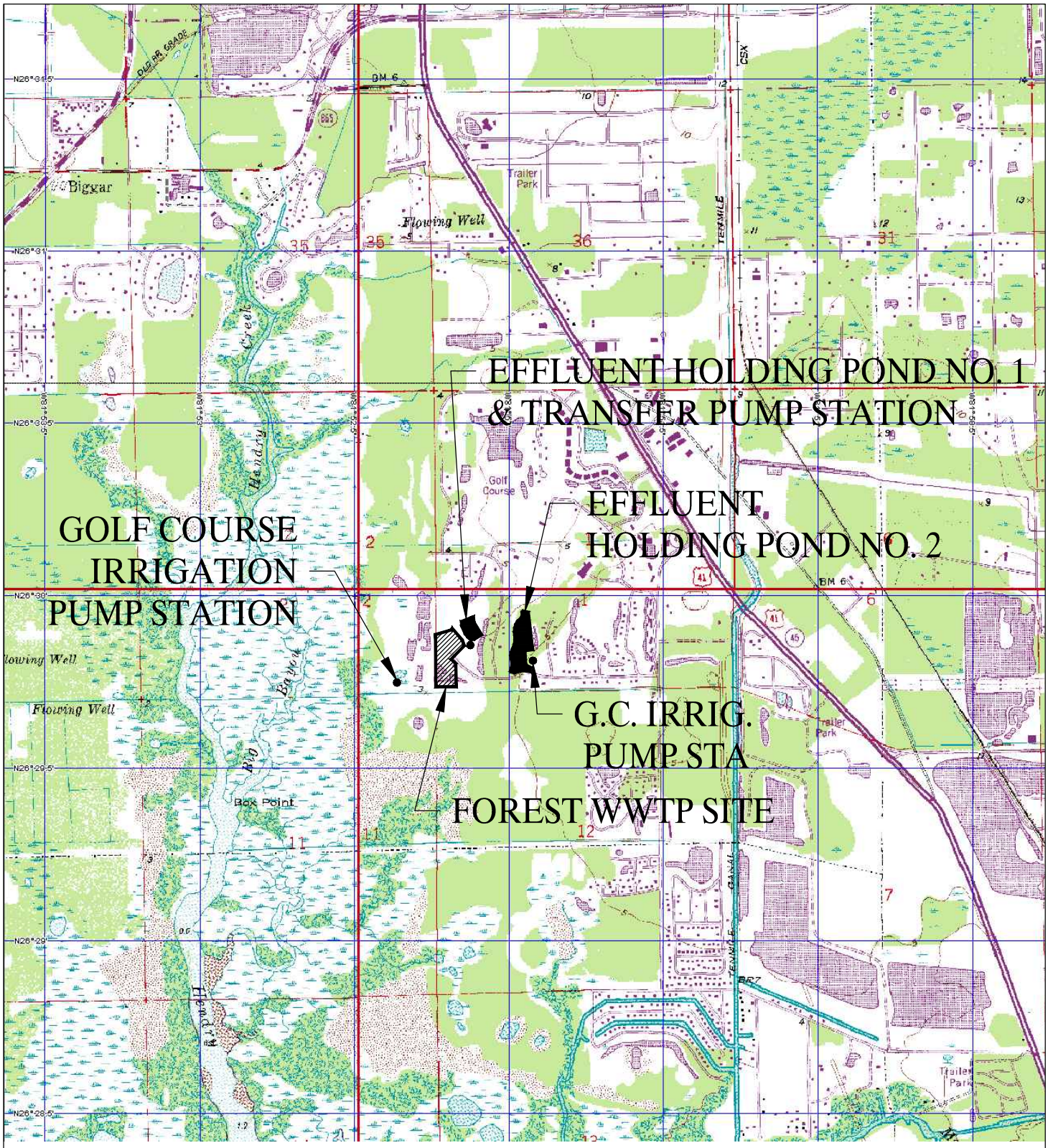
JOB NO.	SHEET NO.
170-02-20	3 OF
DATE 08-25-20	DRAWN BY: JN
	FILE NAME: 03-170.DWG

Oct 22, 2020 - 9:16am C.D. Nguno
X:\Project\Current Projects\1003\170-02-20 FLU WWTP Permit Renewal\03 170-02-20 Exhibit 3.dwg

SECTION 8. DOCUMENTATION

1. GENERAL APPLICATION REQUIREMENTS

c. Location Map



LOCATION MAP

N

FOREST UTILTIES WWTP

TWP. 46S. - RNG. 24E.

SOUTHEAST. QUADRANT

LEE COUNTY, FLORIDA

SOURCE, INC.
ENGINEERS - PLANNERS
Engineering Business #34338

1334 LAFAYETTE STREET * CAPE CORAL, FL 33904
TELEPHONE (239)549-2345 FAX (239)549-6779

PROJECT NO. 170-02-20

Aug 10, 2020 - 11:44am Joe Nuccio
X:\Projects\Current Projects\100's\170-02-20 FUI WWTP Permit Renewal\00 170-02-20 Location Map USGS Map.dwg

SECTION 8. DOCUMENTATION

3. ADDITIONAL APPLICATION REQUIREMENTS FOR PERMIT RENEWALS

b. Effluent Analysis Report

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

February 12, 2020

Wade Moser
Forest Utility
6000 Forest Blvd
Ft Myers, FL 33908
TEL: 941-481-5333
FAX:

RE: Order No.: 2002168

Dear Wade Moser:

Sanders Laboratories, Inc received 1 sample(s) on 2/5/2020 for the analyses presented in the following report.

These results only pertain to the samples as received. These pages may include, but are not limited to: Analytical Data, Chains of Custodies, Subcontracted Data and Case Narratives for samples. Results relate only to the samples in the report.

Reports are archived for a minimum of 5 years. Copies of reports are available for a fee of $50.00. Copies will be provided within 2 weeks of the time of the request.
Laboratory PQL's are available upon request.

Test results meet all the requirements of the NELAP standards, unless otherwise noted.
Nokomis Certificate # E84380 Fort Myers Certificate # E85457

A statement of estimated uncertainty of results is available upon request.
Laboratory report shall not be reproduced except in full, without the written approval of Sanders Laboratories.
Sanders Laboratories follows DEP standard operating procedures for field sampling, unless otherwise noted.

Katie Strothman
Laboratory Director

Sanders Laboratories
Environmental Testing Services

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

Definition Only

WO#: **2002168**
Date: **2/12/2020**

Definitions:

B: Results based upon colony counts outside the acceptable range.

G: Sample value indicates that the analyte was detected at or above the method detection limit in both the sample and the associated field blank, equipment blank, or trip blank, and the blank value was greater than 10% of the associated sample value. The value in the blank shall not be subtracted from associated samples.

I: The reported value is greater than or equal to the laboratory MDL but less than the laboratory PQL.

J: Estimated Value.

J7: Excessive amounts of Sodium Sulfite used to dechlorinate the sample due to high levels of chlorine present.

K: Off scale low, actual value is known to be less than the value given.

L: Off scale high, actual value is known to be greater than the value given.

NC: Not Certified. Parameter was ran but is not covered under laboratory accredited scopes.

Q: Sample held beyond acceptable holding time.

U: The compound was analyzed for, but not detected.

V: Indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.

Y: The laboratory analysis was from an improperly preserved sample.

Z: Too many colonies were present for accurate counting.

Sanders Laboratories
Environmental Testing Services

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

Analytical Report

(continuous)

WO#: **2002168**

Date Reported: **2/12/2020**

CLIENT: Forest Utility

Lab Order: 2002168

Project:

Lab ID: 2002168-001

Collection Date: 2/5/2020 10:00:00 AM

Client Sample ID: CCC, EFF

Matrix: WASTE WATER

Analyses	Result	MDL	Qual	Units	DF	Date Analyzed
FECAL COLIFORM				**A9222D**		Analyst: **TM**
Coliform, Fecal	ND	1.00		CFU/100ml	1	2/5/2020 12:10:00 PM
NITROGEN, NITRATE + NITRITE				**E353.2**		Analyst: **PS**
Nitrogen, Nitrate	14.2	0.0100		mg/L	1	2/10/2020 12:33:00 PM
NITROGEN, NITRITE				**A4500-NO2-B**		Analyst: **SP**
Nitrogen, Nitrite	ND	0.0100		mg/L	1	2/5/2020 4:00:00 PM
CHLORIDE				**A4500-CL-E**		Analyst: **EH**
Chloride	228	3.00		mg/L	1	2/10/2020 12:51:00 PM
SULFATE				**ASTM-D516-90**		Analyst: **EH**
Sulfate	77.5	2.00		mg/L	1	2/6/2020 1:28:00 PM
TOTAL DISSOLVED SOLIDS				**A2540C**		Analyst: **NS**
Total Dissolved Solids (Residue, Filterable)	540	20		mg/L	1	2/6/2020 11:30:00 AM

Qualifiers:

H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
PL	Permit Limit	RL	Reporting Detection Limit
U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as specified at testcode

Original

D Pix Evaluation

Sanders Laboratories
Environmental Testing Services

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 2002 168 / ~~2002~~ 007

Client: Forest Util
Address:
Phone:
Fax:

Email: Wade
Report To:
Bill to:
P.O. #

Project Name: WWTP
Project Location:
Customer Type:
Kit #: 2417
Requested Due Date:

Preservative: HCL = H, HNO_3 = N, $Na_2S_2O_3$ = ST, H_2SO_4 = S, NaOH = SH, NH_4Cl = NH

Sampled By (PRINT): Neil Hardon
Sampler Signature:

Matrix	Sample Description	Sample Date	Sample Time	Sample Type	Preservatives: HCL	Preservatives: ICE	Analysis Requested: NH_4 Nitrate	Analysis Requested: TDS	Analysis Requested: Cl - SO_4	Analysis Requested: Metals	Sample ID # (Lab Use Only)
WW	CCC EFF	2/5/20	1000	G		✓	X				1A
"	"	"	"	"		"		X			B
"	"	"	"	"		"			X		C
"	"	"	"	"		"				X	D

Bottle Lot #: 073015615, 9.19710, 8036a

Okay to Run As Is... Client Initial:

Samples On Ice: Yes / No — 3

Relinquished By/Affiliation	Date	Time	Accepted By/Affiliation	Date	Time
Neil Hardon	2/5/20		WL	2/5/20	11:42

1050 Endeavor Ct, Nokomis, FL 34275-3623 (941) 488-8103 fax(941) 484-5774
10090 Bavana Rd., Fort Myers, FL 33913 (239) 590-0337 fax (239) 590-0536

Form #: RCF -02 Approved by: KS 7/11/2016

www.sandlab.com

SECTION 8. DOCUMENTATION

1. GENERAL APPLICATION REQUIREMENTS

e. Capacity Analysis Update

FOREST UTILITIES WASTEWATER TREATMENT FACILITY

CAPACITY ANALYSIS REPORT UPDATE

for

FOREST UTILITIES, INC.
6000 Forest Boulevard
Fort Myers, FL 33908
Ph. (239) 481-5333
Fx. (239) 481-0327

Located in Lee County, Florida
Facility ID # FLA014478

FDEP Permit Number:
Permit #FLA014478-012 Issued 06/05/16 Expires 06/04/21

Updated July 2020

Prepared By:

SOURCE, INC.
Engineers - Planners
FL Eng. Business No. 2627
1334 Lafayette Street
Cape Coral, FL 33904
Ph. (239) 549-2345
Fx. (239) 549-6779

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Exhibits:

1	Franchise Area Map
2	Treatment Process Flow Diagram

Figures:

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CERTIFICATIONS

Permittee:

The undersigned, a duly elected officer for Forest Utilities, Inc., hereby certifies that this document has been reviewed by the corporation and that said corporation is fully aware of and understands the contents herein and does intend to comply with any recommendations and/or schedule included herein.

Dated: 10-27-20 Certified By: _____
Signature

Phone: (239) 481-5333

Wade Moser, General Manager
Forest Utilities, Inc.
6341 Deer Run Rd., SW
Fort Myers, FL 33908

Engineer:

The undersigned, a Registered Professional Engineer in the State of Florida, does hereby certify that this report has been prepared under my direction, and to the best of my knowledge, the statements and information herein contained are true and correct, and has been prepared utilizing sound engineering principles and judgment. The contents of this document have been reviewed by, and all recommendations and schedules have been discussed with the principals of Forest Utilities, Inc.

Dated: October 22, 2020 Certified By: _____
Signature

Phone: (239) 549-2345

James P. Elliott, P.E.
Florida Certificate No. 21022
Source, Inc. (E.B. #2627)
1334 Lafayette Street
Cape Coral, FL 33904

Chapter 1 - Introduction:

Forest Utilities, Inc. is a privately owned, Florida Public Service Commission regulated wastewater utility having a franchise area of approximately 2,720 acres, which was last expanded, over five years ago, to include the community of Laurel Oaks and Jamaica Bay West. The most recent facility expansion was intended to enable treatment for the expanded franchise area wastewater flows. The treatment capacity is rated as 0.800 MGD.

The Forest Wastewater Treatment Facility is located west of U.S. 41 within "The Forest" subdivision in southern Lee County, Florida. The area served by the treatment facility is located approximately 10 miles south of the Fort Myers city limits.

The Forest Wastewater Treatment Facility provides wastewater collection, transmission, and treatment for the franchised area comprised primarily of single family and multifamily developments, along with two (2) shopping centers and one (1) commercial center located along U.S. 41. The service area is approximately eighty percent (85%) developed. Exhibit No. 1 shows the franchised area.

The existing wastewater collection/transmission/treatment/disposal system consists of the following:

1. 127,800 ± Lineal feet of gravity sewers with appurtenances.
2. 33 duplex submersible pumping stations.
3. 55,300 ± Lineal feet of wastewater force mains.
4. Activated sludge process treatment facility consisting of processes as follows:
    a. Manual bar screens.
    b. Flow equalization.
    c. Treatment unit having compartments or zones for aeration, contact, settling, aerobic and anaerobic digestion.
    d. On-line ABW effluent filters.
    e. Chlorine contact tank.
    f. Facilities for chemical feed.
        (1) Dual gas chlorinators w/booster pumping.
    g. Effluent storage pond.
    h. Effluent disposal to the Forest Golf Course irrigation system.
    i. Substandard effluent storage tank.
    j. Sludge drying beds.
    k. Dry sludge storage.

Exhibit No. 2 is a diagram, showing the existing treatment facility process and flow pattern.

Chapter 2 - Existing Conditions:

A. Permitted Capacities:

The Forest Wastewater Treatment Facility is presently operating under a current FDEP operation permit FLA014478-012, issued on May 5, 2016. This permit will expire on May 4, 2021. The rated plant flow capacity is 0.800 MGD of domestic wastewater under this permit utilizing an extended aeration activated sludge process treatment. The individual process components of the existing treatment facility have capacities and/or performance rates as shown in the following Table 2-1.

Table 2-1

Process Stage	Existing Capacity	Design Parameters
Flow Equalization	520,000 gallons	75% of DAF
Aeration Basins	692,788 gallons total	Max. Organic loading of 15.9 #/BOD_5 per 1000 cf
Aerobic Digestion	218,800 gallons total	3.0 cf/capita
Settling Tank Capacity: Surface Loading Rate: Weir Overflow Rate:	400,000 gallons total 1,385.44 ft^2 surface area 131.94 lf weir length	Det. Time: 12.0 hrs. 577.43 gpd/sf 6,063.36 gpd/ft

B. Existing and Historical Flow Data:

The following Table 2-2 summarizes the: 1) average daily flow (ADF), 2) three-month average daily flow (3 Mo. ADF), 3) annual average daily flow (AADF), and 4) maximum daily flow (Max. DF) conditions experienced at the Forest Wastewater Treatment Facility for the past ten plus years of operation.

Table 2-2

Month/Year	ADF	3 Mo. ADF	AADF	Max. DF
Jul-09	0.289	0.316	0.304	0.377
Aug-09	0.323	0.314	0.310	0.398
Sep-09	0.379	0.330	0.323	0.450
Oct-09	0.313	0.338	0.329	0.346
Nov-09	0.337	0.343	0.331	0.380
Dec-09	0.349	0.333	0.334	0.408
Jan-10	0.378	0.355	0.336	0.401
Feb-10	0.403	0.377	0.341	0.433
Mar-10	0.428	0.403	0.347	0.600
Apr-10	0.380	0.404	0.353	0.453
May-10	0.267	0.358	0.348	0.331
Jun-10	0.224	0.290	0.339	0.349
Jul-10	0.168	0.220	0.329	0.215
Aug-10	0.167	0.186	0.316	0.199

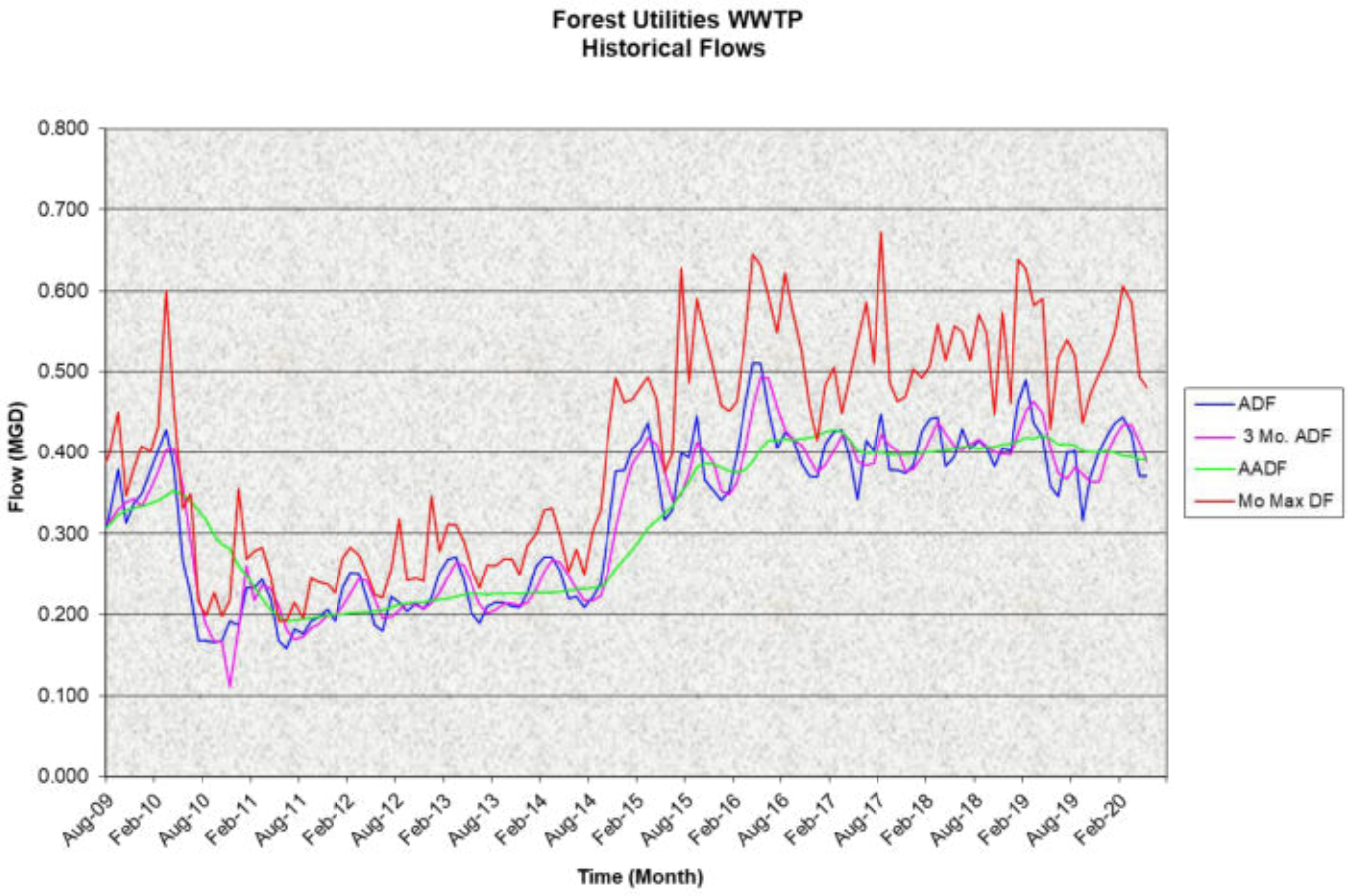
Month/Year	ADF	3 Mo. ADF	AADF	Max. DF
Sep-10	0.165	0.167	0.298	0.227
Oct-10	0.168	0.167	0.286	0.198
Nov-10	0.192	0.175	0.274	0.217
Dec-10	0.187	0.182	0.261	0.217
Jan-11	0.232	0.204	0.248	0.268
Feb-11	0.233	0.217	0.234	0.278
Mar-11	0.243	0.236	0.219	0.283
Apr-11	0.218	0.231	0.205	0.246
May-11	0.168	0.210	0.197	0.192
June-11	0.158	0.181	0.192	0.193
July-11	0.182	0.169	0.193	0.214
Aug-11	0.176	0.172	0.194	0.195
Sept-11	0.192	0.183	0.196	0.244
Oct-11	0.197	0.188	0.198	0.240
Nov-11	0.206	0.198	0.199	0.237
Dec-11	0.192	0.198	0.200	0.226
Jan-12	0.232	0.210	0.200	0.270
Feb-12	0.252	0.225	0.201	0.283
Mar-12	0.250	0.245	0.202	0.273
Apr-12	0.219	0.240	0.202	0.250
May-12	0.187	0.219	0.204	0.224
June-12	0.180	0.195	0.205	0.220
July-12	0.222	0.196	0.209	0.257
Aug-12	0.214	0.205	0.212	0.318
Sept-12	0.204	0.213	0.213	0.242
Oct-12	0.213	0.210	0.214	0.245
Nov-12	0.206	0.208	0.214	0.241
Dec-12	0.221	0.213	0.217	0.345
Jan-13	0.252	0.226	0.218	0.278
Feb-13	0.269	0.247	0.220	0.312
Mar-13	0.271	0.264	0.222	0.310
Apr-13	0.243	0.261	0.224	0.290
May-13	0.203	0.239	0.225	0.258
June-13	0.189	0.212	0.226	0.233
July-13	0.210	0.201	0.225	0.261
Aug-13	0.215	0.205	0.225	0.260
Sept-13	0.214	0.213	0.226	0.269
Oct-13	0.210	0.213	0.225	0.268
Nov-13	0.208	0.211	0.225	0.249
Dec-13	0.227	0.215	0.226	0.285
Jan-14	0.260	0.232	0.227	0.300
Feb-14	0.271	0.253	0.227	0.329

Month/Year	ADF	3 Mo. ADF	AADF	Max. DF
Mar-14	0.271	0.267	0.227	0.331
Apr-14	0.254	0.265	0.228	0.298
May-14	0.219	0.248	0.229	0.253
June-14	0.222	0.232	0.232	0.280
July-14	0.208	0.216	0.232	0.249
Aug-14	0.222	0.217	0.232	0.304
Sept-14	0.238	0.223	0.234	0.328
Oct-14	0.303	0.254	0.242	0.422
Nov-14	0.376	0.306	0.256	0.492
Dec-14	0.378	0.352	0.269	0.462
Jan-15	0.404	0.386	0.281	0.465
Feb-15	0.415	0.399	0.293	0.480
Mar-15	0.437	0.419	0.306	0.493
Apr-15	0.378	0.410	0.317	0.465
May-15	0.316	0.377	0.325	0.375
June-15	0.329	0.341	0.334	0.398
July-15	0.400	0.348	0.350	0.628
Aug-15	0.393	0.374	0.364	0.486
Sep-15	0.445	0.413	0.381	0.591
Oct-15	0.366	0.401	0.386	0.547
Nov-15	0.352	0.388	0.384	0.503
Dec-15	0.340	0.353	0.381	0.458
Jan-16	0.353	0.348	0.377	0.451
Feb-16	0.397	0.363	0.376	0.463
Mar-16	0.458	0.403	0.377	0.541
Apr-16	0.510	0.455	0.388	0.645
May-16	0.510	0.493	0.404	0.631
June-16	0.454	0.491	0.415	0.594
July-16	0.405	0.456	0.415	0.547
Aug-16	0.425	0.428	0.418	0.622
Sept-16	0.417	0.416	0.416	0.573
Oct-16	0.386	0.409	0.417	0.524
Nov-16	0.371	0.391	0.419	0.457
Dec-16	0.369	0.375	0.421	0.415
Jan-17	0.410	0.383	0.426	0.482
Feb-17	0.426	0.402	0.428	0.505
Mar-17	0.428	0.421	0.426	0.449
Apr-17	0.395	0.416	0.416	0.492
May-17	0.342	0.388	0.402	0.536
Jun-17	0.415	0.384	0.399	0.586
Jul-17	0.402	0.386	0.399	0.510
Aug-17	0.448	0.422	0.401	0.672

Month/Year	ADF	3 Mo. ADF	AADF	Max. DF
Sep-17	0.378	0.409	0.398	0.486
Oct-17	0.378	0.401	0.397	0.463
Nov-17	0.374	0.377	0.397	0.469
Dec-17	0.384	0.379	0.398	0.503
Jan-18	0.427	0.395	0.400	0.492
Feb-18	0.442	0.418	0.401	0.507
Mar-18	0.444	0.438	0.402	0.558
Apr-18	0.383	0.423	0.401	0.514
May-18	0.395	0.407	0.406	0.555
Jun-18	0.430	0.403	0.407	0.548
Jul-18	0.404	0.410	0.407	0.514
Aug-18	0.415	0.416	0.405	0.571
Sep-18	0.405	0.408	0.407	0.546
Oct-18	0.383	0.401	0.407	0.448
Nov-18	0.405	0.398	0.410	0.574
Dec-18	0.402	0.397	0.411	0.461
Jan-19	0.462	0.423	0.414	0.638
Feb-19	0.489	0.451	0.418	0.626
Mar-19	0.437	0.463	0.418	0.582
Apr-19	0.420	0.449	0.421	0.590
May-19	0.358	0.405	0.418	0.430
Jun-19	0.345	0.374	0.410	0.517
Jul-19	0.399	0.367	0.410	0.539
Aug-19	0.402	0.382	0.409	0.520
Sep-19	0.317	0.373	0.402	0.437
Oct-19	0.370	0.363	0.401	0.473
Nov-19	0.402	0.363	0.400	0.498
Dec-19	0.421	0.398	0.402	0.519
Jan-20	0.437	0.420	0.400	0.548
Feb-20	0.444	0.434	0.396	0.606
Mar-20	0.423	0.435	0.395	0.586
Apr-20	0.370	0.412	0.391	0.493
May-20	0.371	0.388	0.392	0.480
Jun-20				
Jul-20				

The following Figure 2-1 provides a graphical historical summary of the average daily flow (ADF); three-month average daily flow (3 Mo. ADF); annual average daily flow (AADF); and maximum daily flow conditions experienced at the Forest Wastewater Treatment Facilities for the past ten years.

FIGURE 2-1



C. Seasonal Variations in Flow:

The following Table 2-3 summarizes the: 1) month of the year when the three-month average daily flow was maximum and 2) the ratio of the maximum three-month average daily flow to the annual average daily flow experienced at the Forest Wastewater Treatment Facility for the past ten years. March and April are typically the months of the year when the three-month average daily flow was at its maximum. The average ratio of the yearly maximum three-month average daily flow to the annual average daily flow for the past ten years is 1.147.

Table 2-3

Month	Max. 3 Mo. ADF	Max. 3 Mo. ADF/End of Year ADF	Ratio
Mar 09	0.350	0.350/0.334	1.048
Apr 10	0.404	0.404/0.361	1.119
Jan 11	0.260	0.260/0.200	1.300
Mar 12	0.245	0.245/0.217	1.129
Mar 13	0.264	0.264/0.226	1.168
Dec 14	0.352	0.352/0.269	1.309
Mar 15	0.419	0.419/0.381	1.100
May 16	0.493	0.493/0.421	1.171
Aug 17	0.422	0.422/0.398	1.060
Mar 18	0.438	0.438/0.411	1.066
Mar 19	0.463	0.463/0.402	1.152
Mar 20	0.435	-	-

D. Updated Flow and Loading Information:

The results of the tested effluent parameters ($CBOD_5$ and TSS) from the past year were compared and found to be within the range of the effluent parameters utilized to establish the design capacity of the treatment facilities. Based on the results presented in the Discharge Monitoring Reports (DMR's) for 2019, the average influent $CBOD_5$ loading was 123.018 mg/l and the TSS loading was 185.7 mg/l, with the average effluent $CBOD_5$ loading being 2.172 mg/l and the TSS loading being 0.60 mg/l. The 15 years recorded on the DMR's have been depicted graphically on Figure 2-2 ($CBOD_5$) and Figure 2-3 (TSS).

FIGURE 2-2
Forest Utilities WWTP
$CBOD_5$ Reduction Graph

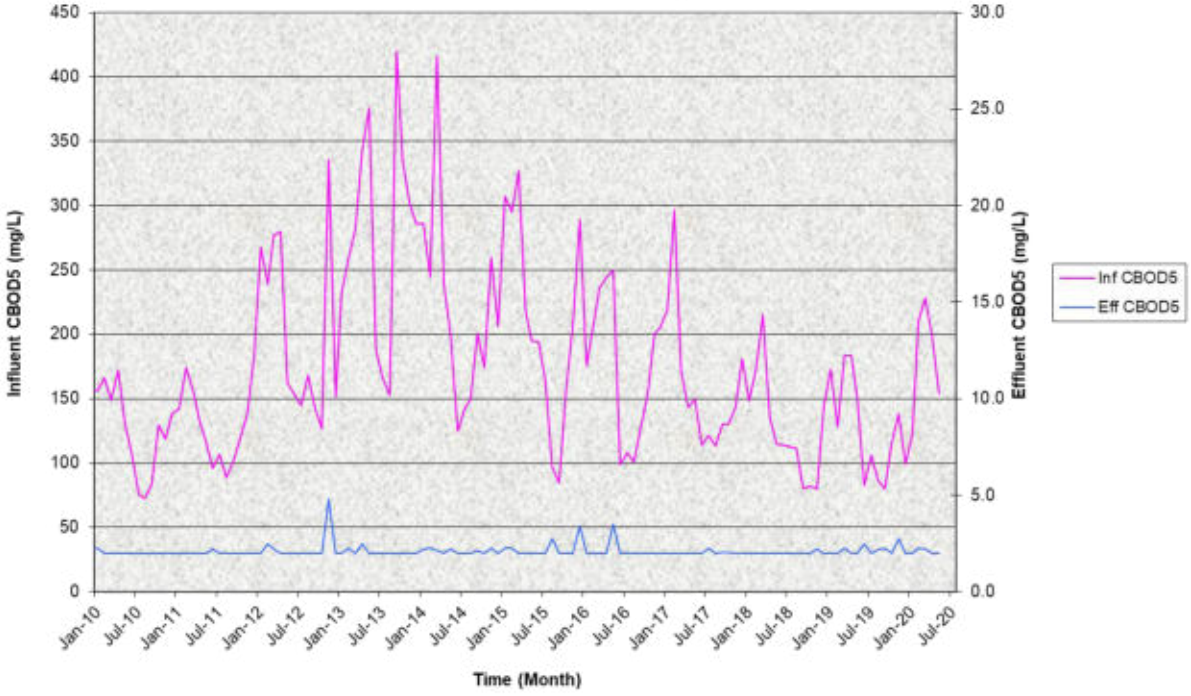
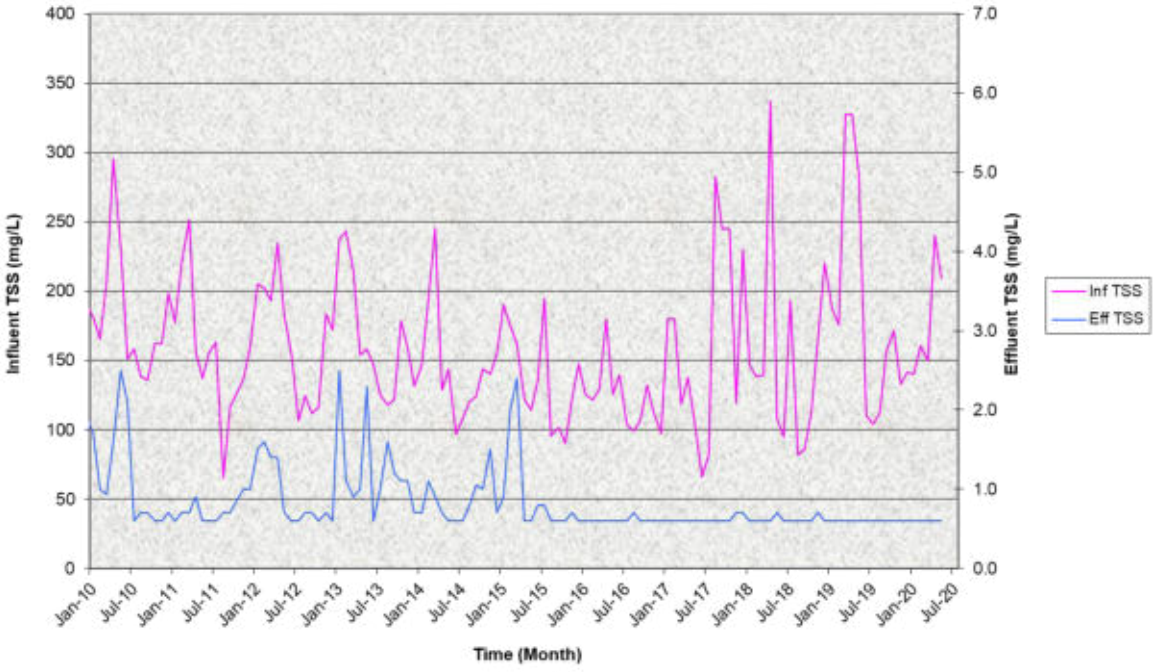


FIGURE 2-3
Forest Utilities WWTP
TSS Reduction Graph



Chapter 3 - Future Conditions:

A. Ten Year Annual Average Daily Flow Projections

The area serviced by the Forest Wastewater Treatment Facilities is approximately 85% built out. The service area has recently been expanded to provide wastewater service to the community of Jamaica Bay that had been experiencing problems associated with effluent disposal at its onsite wastewater treatment facility. Exhibit 1 depicts the franchise area boundaries including the Jamaica Bay expansion. Flows from the expanded franchise area were phased in through 2007, with 100% of flows from Laurel Oaks initially delivered to Forest Utilities WWTP beginning in 2008. Flows from Jamaica Bay were delivered to Forest Utilities WWTP beginning in October 2014.

The wastewater from the service area is typical of domestic wastewater. There are no sources of wastewater, other than domestic, entering the system or proposed to enter the system.

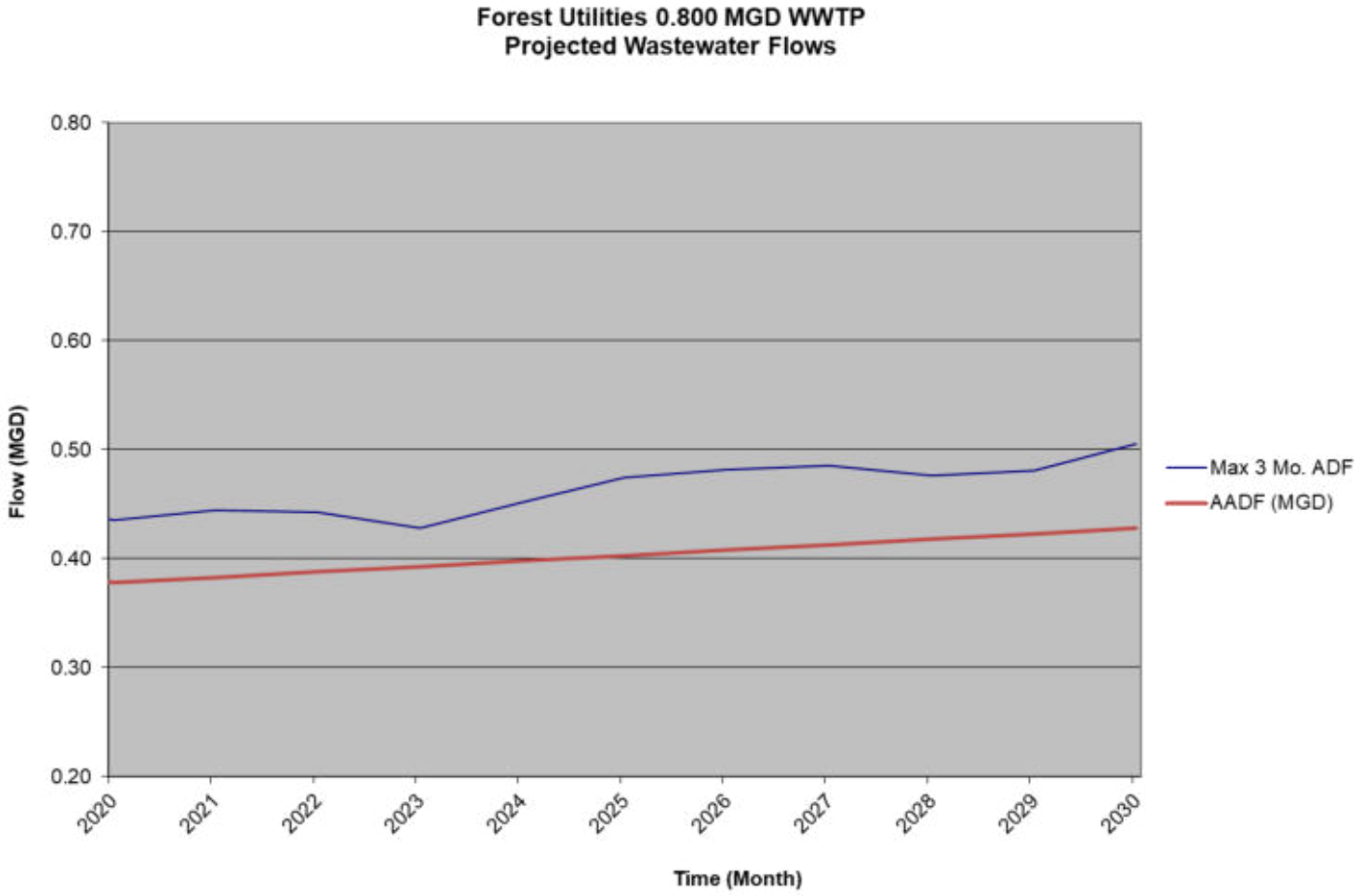
Table 3-1 projects flows for each of the next ten years, 1) the annual average daily flow, 2) the maximum three-month average daily flow and 3) the ratio of the maximum three-month average daily flow to the annual average daily flow for the next ten years.

Table 3-1

Year	Max. 3 Mo. ADF	AADF (MGD)	Max. 3 Mo. ADF/AADF	Ratio
2020	0.435	0.378	0.435/0.378	1.15
2021	0.444	0.383	0.444/0.383	1.16
2022	0.443	0.388	0.443/0.388	1.14
2023	0.428	0.393	0.428/0.393	1.09
2024	0.451	0.398	0.451/0.398	1.13
2025	0.474	0.403	0.474/0.403	1.18
2026	0.482	0.408	0.482/0.408	1.18
2027	0.485	0.413	0.485/0.413	1.18
2028	0.476	0.418	0.476/0.418	1.14
2029	0.480	0.423	0.480/0.423	1.14
2030	0.505	0.428	0.505/0.428	1.18

The flow projections have an average ratio of the yearly maximum three-month average daily flow to the annual average daily flow of 1.15, which is the average for the ten year projection. Figure 3-1 graphically depicts the flow projections through the year 2030.

Figure 3-1


Forest Utilities 0.800 MGD WWTP
Projected Wastewater Flows
0.80
0.70
0.60
0.50
0.40
0.30
0.20
Flow (MGD)
2020
2021
2022
2023
2024
2025
2026
2027
2028
2029
2030
Time (Month)
Max 3 Mo. ADF
AADF (MGD)

B. Ten Year Population Projections

Table 3-2 tabulates population projections for the next ten years in ERC's (Equivalent Residential Connections). The ERC's were calculated utilizing the Florida Public Service Commission formulas. Based on this, one ERC equates to 170 gpd. Based on a review the past 5 years reported flows, there has not been any substantial increase. We have calculated that by the end of the year 2020, the Forest Wastewater Treatment Plant will serve the equivalent of 2224 ERC's and by the end of the year 2030, the Forest Wastewater Treatment Plant will be serving 2518 ERC's.

Table 3-2

Year	Wastewater ERC's	% Growth
2015	2241	
2016	2476	10.5%
2017	2341	-5.5%
2018	2418	3.3%
2019	2365	-2.2%
2020	2224	-6.0%
2021	2253	1.3%
2022	2282	1.3%
2023	2312	1.3%
2024	2341	1.3%
2025	2371	1.3%
2026	2400	1.2%
2027	2429	1.2%
2028	2459	1.2%
2029	2488	1.2%
2030	2518	1.2%

Chapter 4 - Summary and Conclusions:

A. Time Required for the Three-Month Average Daily Flow to Reach the Permitted Capacity:

Based on the data presented in Table 3-1, the maximum three-month average daily flows should not exceed the facility's capacity of 800,000 gpd within the next ten years.

B. Recommendations for Expansion:

In order to meet the needs of the expanded franchise area, the facility had been expanded to a capacity of 800,000 gpd. Capacity is present in the existing facility to accept flow from all of Laurel Oaks and Jamaica Bay. The Forest Wastewater Treatment Facility will be sufficient to provide for the needs of this expanded franchise area. No further capacity expansions will be required to the treatment facilities, within the next ten years.

C. Expansion Schedules:

A facility expansion to bring the capacity of the Forest Wastewater Treatment Facility to 800,000 gpd was performed and completed prior to the last operating permit renewal. As such no additional expansions are necessary or anticipated.

SECTION 8. DOCUMENTATION

1. GENERAL APPLICATION REQUIREMENTS

g. Reuse Feasibility Study

REUSE FEASIBILITY STUDY

for

FOREST UTILITIES, INC.
THE FOREST WASTEWATER TREATMENT FACILITIES

Located in Lee County, FL
GMS ID #5236P00059

DEP Permit Numbers

DO36-173553	Issued 01/11/90	Expired 01/11/95
FLA014478-262211	Issued 08/01/95	Expired 08/01/00
FLA014478	Issued 08/17/00	Expires 08/16/05
FLA014478	Issued 06/06/11	Expires 06/05/16
FLA014478	Issued 05/05/16	Expires 05/04/21

Updated August ◆ 2020

Prepared for:

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CHAPTER 1
INTRODUCTION

In accordance with Section 403.064, Florida Statutes, after January 1, 1992, all applicants for permits to operate a domestic wastewater treatment facility in a critical water supply problem area (such as Lee County) shall evaluate the costs and benefits of reuse of reclaimed water as part of their application for the permit.

An application to renew the current FDEP Operation Permit is being filed. The current Operation Permit, FLA014478, which is scheduled to expire May 5, 2021, permits the treatment of a maximum of 0.800 MGD of typical domestic wastewater. The permitted capacity for the effluent disposal system is also 0.800 MGD. Since the decision to utilize reclaimed water as a golf course irrigation source was made in 1982, the only reason for updating this Reuse Feasibility Study is to comply with Florida Statute, Section 403.064.

CHAPTER 2
EXISTING CONDITIONS

A. GENERAL CONDITIONS

Forest Utilities, Inc. is a privately owned, Florida Public Service Commission regulated wastewater utility having a franchise area of approximately 2,500 acres. The Forest Wastewater Treatment Facility is located southwest of US 41 and northwest of Island Park Road in southern Lee County, FL. The area served by the treatment facility is located approximately 10 miles south of the Fort Myers city limits.

The Forest Wastewater Treatment Facility provides wastewater collection, transmission and treatment for the franchised area comprised of single-family, multifamily and commercial developments. The wastewater system provides service to a total of approximately 2,390 committed equivalent residential connections (ERC's), all existing within the franchised area. An ERC is equivalent to 170 gallons of wastewater flow per day as established by the Public Service Commission. The service area is approximately 80% developed.

B. WASTEWATER MANAGEMENT

The Forest Wastewater Treatment Facility is permitted to operate at a capacity of 0.800 MGD utilizing a complete mix activated sludge process with filtered effluent going to a holding ponds located on the Forest golf course. The holding ponds are equipped with duplex pumping systems which discharges into the irrigation wet well for the golf course irrigation system. The transfer pumping units are interfaced to start up when the irrigation pumps are started, allowing the treated effluent to mix with lake water. The area serviced by the facility is approximately 80% developed and reclaimed effluent from the facility going to the golf course is approximately 0.402 MGD (annual average daily) at the end of 2019. Forest Utilities, Inc. does not plan to expand this facility beyond its present permitted treatment capacity. Therefore, the maximum amount of reclaimed water to be made available to the Forest golf course will be 0.800 MGD.

C. WATER SUPPLY

The tributary area serviced by the Forest Wastewater Treatment Facility is provided with potable water from two community water supply systems owned and operate by Lee County Utilities (formerly two systems - Gulf Utility Company and Florida Cities Water Company).

D. REUSE FACILITIES

The Forest Wastewater Treatment Facility has been providing the Forest golf course with reclaimed water since the completion of the 0.100 MGD treatment facility phase in the early 1980's. As population in the tributary area has increased, the availability of reclaimed water has increased proportionally, making the golf course less reliant upon surface and well waters for irrigation purposes.

CHAPTER 3
FUTURE CONDITIONS

A. GENERAL CONDITIONS

The Forest Wastewater Treatment Facility has a permitted capacity of 0.800 MGD. Forest Utilities, Inc. does not plan to expand on increased permitted capacity or discharge for this facility. The annual average daily flow recorded at this facility during 2019 was 0.402 MGD. Figure 3-1 included herein graphically depicts the projected maximum three-month ADF and annual ADF for the facility through the year 2030. There are presently no plans to abandon this facility, thus eliminating or lessening the availability of reclaimed water for the golf course.

B. WASTEWATER MANAGEMENT

As noted earlier in this report, the utility company does not plan to expand the Forest Wastewater Treatment Facility. This facility is operating at approximately 50% of its permitted capacity. The utility plans to continue operation of this facility until it reaches its permitted capacity. The treatment facility was designed to meet the needs of the utility's certificated franchise area. There is no evidence that the permitted capacity is deficient to meet this goal.

C. WATER SUPPLY

The area presently serviced by the Forest Wastewater Treatment Facility is provided with potable water from a community water supply system owned and operated by Lee County Utilities.

The irrigation water utilized at the Forest golf course is made up of a blend of reclaimed water from the Forest WWTF, surface runoff and makeup water from on-site wells. Forest Utilities, Inc. will continue to supply reclaimed water as stated in the present agreement. Reclaimed water is mixed with waters from golf course lakes in the irrigation pumping station for the golf course. Reclaimed water is transferred from effluent holding pond when golf course irrigation pumps are started.

D. REUSE FACILITIES

Forest Utilities, Inc. entered into an agreement with the Forest Country Club Membership Association, Inc. on January 3, 1989 (see Appendix 1) to supply the golf course with (if available) up to 1.0 MGD of treated wastewater effluent. The utility intends to continue providing the reclaimed water to the golf course for as long as both are in operation.

CHAPTER 4
DESCRIPTION OF ALTERNATIVES

Because this project is existing and has been utilizing reuse of treated effluent from the time the wastewater treatment facilities were originally completed, the “No Action” alternative is the only option to be considered for this feasibility study. The presently existing reuse system has been providing maximum reuse with all of the reclaimed wastewater being utilized for golf course irrigation. The continued reliance on this existing reuse system is anticipated for the immediate future.

CHAPTER 5
EVALUATION OF ALTERNATIVES

A. PRESENT VALUE ANALYSIS

Since this feasibility study is for a single alternative, a present value analysis of the existing reuse system is of no benefit. Therefore, this portion of the reuse feasibility study is not applicable.

B. EVALUATION OF RATES AND FEES

The wastewater treatment facilities, as well as the reuse transmission system, is owned, operated and maintained by Forest Utilities, Inc., a Public Service Commission regulated utility company. Monthly sewer fees are collected from each property owner within the service area development. The sewer fees collected provide the capital to operate and maintain the wastewater treatment facilities as well as the reuse system. It should be noted that the associated golf course is the only user of the reclaimed water from the reuse system, and the reuse system is an integral part of the wastewater treatment facilities. As was indicated previously in this study, the existing reuse system is the only alternative to be considered. As such, a detailed evaluation of the rates and fees to compare with other alternatives is not necessary.

C. TECHNICAL FEASIBILITY

The technical feasibility of utilizing reclaimed wastewater for golf course irrigation at the Forest golf course project is readily apparent as evidenced by its existence. The existing Forest Utilities, Inc. wastewater treatment facility was designed and constructed prior to the adoption of the Chapter 62-610, F.A.C. rules. This being the case, the existing treatment facilities fall short of complying with all of the rule changes incorporated into Chapter 62-610, F.A.C., a specific example of which is the Class I reliability requirement. The existing treatment facilities have had no problem delivering a quality of effluent meeting current standards. There is no reason to believe that the treatment facilities cannot continue to provide this same quality effluent in the future.

D. ENVIRONMENTAL ASSESSMENT

The existing reclaimed wastewater system has been in operation since approximately 1982. In accordance with the groundwater monitoring program, Forest Utilities, Inc. has been submitting test results from the monitoring wells every quarter for at least the past 10 years. There has been no evidence that the utilization of reclaimed wastewater as an irrigation source for the associated golf course has resulted in any degradation of the groundwater quality. The success of the existing reclaimed wastewater system in place, coupled with the potential for groundwater draw-down impacts if the system were not in place, further illustrates the effectiveness of the reuse system. Since the system is existing and no changes to the reuse system are being proposed, no additional impacts on the physical, biological or socioeconomic environment within the service area are projected to occur.

CHAPTER 6
SUMMARY AND CONCLUSIONS

As noted in Chapter 3, Forest Utilities, Inc. does not propose, plan or anticipate any changes or alterations to this facility in the future unless mandated by regulatory agencies in order to conform to water quality standards. An increase in permitted capacity is not anticipated.

APPENDIX NO. 1
RECOVERED WATER AGREEMENT

$2.50 Rec

2583182

RECOVERED WATER AGREEMENT

THIS AGREEMENT is made and entered into this 3rd day of January, 1989, by and between FOREST UTILITIES, INC., a Florida corporation, referred to as "Utility", and THE FOREST COUNTRY CLUB MEMBERSHIP ASSOCIATION, INC., a Florida corporation, referred to as "Owner", for the delivery and use of treated wastewater effluent (hereinafter referred to as "recovered water") for irrigation purposes on the Owner's property. Utility and Owner agree that:

1. Utility operates a wastewater treatment facility in Lee County, Florida, hereinafter referred to as the "Plant" located on property owned by Utility adjacent to Owner's property. The Plant produces recovered water which is used for various purposes including the irrigation of recreational sites and lawns.

2. The Owner holds title to the Forest Country Club site which includes approximately 280 acres of land located in Lee County, Florida. A legal description of the Owner's property is attached hereto as Exhibit "A". The Owner warrants that it owns title to this land in fee simple.

3. It is further warranted by the Owner and Utility that the undersigned representatives are authorized to execute this Agreement on behalf of the Owner and the Utility.

4. In consideration of Utility's commitment to deliver recovered water to the Owner, and the Owner's commitment to receive and use this water for permitted purposes, Utility and Owner agree to the specific terms and conditions set forth herein.

TERMS AND CONDITIONS

5. Subject to the other terms and conditions contained herein, Utility shall deliver and the Owner shall accept and use the recovered water from Utility's existing plant. The recovered water will be delivered to the Owner at a point or points of connection. The points of connection, monitoring wells and force mains are specifically identified in Exhibit "B". Owner grants to Utility an easement for ingress and egress over the property described in Exhibit "A" for operation, maintenance, repair,

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THIS INSTRUMENT WAS PREPARED BY
PETER J. GRIFFIN
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inspection, and monitoring of the Utility force mains, dams, gate valves, and each monitoring well described on Exhibit "B" as well as all other equipment related to the delivery system for the recovered water. These items shall be installed and maintained, and the easement right exercised, by Utility in such a manner as not to interfere unreasonably with the use of Owner's property as a Golf Course and Country Club. Utility will be responsible for the repair of any damage to Owner's property occasioned by Utility's exercise of the right of easement.

6. This Agreement shall be effective on the date of execution and will remain in effect for a term of ten (10) years commencing from the 3rd day of January, 1989. This Agreement shall be renewed automatically for a five-year term upon expiration of the initial term and every fifth year beyond the initial ten-year term, unless terminated by either party by written notice twelve (12) months in advance of the anniversary of the commencement of any automatic five year renewal.

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Use of Recovered Water

7. The Owner shall use the recovered water delivered by Utility for irrigation, frost protection, surface storage, or other purposes allowed in accordance with applicable regulations. The Owner has all necessary storage, pumping and irrigation facilities needed to utilize the recovered water provided by Utility. The Owner shall be solely responsible for the ownership, operation and maintenance of all portions of the irrigation system located within the boundary of the Owner's property. Utility shall own and maintain the force mains and shall maintain the dams and their components, all as shown on Exhibit "B" even though the same are located on Owner's property.

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8. Owner shall take all reasonable precautions, including the use of signs and appropriate labels, to clearly identify the recoverad water sources and supply system. These precautionary measures shall be designed to prevent confusion concerning the recovered water supply system and potable water supplies.

Water Quality

9. The recovered water delivered under the terms of this Agreement shall be treated by Utility by such treatment process as is required by local, state and federal regulatory agencies to remove harmful levels of bacteria, viruses, and other substances which would constitute a danger to human health. The recovered water shall be of a quality which is appropriate for the irrigation of lawns, golf courses, landscape plants and trees, and other unrestricted public access areas.

10. Utility shall analyze the recovered water under the monitoring plan which is attached to this Agreement as Exhibit "C". This monitoring plan described the substances which will be analyzed and the frequency of the analysis. The location of the monitoring wells to be utilized by Utility is shown on Exhibit "B". Copies of test results from the monitoring wells shall be delivered to Owner within seven days after receipt thereof by Utility.

11. The Plant has a current design capacity of 500,000 gallons per day and is anticipated, under current construction design, to be expanded to 1.0 million gallons per day (average day capacity).

12. It is anticipated, but not warranted, that up to 1.0 million gallons per day of recovered water will be available for the Owner. Owner agrees to accept and Utility agrees to deliver all recovered water produced by Utility up to a maximum of 1,000,000 gallons of recovered water per day. Additional recovered water in excess of 1,000,000 gallons per day may be used by the Owner on a voluntary basis, if additional recovered water is available. Likewise, should it be shown that the above rates of application cause circumstances which violate existing or future local, state or federal regulations pertaining to the safe use of reclaimed water, Owner and Utility agree to reduce the above recovered water allocations to amounts which will allow compliance with the regulations, at no cost to the Owner.

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13. Utility shall consult with the Owner, and any other property owners that enter into similar agreements with Utility, to establish a mutually beneficial delivery schedule so that under normal conditions, to the extent possible, the Owner shall receive its weekly allotment of recovered water at an acceptable time and within an acceptable time period. Utility will make reasonable efforts to accommodate the irrigation systems and practices of this Owner and any other similarly situated person.

Delivery of Recovered Water Under Adverse Conditions

14. Utility and Owner recognize that adverse weather conditions or unforeseen circumstances may necessitate modifications to the normal delivery schedule established herein. The Owner shall have the right to restrict or refuse the use of the recovered water in the event of adverse weather conditions or unforeseen circumstances, for a maximum of two (2) consecutive days. The Owner shall give notice to Utility in advance of the Owner's exercise of this right. If advance notice is not practical or possible, the Owner shall give notice immediately upon its exercise of this right.

15. Both parties recognize that adverse weather conditions or unforeseen circumstances may result in the need for recovered water greater than or less than the volumes described in paragraph 12. The Owner and Utility agree to cooperate in reaching solutions to the problems created for either party as a result of such circumstances.

Terms or Modifications of Owner's Commitment

16. Upon execution by the Owner and Utility, this Agreement shall be binding as a covenant or condition which shall bind any subsequent owner of the land described in Exhibit "A" unless the commitments undertaken by the current Owner are modified in the manner provided herein, and shall bind any subsequent owner of the Plant and Utility, whether such owner is a private or governmental entity. This Agreement shall be recorded in the official records of Lee County, Florida.

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17. The Owner's right to sell, transfer or encumber the land described in Exhibit "A" shall not be restricted by this Agreement. However, any subsequent owner or successor in interest shall be obligated to receive and use the weekly allocation of recovered water as described herein and shall be subject to all of the other terms and conditions of this Agreement. Any buyer, transferee, or successor in interest, receiving the Owner's interest in this land or Utility's interest in the Plant must execute and deliver to the other party to this Agreement, prior to any sale or transfer, an acknowledgment and acceptance of the terms and conditions of this Agreement.

18. Owner shall receive from Utility, when they are filed with any governmental authority, copies of all permit applications and other related correspondence relative to future construction and operating permit requests for the Plant and resultant effluent disposal.

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Indemnity for Third Party Claims

19. If the Owner uses recovered water for the purposes set forth herein, consistent with the terms and conditions of this Agreement, Utility shall indemnify the Owner and hold the Owner harmless from any and all claims, actions, suits, proceedings, and all costs, expenses, damages and liabilities arising out of claims by third parties using Owner's land or residing on or using land adjacent to or in close proximity to Owner's land (described in Exhibit "A") that the use of recovered water has resulted in adverse human health effects to those residing on or using lands adjacent to or in close proximity to Owner's land. The Owner shall be indemnified in like manner for claims that the use of recovered irrigation water in the manner set forth in this Agreement constitutes a nuisance. This indemnity shall apply only if the Owner promptly notifies Utility of any such claims and cooperates fully in the defense against them.

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20. Utility's obligation to indemnify the Owner shall also be conditioned upon the Owner's compliance with any reasonable operating practice or restriction for protecting human health and

the environment, which Lee County, the State of Florida, or the Federal Government may establish from time to time and provide to Owner. Reasonable operating practices include any requirements established by the United States Environmental Protection Agency, DER, EPC, or other agency with jurisdiction over the activities described herein. Utility shall be indemnified in the same manner described above for similar claims or demands from persons residing on or using land adjacent to or in close proximity to the land described in Exhibit "A", or on the land described in Exhibit "A", in the event the Owner fails to comply with this Agreement and any operating practice or restriction protecting human health and the environment, as described above, and any claim or demand that arises out of Owner's failure to comply.

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Excuse from Performance by Governmental Acts

21. If for any reason during the term of this Agreement a local, regional, state or federal government or agency other than one who is a successor in ownership, title or interest to the Plant or to Utility, fails to issue necessary permits, grant necessary approvals, or requires any substantial change in the operation of the systems or the treatment, transmission or distribution of, or the application or use of recovered water, then to the extent that such requirement shall affect the ability of any party to perform any of the terms of this Agreement, the affected party shall be excused from the performance thereof and a new Agreement shall be negotiated, if possible, by Utility and Owner in conformance with such permits, approvals, or requirements.

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Remedy for Default

22. Because of the unique nature of the rights and responsibilities of the parties under this Agreement, it is understood that in the event of a breach of this Agreement by either party, monetary damages would be wholly inadequate as a remedy for either party. Accordingly, the parties agree that each shall have the right of specific performance against the

other party to require the defaulting party to perform in accordance with the terms and provisions of this Agreement.

23. Utility shall have the right to transfer all or any part of the treatment, transmission or distribution facilities and to assign all or any part of its rights and obligations under this Agreement to another entity and such entity shall be bound by and be exclusively responsible for all applicable terms and conditions of this Agreement.

Notices

24. All notices required or authorized under this Agreement shall be given in writing and shall be served by mail on the parties at the following addresses:

Owner:	The Forest Country Club Membership Association, Inc. Attention: President 6100 Club Boulevard, S.W. Fort Myers, Florida 33908
Utility:	Forest Utilities, Inc. Attention: President 6385 Presidential Court, S.W. Fort Myers, Florida 33919

Inspections

25. Utility shall have the right, upon written notice to the Owner, to enter upon the Owner's property to review and inspect the Owner's operation, practices, and any positive disconnect mechanisms between the Owner's irrigation system and any well or potable water system.

Disclaimer of Third Party Beneficiaries

26. This Agreement is solely for the benefit of Utility and the Owner and their assigns. No right or cause of action shall accrue hereon or by reason hereof, to or for the benefit of any third party who is not a formal party hereto.

Severability

27. If any part of this Agreement is found invalid or unenforceable by any court, such invalidity or unenforceability shall not affect the other parts of this Agreement if the rights and obligations of the parties contained herein are not materially prejudiced and if the intentions of the parties can

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continue to be effected. To that end, this Agreement is declared severable.

Applicable Law

28. This Agreement and the provisions contained herein shall be construed, controlled and interpreted according to the laws of the State of Florida.

29. This Agreement constitutes the entire Agreement between the parties and has been entered into voluntarily and with independent advice and legal counsel and has been executed by the authorized representative of each party on the date written below. Modifications to and waiver of the provisions herein shall be made in writing by the parties hereto.

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Witnesses:

FOREST UTILITIES, INC.

By: _____
President
"UTILITY"

THE FOREST COUNTRY CLUB MEMBERSHIP ASSOCIATION, INC.

By: John A Copeland
President
"OWNER"

STATE OF FLORIDA

COUNTY OF LEE

BEFORE ME, this day, personally appeared _____ DAVID W. SWOR, as President of FOREST UTILITIES, INC., to me well known and known to me to be the person described in and who executed the foregoing agreement and he acknowledged before me the execution of the same.

WITNESS my hand and official seal this 3rd day of January, 1989.

_____
Notary Public

My Commission Expires:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. MAY 14,1990
BONDED THRU GENERAL INS. UND.

STATE OF FLORIDA

COUNTY OF LEE

BEFORE ME, this day, personally appeared _____ JOHN A. COPELAND, as President of THE FOREST COUNTRY CLUB MEMBERSHIP ASSOCIATION, INC., to me well known and known to me to be the person described in and who executed the foregoing agreement and he acknowledged before me the execution of the same.

WITNESS my hand and official seal this 3rd day of January, 1989.

Notary Public

My Commission Expires:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. MAY 14,1990
BONDED THRU GENERAL INS. UND.

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EXHIBIT "A"

DESCRIPTION: Golf Course at The Forest

A tract of land lying in Section 1, Township 46 South, Range 24 East, Lee County, Florida, being more particularly described as follows:

PARCEL 1:

Commencing at the Southwest corner of the Northwest Quarter (N.W.¼) of said Section 1, thence run S.0°22'48"E. along the West line of said Section 1 for 390.02 feet to the point of beginning; thence continue S.0°22'48"E. for 1446.29 feet; thence run N.73°57'27"E. for 250.82 feet; thence run N.29°02'14"W. for 30.00 feet; thence run S.40°18'15"E. for 239.90 feet; thence run S.19°38'44"E. for 99.31 feet; thence run S.32°29'07"E. for 9.78 feet; thence run S.44°08'31"W. for 282.83 feet; thence run S.45°51'29"E. for 100.00 feet; thence run S.0°51'29"E. for 300.00 feet to the North line of I.D.D. Canal "T"; thence run N.89°08'31"E. along said North line for 551.00 feet to the Southeast corner of Lot 3, Block 10, "The Forest, Unit One" as recorded in Plat Book 33 Page 85 through 88 of the Public Records of Lee County,Florida; thence run N.0°51'29"W. for 130.00 feet to the Northeast corner of said Lot 3; thence run S.89°08'31"W. along the boundary of said Lot 3 for 15.0 feet; thence run Northwesterly along the boundary of said Lot 3 and said Unit One for 186.75 feet on the arc of a curve to the right having a radius of 235.0 feet and a central angle of 45°31'59"; thence run N.45°19'30"W. along the boundary of said Unit One for 305.20 feet; thence run N.44°40'30"E. along said boundary for 60.00 feet; thence run S.45°19'30"E. along said boundary for 305.20 feet; thence run Southeasterly for 139.07 feet along said boundary on the arc of a curve to the left having a radius of 175.00 feet and a central angle of 45°31'59"; thence run N.89°08'31"E. along said boundary for 85.00 feet to the Southwest corner of "The Forest, Unit Three" as recorded in Plat Book 35, Pages 34-37 of the Public Record of Lee County, Florida; thence run N.0°51'29"W. along said boundary for 30.0 feet; thence run N.13°39'44"W. along said boundary for 225.61 feet; thence run N.0°51'29"W. along said boundary for 294.46 feet; thence run N.12°30'49"E. along said boundary for 604.27 feet; thence run N.1°35'56"E. along said boundary for 333.82 feet; thence run N.89°51'15"W. for 15.00 feet; thence run N.1°35'56"E. for 120.04 feet; thence run S.89°51'15"E. for 15.00 feet; thence run N.1°35'56"E. along said boundary for 120.04 feet; thence run S.89°51'15"E. along said boundary for 149.67 feet; thence run N.0°08'46"E. along said boundary for 30.00 feet; thence run N.89°51'15'W. along said boundary for 148.91 feet; thence run N.1°35'56"E. along said boundary for 154.18 feet; thence run N.63°38'17"W. along said boundary for 112.49 feet; thence run S.20°35'00"W. for 147.73 feet; thence run S.0°34'53"W. for 106.80 feet; thence run S.20°35'00"W. for 581.57 feet; thence run N.87°14'43"W. for 82.80 feet; thence run N.34°58'32"W. for 325.62 feet; thence run N.2°45'17"E. for 577.23 feet; thence run S.89°06'24"W. for 440.00 feet to the point of beginning.

PARCEL 2:

Beginning at the Southeast corner of Lot 29, Block 17,"The Forest, Unit Three" as shown on plats recorded in Plat Book 35 at Pages 34-37 of the Public Records of Lee County, Florida; thence run S.69°03'10"W.

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along the boundary of said Unit Three for 78.37 feet; thence run S.30°13'16"W. along said boundary for 74.54 feet; thence run S.0°54'04"W. along said boundary for 106.72 feet; thence run S.0°22'48"E. along said boundary for 1160.00 feet; thence run S.26°35'01"E. along said boundary for 319.19 feet; thence run S.10°39'04"E. along said boundary for 149.62 feet; thence run S.18°52'15"W. along said boundary for 515.20 feet; thence run S.0°53'36"E. along said boundary for 64.31 feet; thence run S.89°06'24"W. along said boundary for 170.00 feet; thence run Southwesterly along said boundary for 80.50 feet on the arc of a curve concave Easterly having a radius of 710.00 feet (chord bearing of S.5°10'49"W.); thence run N.89°06'24"E. along said boundary for 1022.20 feet; thence run N.0°53'36'W. for 80.00 feet; thence run S.89°06'24"W. for 302.86 feet; thence run N.9°25'59"E. for 891.51 feet; thence run N.37°45'47"W. for 177.89 feet; thence run N.2°37'10"E. for 363.93 feet; thence run N.83°31'07"W. for 348.13 feet; thence run N.57°16'57"E. for 28.55 feet; thence run S.73°20'45"E. for 148.64 feet; thence run S.11°18'36"E. for 724.64 feet; thence run S.15°25'39"W. for 702.37 feet; thence run S.89°06'24"W. for 159.02 feet; thence run S.0°53'36"E. for 80.00 feet; thence run Southeasterly for 108.30 feet on the arc of a curve concave Southwesterly having a radius of 105.00 feet (chord bearing of S.61°20'40"E.); thence run S.31°47'44"E. for 66.26 feet; thence run Southeasterly for 76.82 feet on the arc of a curve to the left having a radius of 75.00 feet and a central angle of 58°41'02" to a point of reverse curvature; thence run Southeasterly for 237.21 feet on the arc of a curve to the right having a radius of 380.00 feet and a central angle of 35°46'00"; thence run S.54°42'46"E. for 21.35 feet; thence run Southeasterly for 28.04 feet on the arc of a curve to the left having a radius of 230.00 feet and a central angle of 6°59'04"; thence run S.28°18'10"W. for 30.00 feet; thence run S.43°27'53"W. for 163.82 feet; thence run N.74°40'59"W. for 743.90 feet; thence run S.23°42'30"W. for 40.00 feet; thence run Southeasterly for 47.12 feet on the arc of a curve to the left having a radius of 30.00 feet and a central angle of 90°00'00" to a point on the boundary of said Unit Three; thence run S.66°17'30"E. along said boundary for 77.44 feet; thence run Southeasterly along said boundary for 237.71 feet on the arc of a curve to the right having a radius of 205.00 feet and a central angle of 66°26'16"; thence run S.0°08'46"W. along said boundary for 499.13 feet; thence run S.63°48'23"E. along said boundary for 202.13 feet; thence run S.12°30'49"W. along said boundary for 815.00 feet; thence run S.0°51'29"E. along said boundary for 257.26 feet; thence run S.23°06'26"E. along said boundary for 118.85 feet; thence run S.0°51'29"E. along said boundary for 135.00 feet to a point on the boundary of "The Forest, Unit One" as recorded in Plat Book 33 at Pages 85-88 of the Public Records of Lee County; thence run N.89°08'31"E. along said boundary for 80.00 feet; thence run Northeasterly along said boundary for 135.78 feet on the arc of a curve to the left having a radius of 275.00 feet and a central angle of 28°17'19" to a point of reverse curvature; thence run Easterly along said boundary for 296.24 feet on the arc of a curve to the right having a radius of 300.00 feet (chord bearing N.89°08'31"E.) to a point of reverse curvature; thence run Southeasterly along said boundary for 93.29 feet on the arc of a curve to the left having a radius of 275.00 feet and a central angle of 19°26'13"; thence run N.0°51'29"W. along said boundary for 121.72 feet; thence run N.22°58'11"E. along said

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boundary for 103.31 feet; thence run N.8°37'45"W. along said boundary for 680.00 feet; thence run N.46°08'50"E. along said boundary for 500.00 feet; thence run S.49°00'29"E. along said boundary for 162.15 feet; thence run S.17°39'12"W. along said boundary for 437.00 feet; thence run S.8°37'45"E. along said boundary for 500.00 feet; thence run S.81°22'15"W. along said boundary for 130.00 feet; thence run S.8°37'45"E. along said boundary for 31.88 feet; thence run Southeasterly along said boundary for 42.25 feet on the arc of a curve to the right having a radius of 400.00 feet and a central angle of 6°03'07"; thence run N.89°08'31"E. along said boundary for 530.20 feet; thence run N.89°09'31"E. along said boundary for 273.72 feet; thence run N.0°50'29"W. for 145.00 feet; thence run Northwesterly for 54.17 feet on the arc of a curve to the left having a radius of 185.00 feet and a central angle of 16°46'32"; thence run S.89°09'31"W. for 94.65 feet; thence run S.78°49'14"W. for 396.89 feet; thence run N.0°50'29"W. for 452.00 feet; thence run N.59°02'11"E. for 104.96 feet; thence run S.50°54'23"E. for 586.44 feet; thence run S.0°50'29"E. for 57.00 feet; thence run S.89°09'31"W. for 24.21 feet; thence run Southwesterly for 53.96 feet on the arc of a curve concave Westerly having a radius of 215.00 feet and a central angle of 14°22'47"; thence run S.0°50'29"E. for 145.00 feet to said boundary line of "The Forest, Unit One"; thence run N.89°09'31"E. along said boundary for 573.24 feet; thence run N.5°40'23"W. along said boundary for 91.26 feet; thence run N.85°28'44"W. along said boundary for 216.70 feet; thence run N.34°33'54"W. along said boundary for 209.84 feet; thence run N.10°17'53"E. along said boundary for 686.74 feet; thence run N.1°09'39"W. along said boundary for 389.43 feet; thence run N.38°35'40"E. along said boundary for 85.00 feet; thence run S.51°24'20"E. along said boundary for 99.34 feet; thence run Southeasterly along said boundary for 52.58 feet on the arc of a curve to the left having a radius of 370.00 feet and a central angle of 8°08'30"; thence run Northeasterly along said boundary for 4.72 feet on the arc of a curve concave Southeasterly having a radius of 335.00 feet and a central angle of 0°48'26" (chord bearing N.23°28'22"E.) to a point of reverse curvature; thence run Northwesterly along said boundary for 41.22 feet on the arc of a curve to the left having a radius of 30.00 feet and a central angle of 78°42'53" to a point of reverse curvature; thence run Northwesterly along said boundary for 20.37 feet on the arc of a curve to the right having a radius of 340.00 feet and a central angle of 3°25'57"; thence run N.51°24'20"W. along said boundary for 99.34 feet; thence run Northwesterly along said boundary for 175.80 feet on the arc of a curve to the left having a radius of 530.00 feet and a central angle of 19°00'18"; thence run N.19°35'22"E. along said boundary for 100.00 feet; thence run Southeasterly along said boundary for 47.94 feet on the arc of a curve concave Southwesterly having a radius of 630.00 feet and a central angle of 4°21'36" (chord bearing S.68°13'55"E.) to a point of reverse curvature; thence run Northeasterly along said boundary for 51.56 feet on the arc of a curve to the left having a radius of 40.00 feet and a central angle of 73°51'36"; thence run Northwesterly along said boundary for 132.28 feet on the arc of a curve concave Southwesterly having a radius of 660.00 feet and a central angle of 11°29'07"; thence run N.7°05'17"E. along said boundary for 67.98 feet; thence run N.27°17'05"W. along said boundary and along the boundary of "The

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Forest, Unit Two" as shown on plats recorded in Plat Book 34 at Pages 20-22 of the Public Records of Lee County, Florida for 782.59 feet; thence run N.53°17'06"W. along said boundary of Unit Two for 642.41 feet; thence run N.79°50'01"W. along said boundary for 91.17 feet; thence run S.5°13'11"W. along said boundary for 29.54 feet; thence run N.77°25'40"W. along the Northerly line of Lot 9, Block 13, "The Forest, Unit Two" as shown in Plat Book 34 Pages 20-22 of the Public Records of Lee County, Florida for 152.11 feet; thence run S.12°34'20"W. along the Westerly line of said Lot 9 for 52.95 feet; thence run S.48°51'47"E. for 194.64 feet to the Southeast corner of said Lot 9; thence run S.60°26'31"E. along the boundary of said Unit Two for 152.31 feet; thence run S.14°05'18"W. along said boundary for 87.31 feet; thence run S.83°51'06"W. along said boundary for 300.14 feet; thence run S.79°12'54"W. along said boundary for 195.36 feet; thence run N.47°39'38"W. along said boundary for 108.05 feet; thence run N.18°13'10"E. along said boundary for 519.86 feet; thence run N.62°13'56"W. for 89.05 feet; thence run N.2°55'30"E. for 132.25 feet; thence run N.77°56'02"E. for 123.41 feet; thence run N.18°13'10"E. for 30.00 feet; thence run S.84°15'39"E. for 284.20 feet to a point on said boundary of "The Forest, Unit Two"; thence run S.79°50'01"E. along said boundary for 483.00 feet; thence run S.54°30'05"E. along said boundary for 580.00 feet; thence run S.21°25'56"E. along said boundary for 110.41 feet; thence run N.68°34'04"E. along said boundary for 105.54 feet; thence run Northeasterly along said boundary for 125.96 feet on the arc of a curve to the right having a radius of 325.00 feet (chord bearing N.79°40'16"E.) to a point of reverse curvature; thence run Northeasterly along said boundary for 157.43 feet on the arc of a curve to the left having a radius of 147.50 feet (chord bearing N.60°11'51"E.); thence run N.80°25'08"W. for 156.13 feet; thence run N.08°01'28"W. for 219.18 feet; thence run East 125.00 feet to the boundary line of said "The Forest, Unit Two"; thence run N.31°32'00"W. along said boundary for 154.53 feet; thence run Northwesterly along said boundary for 115.84 feet along the arc of a curve to the right having a radius of 197.50 feet and a central angle of 33°36'24" to a point of reverse curvature; thence run Northwesterly along said boundary for 50.86 feet on the arc of a curve to the left having a radius of 40.00 feet and a central angle of 72°51'30"; thence run N.70°47'06"W. along said boundary for 10.61 feet; thence run Northwesterly along said boundary for 40.20 feet on the arc of a curve to the right having a radius of 135.00 feet and a central angle of 17°03'36"; thence run S.57°12'27"W. for 240.32 feet; thence run N.72°46'20"W. for 377.20 feet; thence run N.87°48'10"W. for 280.27 feet; thence run N.71°39'25"W. for 197.01 feet; thence run N.33°39'05"W. for 84.13 feet; thence run N.0°24'09"W. for 477.00 feet; thence run N.11°37'24"W. for 778.40 feet to a point on the boundary of said "The Forest, Unit Two"; thence run N.74°17'19"W. along said boundary for 79.14 feet; thence run S.35°01'42"W. along said boundary for 38.81 feet; thence run S.0°24'09"E. along said boundary for 778.62 feet; thence run S.6°02'38"E. along said boundary for 583.00 feet; thence run S.57°04'44"W. along said boundary for 205.61 feet; thence run N.77°51'25"W. along said boundary for 136.80 feet; thence run N.10°52'12"W. along said boundary for 360.00 feet; thence run N.0°24'09"W. along said boundary for 370.00 feet; thence run N.27°15'13"W. along said boundary for 255.00 feet; thence run N.16°24'16"E. along said boundary for 403.29 feet; thence run

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N.1°01'31"W. along said boundary for 100.00 feet; thence run N.37°53'43"W. along said boundary for 37.50 feet; thence run S.88°58'29"W. along said boundary for 125.00 feet; thence run S.1°01'31"E. for 36.49 feet; thence run S.61°27'01"W. for 35.00 feet; thence run S.19°42'52"W. for 127.47 feet; thence run S.1°01'31"E. for 60.00 feet; thence run S.38°00'29"W. for 85.26 feet; thence run S.49°29'58"W. for 161.29 feet; thence run N.89°22'06"W. for 204.25 feet; thence run N.46°20'28"W. for 197.55 feet; thence run S.82°49'49"W. for 179.54 feet; thence run N.77°07'12"W. for 92.20 feet; thence run N.30°36'46"W. for 46.65 feet; thence run N.57°14'31"W. for 299.10 feet; thence run N.1°01'31"W. for 21.00 feet to the point of beginning. Tract herein described contains 169.16± acres..

PARCEL 3:

Commencing at the Northeast corner of the Northwest Quarter (N.W.¼) of Southeast Quarter (S.E.¼) of said Section 1; thence run S.0°24'20"E. long the East line of the Northwest Quarter (N.W.¼) of the Southeast Quarter (S.E.¼) of said Section 1 for 68.00 feet to the point of beginning; thence continue S.0°24'20"E. along said East line for 237.41 feet; thence run S.58°25'06"W. for 35.06 feet; thence run S.0°24'20"E. for 55.56 feet to the Northeast corner of Lot 4, Block 1 of "The Forest Unit One", as recorded in Plat Book 33 at Pages 85-88 of the Public Records of Lee County, Florida; thence run S.89°35'40"W. along the boundary of said Unit One for 150.00 feet; thence run S.0°24'20"E. along said boundary for 500.00 feet; thence run S.89°35'40"W. along said boundary for 125.00 feet; thence run Northwesterly along said boundary for 163.36 feet along the arc of a curve to the right having a radius of 240.00 feet and a central angle of 39°00'00"; thence run N.51°24'20"W. along said boundary for 99.34 feet; thence run Northwesterly along said boundary for 29.13 feet on the arc of a curve to the left having a radius of 630.00 feet and a central angle of 2°38'57" to a point of reverse curvature; thence run Northwesterly along said boundary for 51.56 feet on the arc of a curve to the right having a radius of 40.00 feet central angle 73°51'36"; thence run Southeasterly along said boundary for 68.96 feet on the arc of a curve concave Southwesterly having a radius of 660.00 feet and a central angle of 5°59'12" (chord bearing S.54°23'56"E.); thence run S.51°24'20"E. along said boundary for 99.34 feet; thence run N.38°35'40"E. along said boundary for 75.00 feet; thence run N.7°41'31"W. along said boundary for 246.47 feet; thence run N.16°24'41"W. along said boundary for 788.16 feet; thence run N.68°34'04"E. along said boundary for 84.39 feet; thence run S.28°31'29"E. for 407.59 feet; thence run N.89°06'24"E. for 367.69 feet to the point of beginning.

PARCEL 4:

Commencing at the Southeast corner of the Southwest Quarter (S.W.¼) of the Southeast Quarter (S.E.¼) of said Section 1; thence run S.89°09'31"W. along the South line of said Section 1 for 30.00 feet to the West right-of-way line of Island Park Road; thence run N.0°24'20"W. along said West line for 240.00 feet; thence run S.89°09'31"W. for 155.00 feet to a point on the boundary of "The Forest,Unit One", as

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recorded in Plat Book 33 at Pages 85-88 of the Public Records of Lee County and the point of beginning; thence continue S.89°09'31"W. along said boundary for 100.22 feet; thence run Northwesterly along said boundary for 148.65 feet on the arc of a curve to the right having a radius of 100.00 feet and a central angle of 85°10'06"; thence run N.5°40'23"W. along said boundary for 184.87 feet; thence run Northwesterly along said boundary for 183.65 feet on the arc of a curve to the left having a radius of 180.00 feet and a central angle of 58°27'29"; thence run S.88°35'48"E. along said boundary for 103.59 feet; thence run N.7°29'29"W. along said boundary for 225.16 feet; thence run N.10°17'53"E. along said boundary for 765.52 reet; thence run S.89°35'40"W. along said boundary for 20.86 feet; thence run Northeasterly along said boundary for 139.13 feet on the arc of a curve to the right having a radius of 370.00 feet and a central angle of 21°32'38"; thence run Northeasterly along said boundary for 2.16 feet on the arc of a curve concave Southeasterly having a radius of 225.00 feet (chord bearing N.22°41'54"E.) to a point of compound curvature; thence run Northwesterly along said boundary for 43.75 feet on the arc of a curve to the right having a radius of 30.00 feet and a central angle of 83°33'28" to a point of reverse curvature; thence run Southeasterly along said boundary for 100.21 feet on the arc of a curve to the left having a radius of 340.00 feet and a central angle of 16°53'11"; thence run N.89°35'40"E. along said boundary for 120.00 feet; thence run S.0°24'20"E. for 1421.36 feet to the point of beginning.

PARCEL 5:

Commencing at the Southwest corner of the Northwest Quarter (N.W.¼) of said Section 1; thence run N.0°22'48"W. along the West line of said Section 1 for 426.52 feet to the point of beginning; thence continue N.0°22'48"W. along said West line for 475.00 feet; thence run S.32°22'14"E. for 308.99 feet along the boundary of "The Forest Unit Three", as recorded in Plat Book 35 at Pages 34-37 of the Public Records of Lee County, Florida; thence run S.18°52'15"W. along said boundary for 135.00 feet; thence run S.53°58'15"W. along said boundary for 146.67 feet to the point of beginning.

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PARCEL 6

DESCRIPTION: Gulf Course at The Oaks

A tract of land for Gulf Course purposes being part of The Oaks, Unit One, a subdivision of part of Sections 1 and 2, Township 46 South, Range 24 East, Lee County, Florida, recorded in Plat Book 37 at Pages 51 through 55 of the Public Records of Lee County, Florida, being more particularly described as follows:

All of Tract "I" of The Oaks, Unit One, lying in said Section 2, containing 32.599 Acres, more or less.

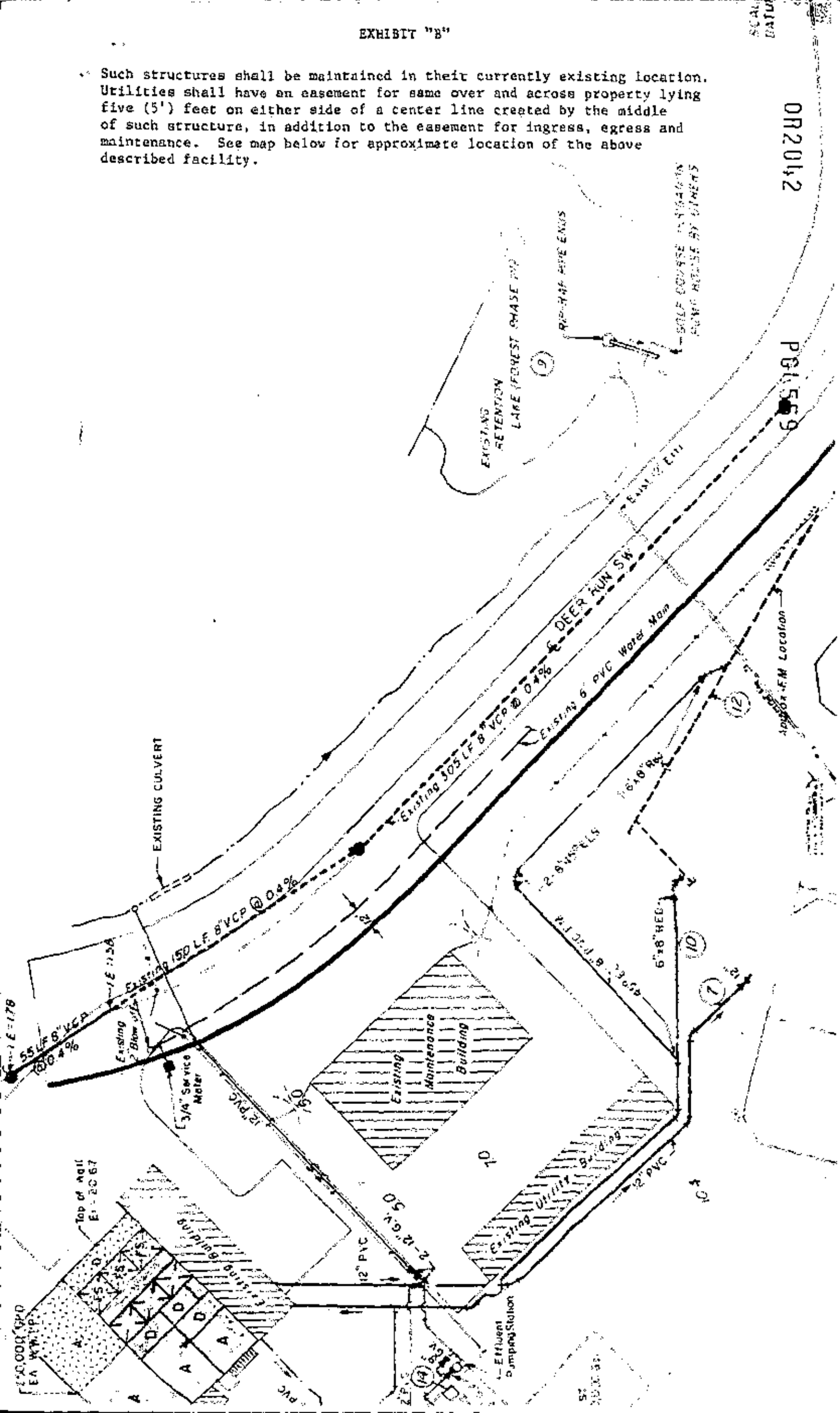
Together with: That part of Tract "N" of The Oaks, Unit One, described as follows:

Beginning at the Southeast corner of said Section 2, being also the Southeast corner of said Tract "N"; thence run N.0°22'48"W. along the East line of said Tract "N" for 982.00 feet; thence run S.89°37'12"W. along the boundary of said Tract "N" for 382.00 feet; thence run N.0°18'10"W. along said boundary for 1222.33 feet; thence run N.37°09'30"W. along said boundary for 119.20 feet; thence run N.25°13'33"W. along said boundary for 67.62 feet; thence run S.67°22'27"W. for 173.50 feet; thence run S.8°15'35"W. for 681.81 feet; thence run S.37°09'43"W. for 241.57 feet; thence run N.86°31'41"W. for 185.00 feet to a point on the boundary line of said Tract "N"; thence run S.5°43'48"E. along said boundary for 333.27 feet; thence run S.14°46'18"E. along said boundary for 175.62 feet; thence run S.20°25'19"E. along said boundary for 247.20 feet; thence run S.2°50'27"W. along said boundary for 223.23 feet; thence run S.72°18'43"E. along said boundary for 130.56 feet; thence run S.53°47'35"W. along said boundary for 210.92 feet; thence run S.7°26'45"E. along said boundary for 335.74 feet to the South line of said Section 2; thence run N.88°51'38"E. along said South line for 934.75 feet to the point of beginning.

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EXHIBIT "B"

Such structures shall be maintained in their currently existing location. Utilities shall have an easement for same over and across property lying five (5') feet on either side of a center line created by the middle of such structure, in addition to the easement for ingress, egress and maintenance. See map below for approximate location of the above described facility.



In accord with the minimum requirements of all governmental bodies with jurisdiction, monitoring wells are located off the Exhibit "A" property adjacent to Lot 18 and Timberlakes Drive, S.W., Block 17, The Forest, Unit Two, a subdivision, recorded in Plat Book 34, Pages 20-22; adjacent to Forest Boulevard, S.W., prior to its juncture with U.S. 41 and on the property described in Exhibit "A" between the first green and the eighteenth tee of the Bear Course and the Forest Country Club. (See map below)

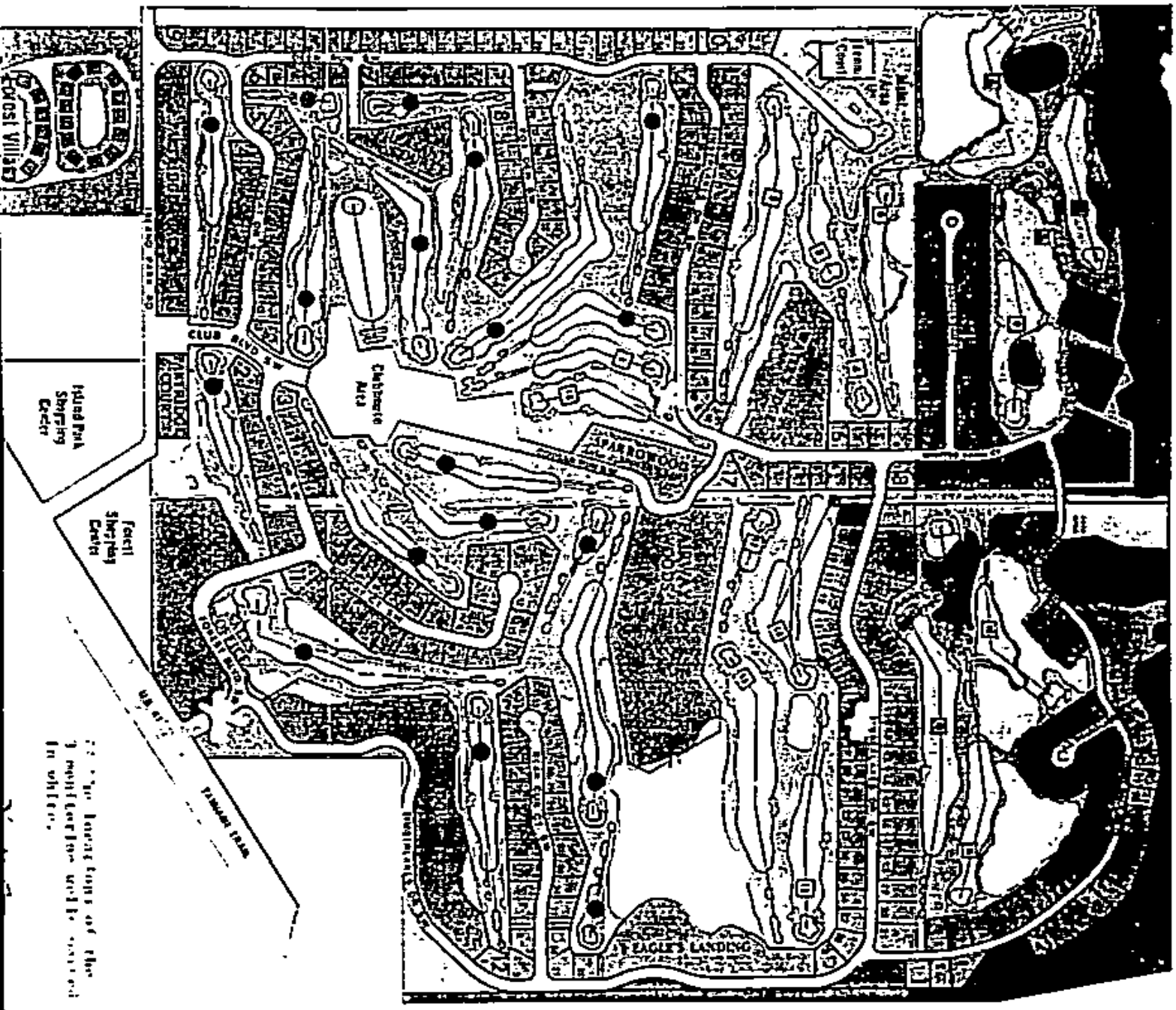
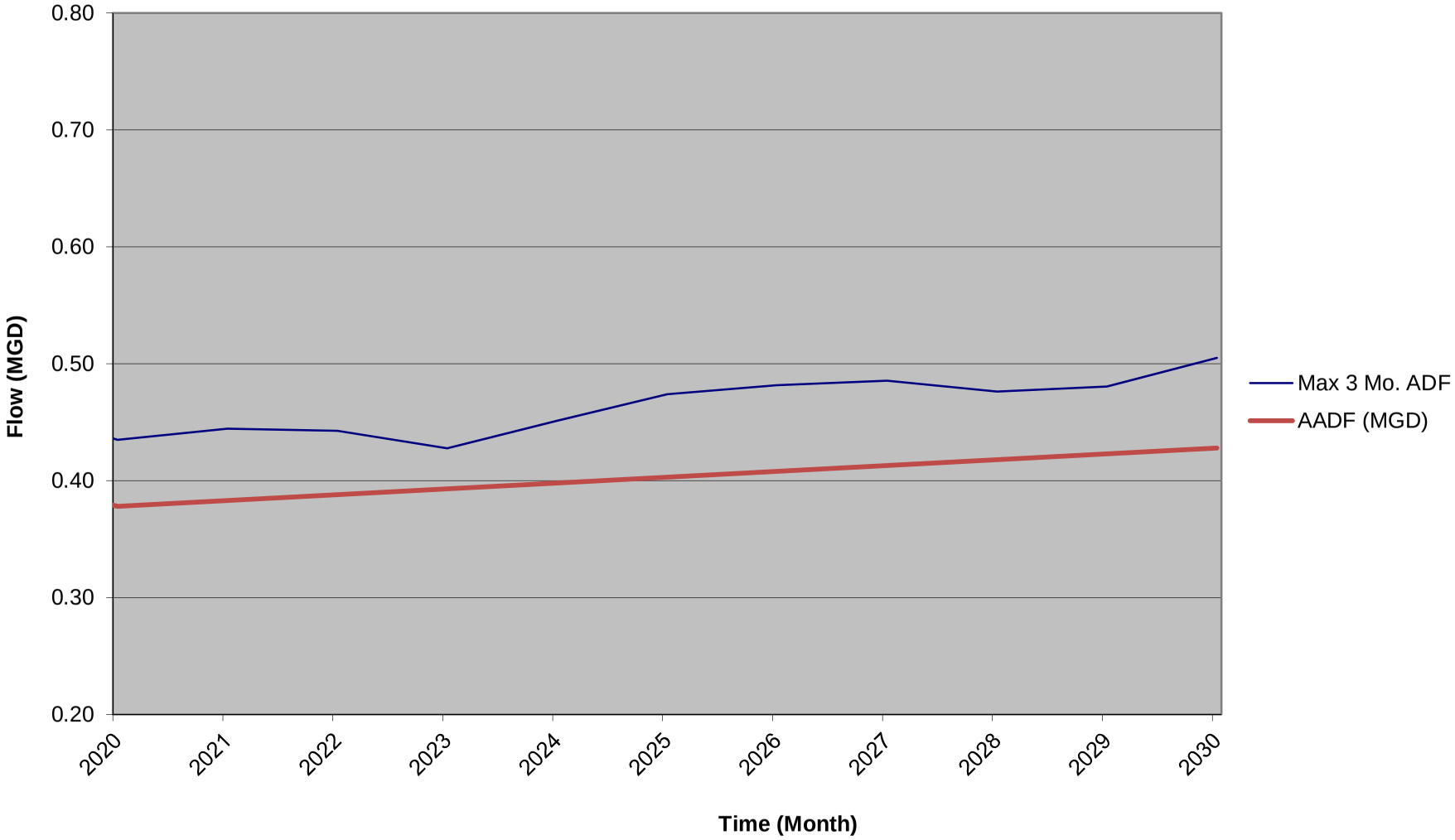


Figure 3-1

Forest Utilities 0.800 MGD WWTP
Projected Wastewater Flows



SECTION 8. DOCUMENTATION

1. GENERAL APPLICATION REQUIREMENTS

h. Binding Agreements and Documentation of Controls on Individual Users of Reclaimed Water

$2.50 Rec

2583182

RECOVERED WATER AGREEMENT

THIS AGREEMENT is made and entered into this 3rd day of January, 1989, by and between FOREST UTILITIES, INC., a Florida corporation, referred to as "Utility", and THE FOREST COUNTRY CLUB MEMBERSHIP ASSOCIATION, INC., a Florida corporation, referred to as "Owner", for the delivery and use of treated wastewater effluent (hereinafter referred to as "recovered water") for irrigation purposes on the Owner's property. Utility and Owner agree that:

1. Utility operates a wastewater treatment facility in Lee County, Florida, hereinafter referred to as the "Plant" located on property owned by Utility adjacent to Owner's property. The Plant produces recovered water which is used for various purposes including the irrigation of recreational sites and lawns.

2. The Owner holds title to the Forest Country Club site which includes approximately 280 acres of land located in Lee County, Florida. A legal description of the Owner's property is attached hereto as Exhibit "A". The Owner warrants that it owns title to this land in fee simple.

3. It is further warranted by the Owner and Utility that the undersigned representatives are authorized to execute this Agreement on behalf of the Owner and the Utility.

4. In consideration of Utility's commitment to deliver recovered water to the Owner, and the Owner's commitment to receive and use this water for permitted purposes, Utility and Owner agree to the specific terms and conditions set forth herein.

TERMS AND CONDITIONS

5. Subject to the other terms and conditions contained herein, Utility shall deliver and the Owner shall accept and use the recovered water from Utility's existing plant. The recovered water will be delivered to the Owner at a point or points of connection. The points of connection, monitoring wells and force mains are specifically identified in Exhibit "B". Owner grants to Utility an easement for ingress and egress over the property described in Exhibit "A" for operation, maintenance, repair,

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THIS INSTRUMENT WAS PREPARED BY
PETER J. GRIFFIN
ITS

inspection, and monitoring of the Utility force mains, dams, gate valves, and each monitoring well described on Exhibit "B" as well as all other equipment related to the delivery system for the recovered water. These items shall be installed and maintained, and the easement right exercised, by Utility in such a manner as not to interfere unreasonably with the use of Owner's property as a Golf Course and Country Club. Utility will be responsible for the repair of any damage to Owner's property occasioned by Utility's exercise of the right of easement.

6. This Agreement shall be effective on the date of execution and will remain in effect for a term of ten (10) years commencing from the 3rd day of January, 1989. This Agreement shall be renewed automatically for a five-year term upon expiration of the initial term and every fifth year beyond the initial ten-year term, unless terminated by either party by written notice twelve (12) months in advance of the anniversary of the commencement of any automatic five year renewal.

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Use of Recovered Water

7. The Owner shall use the recovered water delivered by Utility for irrigation, frost protection, surface storage, or other purposes allowed in accordance with applicable regulations. The Owner has all necessary storage, pumping and irrigation facilities needed to utilize the recovered water provided by Utility. The Owner shall be solely responsible for the ownership, operation and maintenance of all portions of the irrigation system located within the boundary of the Owner's property. Utility shall own and maintain the force mains and shall maintain the dams and their components, all as shown on Exhibit "B" even though the same are located on Owner's property.

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8. Owner shall take all reasonable precautions, including the use of signs and appropriate labels, to clearly identify the recoverad water sources and supply system. These precautionary measures shall be designed to prevent confusion concerning the recovered water supply system and potable water supplies.

Water Quality

9. The recovered water delivered under the terms of this Agreement shall be treated by Utility by such treatment process as is required by local, state and federal regulatory agencies to remove harmful levels of bacteria, viruses, and other substances which would constitute a danger to human health. The recovered water shall be of a quality which is appropriate for the irrigation of lawns, golf courses, landscape plants and trees, and other unrestricted public access areas.

10. Utility shall analyze the recovered water under the monitoring plan which is attached to this Agreement as Exhibit "C". This monitoring plan described the substances which will be analyzed and the frequency of the analysis. The location of the monitoring wells to be utilized by Utility is shown on Exhibit "B". Copies of test results from the monitoring wells shall be delivered to Owner within seven days after receipt thereof by Utility.

11. The Plant has a current design capacity of 500,000 gallons per day and is anticipated, under current construction design, to be expanded to 1.0 million gallons per day (average day capacity).

12. It is anticipated, but not warranted, that up to 1.0 million gallons per day of recovered water will be available for the Owner. Owner agrees to accept and Utility agrees to deliver all recovered water produced by Utility up to a maximum of 1,000,000 gallons of recovered water per day. Additional recovered water in excess of 1,000,000 gallons per day may be used by the Owner on a voluntary basis, if additional recovered water is available. Likewise, should it be shown that the above rates of application cause circumstances which violate existing or future local, state or federal regulations pertaining to the safe use of reclaimed water, Owner and Utility agree to reduce the above recovered water allocations to amounts which will allow compliance with the regulations, at no cost to the Owner.

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13. Utility shall consult with the Owner, and any other property owners that enter into similar agreements with Utility, to establish a mutually beneficial delivery schedule so that under normal conditions, to the extent possible, the Owner shall receive its weekly allotment of recovered water at an acceptable time and within an acceptable time period. Utility will make reasonable efforts to accommodate the irrigation systems and practices of this Owner and any other similarly situated person.

Delivery of Recovered Water Under Adverse Conditions

14. Utility and Owner recognize that adverse weather conditions or unforeseen circumstances may necessitate modifications to the normal delivery schedule established herein. The Owner shall have the right to restrict or refuse the use of the recovered water in the event of adverse weather conditions or unforeseen circumstances, for a maximum of two (2) consecutive days. The Owner shall give notice to Utility in advance of the Owner's exercise of this right. If advance notice is not practical or possible, the Owner shall give notice immediately upon its exercise of this right.

15. Both parties recognize that adverse weather conditions or unforeseen circumstances may result in the need for recovered water greater than or less than the volumes described in paragraph 12. The Owner and Utility agree to cooperate in reaching solutions to the problems created for either party as a result of such circumstances.

Terms or Modifications of Owner's Commitment

16. Upon execution by the Owner and Utility, this Agreement shall be binding as a covenant or condition which shall bind any subsequent owner of the land described in Exhibit "A" unless the commitments undertaken by the current Owner are modified in the manner provided herein, and shall bind any subsequent owner of the Plant and Utility, whether such owner is a private or governmental entity. This Agreement shall be recorded in the official records of Lee County, Florida.

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17. The Owner's right to sell, transfer or encumber the land described in Exhibit "A" shall not be restricted by this Agreement. However, any subsequent owner or successor in interest shall be obligated to receive and use the weekly allocation of recovered water as described herein and shall be subject to all of the other terms and conditions of this Agreement. Any buyer, transferee, or successor in interest, receiving the Owner's interest in this land or Utility's interest in the Plant must execute and deliver to the other party to this Agreement, prior to any sale or transfer, an acknowledgment and acceptance of the terms and conditions of this Agreement.

18. Owner shall receive from Utility, when they are filed with any governmental authority, copies of all permit applications and other related correspondence relative to future construction and operating permit requests for the Plant and resultant effluent disposal.

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Indemnity for Third Party Claims

19. If the Owner uses recovered water for the purposes set forth herein, consistent with the terms and conditions of this Agreement, Utility shall indemnify the Owner and hold the Owner harmless from any and all claims, actions, suits, proceedings, and all costs, expenses, damages and liabilities arising out of claims by third parties using Owner's land or residing on or using land adjacent to or in close proximity to Owner's land (described in Exhibit "A") that the use of recovered water has resulted in adverse human health effects to those residing on or using lands adjacent to or in close proximity to Owner's land. The Owner shall be indemnified in like manner for claims that the use of recovered irrigation water in the manner set forth in this Agreement constitutes a nuisance. This indemnity shall apply only if the Owner promptly notifies Utility of any such claims and cooperates fully in the defense against them.

PG1547

20. Utility's obligation to indemnify the Owner shall also be conditioned upon the Owner's compliance with any reasonable operating practice or restriction for protecting human health and

the environment, which Lee County, the State of Florida, or the Federal Government may establish from time to time and provide to Owner. Reasonable operating practices include any requirements established by the United States Environmental Protection Agency, DER, EPC, or other agency with jurisdiction over the activities described herein. Utility shall be indemnified in the same manner described above for similar claims or demands from persons residing on or using land adjacent to or in close proximity to the land described in Exhibit "A", or on the land described in Exhibit "A", in the event the Owner fails to comply with this Agreement and any operating practice or restriction protecting human health and the environment, as described above, and any claim or demand that arises out of Owner's failure to comply.

OR2042

Excuse from Performance by Governmental Acts

21. If for any reason during the term of this Agreement a local, regional, state or federal government or agency other than one who is a successor in ownership, title or interest to the Plant or to Utility, fails to issue necessary permits, grant necessary approvals, or requires any substantial change in the operation of the systems or the treatment, transmission or distribution of, or the application or use of recovered water, then to the extent that such requirement shall affect the ability of any party to perform any of the terms of this Agreement, the affected party shall be excused from the performance thereof and a new Agreement shall be negotiated, if possible, by Utility and Owner in conformance with such permits, approvals, or requirements.

PG0598

Remedy for Default

22. Because of the unique nature of the rights and responsibilities of the parties under this Agreement, it is understood that in the event of a breach of this Agreement by either party, monetary damages would be wholly inadequate as a remedy for either party. Accordingly, the parties agree that each shall have the right of specific performance against the

other party to require the defaulting party to perform in accordance with the terms and provisions of this Agreement.

23. Utility shall have the right to transfer all or any part of the treatment, transmission or distribution facilities and to assign all or any part of its rights and obligations under this Agreement to another entity and such entity shall be bound by and be exclusively responsible for all applicable terms and conditions of this Agreement.

Notices

24. All notices required or authorized under this Agreement shall be given in writing and shall be served by mail on the parties at the following addresses:

Owner:	The Forest Country Club Membership Association, Inc. Attention: President 6100 Club Boulevard, S.W. Fort Myers, Florida 33908
Utility:	Forest Utilities, Inc. Attention: President 6385 Presidential Court, S.W. Fort Myers, Florida 33919

Inspections

25. Utility shall have the right, upon written notice to the Owner, to enter upon the Owner's property to review and inspect the Owner's operation, practices, and any positive disconnect mechanisms between the Owner's irrigation system and any well or potable water system.

Disclaimer of Third Party Beneficiaries

26. This Agreement is solely for the benefit of Utility and the Owner and their assigns. No right or cause of action shall accrue hereon or by reason hereof, to or for the benefit of any third party who is not a formal party hereto.

Severability

27. If any part of this Agreement is found invalid or unenforceable by any court, such invalidity or unenforceability shall not affect the other parts of this Agreement if the rights and obligations of the parties contained herein are not materially prejudiced and if the intentions of the parties can

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continue to be effected. To that end, this Agreement is declared severable.

Applicable Law

28. This Agreement and the provisions contained herein shall be construed, controlled and interpreted according to the laws of the State of Florida.

29. This Agreement constitutes the entire Agreement between the parties and has been entered into voluntarily and with independent advice and legal counsel and has been executed by the authorized representative of each party on the date written below. Modifications to and waiver of the provisions herein shall be made in writing by the parties hereto.

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Witnesses:

FOREST UTILITIES, INC.

By: _____
President
"UTILITY"

THE FOREST COUNTRY CLUB MEMBERSHIP ASSOCIATION, INC.

By: John A Copeland
President
"OWNER"

STATE OF FLORIDA

COUNTY OF LEE

BEFORE ME, this day, personally appeared _____ DAVID W. SWOR, as President of FOREST UTILITIES, INC., to me well known and known to me to be the person described in and who executed the foregoing agreement and he acknowledged before me the execution of the same.

WITNESS my hand and official seal this 3rd day of January, 1989.

_____
Notary Public

My Commission Expires:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. MAY 14,1990
BONDED THRU GENERAL INS. UND.

STATE OF FLORIDA

COUNTY OF LEE

BEFORE ME, this day, personally appeared _____ JOHN A. COPELAND, as President of THE FOREST COUNTRY CLUB MEMBERSHIP ASSOCIATION, INC., to me well known and known to me to be the person described in and who executed the foregoing agreement and he acknowledged before me the execution of the same.

WITNESS my hand and official seal this 3rd day of January, 1989.

Notary Public

My Commission Expires:

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. MAY 14,1990
BONDED THRU GENERAL INS. UND.

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EXHIBIT "A"

DESCRIPTION: Golf Course at The Forest

A tract of land lying in Section 1, Township 46 South, Range 24 East, Lee County, Florida, being more particularly described as follows:

PARCEL 1:

Commencing at the Southwest corner of the Northwest Quarter (N.W.¼) of said Section 1, thence run S.0°22'48"E. along the West line of said Section 1 for 390.02 feet to the point of beginning; thence continue S.0°22'48"E. for 1446.29 feet; thence run N.73°57'27"E. for 250.82 feet; thence run N.29°02'14"W. for 30.00 feet; thence run S.40°18'15"E. for 239.90 feet; thence run S.19°38'44"E. for 99.31 feet; thence run S.32°29'07"E. for 9.78 feet; thence run S.44°08'31"W. for 282.83 feet; thence run S.45°51'29"E. for 100.00 feet; thence run S.0°51'29"E. for 300.00 feet to the North line of I.D.D. Canal "T"; thence run N.89°08'31"E. along said North line for 551.00 feet to the Southeast corner of Lot 3, Block 10, "The Forest, Unit One" as recorded in Plat Book 33 Page 85 through 88 of the Public Records of Lee County,Florida; thence run N.0°51'29"W. for 130.00 feet to the Northeast corner of said Lot 3; thence run S.89°08'31"W. along the boundary of said Lot 3 for 15.0 feet; thence run Northwesterly along the boundary of said Lot 3 and said Unit One for 186.75 feet on the arc of a curve to the right having a radius of 235.0 feet and a central angle of 45°31'59"; thence run N.45°19'30"W. along the boundary of said Unit One for 305.20 feet; thence run N.44°40'30"E. along said boundary for 60.00 feet; thence run S.45°19'30"E. along said boundary for 305.20 feet; thence run Southeasterly for 139.07 feet along said boundary on the arc of a curve to the left having a radius of 175.00 feet and a central angle of 45°31'59"; thence run N.89°08'31"E. along said boundary for 85.00 feet to the Southwest corner of "The Forest, Unit Three" as recorded in Plat Book 35, Pages 34-37 of the Public Record of Lee County, Florida; thence run N.0°51'29"W. along said boundary for 30.0 feet; thence run N.13°39'44"W. along said boundary for 225.61 feet; thence run N.0°51'29"W. along said boundary for 294.46 feet; thence run N.12°30'49"E. along said boundary for 604.27 feet; thence run N.1°35'56"E. along said boundary for 333.82 feet; thence run N.89°51'15"W. for 15.00 feet; thence run N.1°35'56"E. for 120.04 feet; thence run S.89°51'15"E. for 15.00 feet; thence run N.1°35'56"E. along said boundary for 120.04 feet; thence run S.89°51'15"E. along said boundary for 149.67 feet; thence run N.0°08'46"E. along said boundary for 30.00 feet; thence run N.89°51'15'W. along said boundary for 148.91 feet; thence run N.1°35'56"E. along said boundary for 154.18 feet; thence run N.63°38'17"W. along said boundary for 112.49 feet; thence run S.20°35'00"W. for 147.73 feet; thence run S.0°34'53"W. for 106.80 feet; thence run S.20°35'00"W. for 581.57 feet; thence run N.87°14'43"W. for 82.80 feet; thence run N.34°58'32"W. for 325.62 feet; thence run N.2°45'17"E. for 577.23 feet; thence run S.89°06'24"W. for 440.00 feet to the point of beginning.

PARCEL 2:

Beginning at the Southeast corner of Lot 29, Block 17,"The Forest, Unit Three" as shown on plats recorded in Plat Book 35 at Pages 34-37 of the Public Records of Lee County, Florida; thence run S.69°03'10"W.

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along the boundary of said Unit Three for 78.37 feet; thence run S.30°13'16"W. along said boundary for 74.54 feet; thence run S.0°54'04"W. along said boundary for 106.72 feet; thence run S.0°22'48"E. along said boundary for 1160.00 feet; thence run S.26°35'01"E. along said boundary for 319.19 feet; thence run S.10°39'04"E. along said boundary for 149.62 feet; thence run S.18°52'15"W. along said boundary for 515.20 feet; thence run S.0°53'36"E. along said boundary for 64.31 feet; thence run S.89°06'24"W. along said boundary for 170.00 feet; thence run Southwesterly along said boundary for 80.50 feet on the arc of a curve concave Easterly having a radius of 710.00 feet (chord bearing of S.5°10'49"W.); thence run N.89°06'24"E. along said boundary for 1022.20 feet; thence run N.0°53'36'W. for 80.00 feet; thence run S.89°06'24"W. for 302.86 feet; thence run N.9°25'59"E. for 891.51 feet; thence run N.37°45'47"W. for 177.89 feet; thence run N.2°37'10"E. for 363.93 feet; thence run N.83°31'07"W. for 348.13 feet; thence run N.57°16'57"E. for 28.55 feet; thence run S.73°20'45"E. for 148.64 feet; thence run S.11°18'36"E. for 724.64 feet; thence run S.15°25'39"W. for 702.37 feet; thence run S.89°06'24"W. for 159.02 feet; thence run S.0°53'36"E. for 80.00 feet; thence run Southeasterly for 108.30 feet on the arc of a curve concave Southwesterly having a radius of 105.00 feet (chord bearing of S.61°20'40"E.); thence run S.31°47'44"E. for 66.26 feet; thence run Southeasterly for 76.82 feet on the arc of a curve to the left having a radius of 75.00 feet and a central angle of 58°41'02" to a point of reverse curvature; thence run Southeasterly for 237.21 feet on the arc of a curve to the right having a radius of 380.00 feet and a central angle of 35°46'00"; thence run S.54°42'46"E. for 21.35 feet; thence run Southeasterly for 28.04 feet on the arc of a curve to the left having a radius of 230.00 feet and a central angle of 6°59'04"; thence run S.28°18'10"W. for 30.00 feet; thence run S.43°27'53"W. for 163.82 feet; thence run N.74°40'59"W. for 743.90 feet; thence run S.23°42'30"W. for 40.00 feet; thence run Southeasterly for 47.12 feet on the arc of a curve to the left having a radius of 30.00 feet and a central angle of 90°00'00" to a point on the boundary of said Unit Three; thence run S.66°17'30"E. along said boundary for 77.44 feet; thence run Southeasterly along said boundary for 237.71 feet on the arc of a curve to the right having a radius of 205.00 feet and a central angle of 66°26'16"; thence run S.0°08'46"W. along said boundary for 499.13 feet; thence run S.63°48'23"E. along said boundary for 202.13 feet; thence run S.12°30'49"W. along said boundary for 815.00 feet; thence run S.0°51'29"E. along said boundary for 257.26 feet; thence run S.23°06'26"E. along said boundary for 118.85 feet; thence run S.0°51'29"E. along said boundary for 135.00 feet to a point on the boundary of "The Forest, Unit One" as recorded in Plat Book 33 at Pages 85-88 of the Public Records of Lee County; thence run N.89°08'31"E. along said boundary for 80.00 feet; thence run Northeasterly along said boundary for 135.78 feet on the arc of a curve to the left having a radius of 275.00 feet and a central angle of 28°17'19" to a point of reverse curvature; thence run Easterly along said boundary for 296.24 feet on the arc of a curve to the right having a radius of 300.00 feet (chord bearing N.89°08'31"E.) to a point of reverse curvature; thence run Southeasterly along said boundary for 93.29 feet on the arc of a curve to the left having a radius of 275.00 feet and a central angle of 19°26'13"; thence run N.0°51'29"W. along said boundary for 121.72 feet; thence run N.22°58'11"E. along said

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boundary for 103.31 feet; thence run N.8°37'45"W. along said boundary for 680.00 feet; thence run N.46°08'50"E. along said boundary for 500.00 feet; thence run S.49°00'29"E. along said boundary for 162.15 feet; thence run S.17°39'12"W. along said boundary for 437.00 feet; thence run S.8°37'45"E. along said boundary for 500.00 feet; thence run S.81°22'15"W. along said boundary for 130.00 feet; thence run S.8°37'45"E. along said boundary for 31.88 feet; thence run Southeasterly along said boundary for 42.25 feet on the arc of a curve to the right having a radius of 400.00 feet and a central angle of 6°03'07"; thence run N.89°08'31"E. along said boundary for 530.20 feet; thence run N.89°09'31"E. along said boundary for 273.72 feet; thence run N.0°50'29"W. for 145.00 feet; thence run Northwesterly for 54.17 feet on the arc of a curve to the left having a radius of 185.00 feet and a central angle of 16°46'32"; thence run S.89°09'31"W. for 94.65 feet; thence run S.78°49'14"W. for 396.89 feet; thence run N.0°50'29"W. for 452.00 feet; thence run N.59°02'11"E. for 104.96 feet; thence run S.50°54'23"E. for 586.44 feet; thence run S.0°50'29"E. for 57.00 feet; thence run S.89°09'31"W. for 24.21 feet; thence run Southwesterly for 53.96 feet on the arc of a curve concave Westerly having a radius of 215.00 feet and a central angle of 14°22'47"; thence run S.0°50'29"E. for 145.00 feet to said boundary line of "The Forest, Unit One"; thence run N.89°09'31"E. along said boundary for 573.24 feet; thence run N.5°40'23"W. along said boundary for 91.26 feet; thence run N.85°28'44"W. along said boundary for 216.70 feet; thence run N.34°33'54"W. along said boundary for 209.84 feet; thence run N.10°17'53"E. along said boundary for 686.74 feet; thence run N.1°09'39"W. along said boundary for 389.43 feet; thence run N.38°35'40"E. along said boundary for 85.00 feet; thence run S.51°24'20"E. along said boundary for 99.34 feet; thence run Southeasterly along said boundary for 52.58 feet on the arc of a curve to the left having a radius of 370.00 feet and a central angle of 8°08'30"; thence run Northeasterly along said boundary for 4.72 feet on the arc of a curve concave Southeasterly having a radius of 335.00 feet and a central angle of 0°48'26" (chord bearing N.23°28'22"E.) to a point of reverse curvature; thence run Northwesterly along said boundary for 41.22 feet on the arc of a curve to the left having a radius of 30.00 feet and a central angle of 78°42'53" to a point of reverse curvature; thence run Northwesterly along said boundary for 20.37 feet on the arc of a curve to the right having a radius of 340.00 feet and a central angle of 3°25'57"; thence run N.51°24'20"W. along said boundary for 99.34 feet; thence run Northwesterly along said boundary for 175.80 feet on the arc of a curve to the left having a radius of 530.00 feet and a central angle of 19°00'18"; thence run N.19°35'22"E. along said boundary for 100.00 feet; thence run Southeasterly along said boundary for 47.94 feet on the arc of a curve concave Southwesterly having a radius of 630.00 feet and a central angle of 4°21'36" (chord bearing S.68°13'55"E.) to a point of reverse curvature; thence run Northeasterly along said boundary for 51.56 feet on the arc of a curve to the left having a radius of 40.00 feet and a central angle of 73°51'36"; thence run Northwesterly along said boundary for 132.28 feet on the arc of a curve concave Southwesterly having a radius of 660.00 feet and a central angle of 11°29'07"; thence run N.7°05'17"E. along said boundary for 67.98 feet; thence run N.27°17'05"W. along said boundary and along the boundary of "The

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Forest, Unit Two" as shown on plats recorded in Plat Book 34 at Pages 20-22 of the Public Records of Lee County, Florida for 782.59 feet; thence run N.53°17'06"W. along said boundary of Unit Two for 642.41 feet; thence run N.79°50'01"W. along said boundary for 91.17 feet; thence run S.5°13'11"W. along said boundary for 29.54 feet; thence run N.77°25'40"W. along the Northerly line of Lot 9, Block 13, "The Forest, Unit Two" as shown in Plat Book 34 Pages 20-22 of the Public Records of Lee County, Florida for 152.11 feet; thence run S.12°34'20"W. along the Westerly line of said Lot 9 for 52.95 feet; thence run S.48°51'47"E. for 194.64 feet to the Southeast corner of said Lot 9; thence run S.60°26'31"E. along the boundary of said Unit Two for 152.31 feet; thence run S.14°05'18"W. along said boundary for 87.31 feet; thence run S.83°51'06"W. along said boundary for 300.14 feet; thence run S.79°12'54"W. along said boundary for 195.36 feet; thence run N.47°39'38"W. along said boundary for 108.05 feet; thence run N.18°13'10"E. along said boundary for 519.86 feet; thence run N.62°13'56"W. for 89.05 feet; thence run N.2°55'30"E. for 132.25 feet; thence run N.77°56'02"E. for 123.41 feet; thence run N.18°13'10"E. for 30.00 feet; thence run S.84°15'39"E. for 284.20 feet to a point on said boundary of "The Forest, Unit Two"; thence run S.79°50'01"E. along said boundary for 483.00 feet; thence run S.54°30'05"E. along said boundary for 580.00 feet; thence run S.21°25'56"E. along said boundary for 110.41 feet; thence run N.68°34'04"E. along said boundary for 105.54 feet; thence run Northeasterly along said boundary for 125.96 feet on the arc of a curve to the right having a radius of 325.00 feet (chord bearing N.79°40'16"E.) to a point of reverse curvature; thence run Northeasterly along said boundary for 157.43 feet on the arc of a curve to the left having a radius of 147.50 feet (chord bearing N.60°11'51"E.); thence run N.80°25'08"W. for 156.13 feet; thence run N.08°01'28"W. for 219.18 feet; thence run East 125.00 feet to the boundary line of said "The Forest, Unit Two"; thence run N.31°32'00"W. along said boundary for 154.53 feet; thence run Northwesterly along said boundary for 115.84 feet along the arc of a curve to the right having a radius of 197.50 feet and a central angle of 33°36'24" to a point of reverse curvature; thence run Northwesterly along said boundary for 50.86 feet on the arc of a curve to the left having a radius of 40.00 feet and a central angle of 72°51'30"; thence run N.70°47'06"W. along said boundary for 10.61 feet; thence run Northwesterly along said boundary for 40.20 feet on the arc of a curve to the right having a radius of 135.00 feet and a central angle of 17°03'36"; thence run S.57°12'27"W. for 240.32 feet; thence run N.72°46'20"W. for 377.20 feet; thence run N.87°48'10"W. for 280.27 feet; thence run N.71°39'25"W. for 197.01 feet; thence run N.33°39'05"W. for 84.13 feet; thence run N.0°24'09"W. for 477.00 feet; thence run N.11°37'24"W. for 778.40 feet to a point on the boundary of said "The Forest, Unit Two"; thence run N.74°17'19"W. along said boundary for 79.14 feet; thence run S.35°01'42"W. along said boundary for 38.81 feet; thence run S.0°24'09"E. along said boundary for 778.62 feet; thence run S.6°02'38"E. along said boundary for 583.00 feet; thence run S.57°04'44"W. along said boundary for 205.61 feet; thence run N.77°51'25"W. along said boundary for 136.80 feet; thence run N.10°52'12"W. along said boundary for 360.00 feet; thence run N.0°24'09"W. along said boundary for 370.00 feet; thence run N.27°15'13"W. along said boundary for 255.00 feet; thence run N.16°24'16"E. along said boundary for 403.29 feet; thence run

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N.1°01'31"W. along said boundary for 100.00 feet; thence run N.37°53'43"W. along said boundary for 37.50 feet; thence run S.88°58'29"W. along said boundary for 125.00 feet; thence run S.1°01'31"E. for 36.49 feet; thence run S.61°27'01"W. for 35.00 feet; thence run S.19°42'52"W. for 127.47 feet; thence run S.1°01'31"E. for 60.00 feet; thence run S.38°00'29"W. for 85.26 feet; thence run S.49°29'58"W. for 161.29 feet; thence run N.89°22'06"W. for 204.25 feet; thence run N.46°20'28"W. for 197.55 feet; thence run S.82°49'49"W. for 179.54 feet; thence run N.77°07'12"W. for 92.20 feet; thence run N.30°36'46"W. for 46.65 feet; thence run N.57°14'31"W. for 299.10 feet; thence run N.1°01'31"W. for 21.00 feet to the point of beginning. Tract herein described contains 169.16± acres..

PARCEL 3:

Commencing at the Northeast corner of the Northwest Quarter (N.W.¼) of Southeast Quarter (S.E.¼) of said Section 1; thence run S.0°24'20"E. long the East line of the Northwest Quarter (N.W.¼) of the Southeast Quarter (S.E.¼) of said Section 1 for 68.00 feet to the point of beginning; thence continue S.0°24'20"E. along said East line for 237.41 feet; thence run S.58°25'06"W. for 35.06 feet; thence run S.0°24'20"E. for 55.56 feet to the Northeast corner of Lot 4, Block 1 of "The Forest Unit One", as recorded in Plat Book 33 at Pages 85-88 of the Public Records of Lee County, Florida; thence run S.89°35'40"W. along the boundary of said Unit One for 150.00 feet; thence run S.0°24'20"E. along said boundary for 500.00 feet; thence run S.89°35'40"W. along said boundary for 125.00 feet; thence run Northwesterly along said boundary for 163.36 feet along the arc of a curve to the right having a radius of 240.00 feet and a central angle of 39°00'00"; thence run N.51°24'20"W. along said boundary for 99.34 feet; thence run Northwesterly along said boundary for 29.13 feet on the arc of a curve to the left having a radius of 630.00 feet and a central angle of 2°38'57" to a point of reverse curvature; thence run Northwesterly along said boundary for 51.56 feet on the arc of a curve to the right having a radius of 40.00 feet central angle 73°51'36"; thence run Southeasterly along said boundary for 68.96 feet on the arc of a curve concave Southwesterly having a radius of 660.00 feet and a central angle of 5°59'12" (chord bearing S.54°23'56"E.); thence run S.51°24'20"E. along said boundary for 99.34 feet; thence run N.38°35'40"E. along said boundary for 75.00 feet; thence run N.7°41'31"W. along said boundary for 246.47 feet; thence run N.16°24'41"W. along said boundary for 788.16 feet; thence run N.68°34'04"E. along said boundary for 84.39 feet; thence run S.28°31'29"E. for 407.59 feet; thence run N.89°06'24"E. for 367.69 feet to the point of beginning.

PARCEL 4:

Commencing at the Southeast corner of the Southwest Quarter (S.W.¼) of the Southeast Quarter (S.E.¼) of said Section 1; thence run S.89°09'31"W. along the South line of said Section 1 for 30.00 feet to the West right-of-way line of Island Park Road; thence run N.0°24'20"W. along said West line for 240.00 feet; thence run S.89°09'31"W. for 155.00 feet to a point on the boundary of "The Forest,Unit One", as

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recorded in Plat Book 33 at Pages 85-88 of the Public Records of Lee County and the point of beginning; thence continue S.89°09'31"W. along said boundary for 100.22 feet; thence run Northwesterly along said boundary for 148.65 feet on the arc of a curve to the right having a radius of 100.00 feet and a central angle of 85°10'06"; thence run N.5°40'23"W. along said boundary for 184.87 feet; thence run Northwesterly along said boundary for 183.65 feet on the arc of a curve to the left having a radius of 180.00 feet and a central angle of 58°27'29"; thence run S.88°35'48"E. along said boundary for 103.59 feet; thence run N.7°29'29"W. along said boundary for 225.16 feet; thence run N.10°17'53"E. along said boundary for 765.52 reet; thence run S.89°35'40"W. along said boundary for 20.86 feet; thence run Northeasterly along said boundary for 139.13 feet on the arc of a curve to the right having a radius of 370.00 feet and a central angle of 21°32'38"; thence run Northeasterly along said boundary for 2.16 feet on the arc of a curve concave Southeasterly having a radius of 225.00 feet (chord bearing N.22°41'54"E.) to a point of compound curvature; thence run Northwesterly along said boundary for 43.75 feet on the arc of a curve to the right having a radius of 30.00 feet and a central angle of 83°33'28" to a point of reverse curvature; thence run Southeasterly along said boundary for 100.21 feet on the arc of a curve to the left having a radius of 340.00 feet and a central angle of 16°53'11"; thence run N.89°35'40"E. along said boundary for 120.00 feet; thence run S.0°24'20"E. for 1421.36 feet to the point of beginning.

PARCEL 5:

Commencing at the Southwest corner of the Northwest Quarter (N.W.¼) of said Section 1; thence run N.0°22'48"W. along the West line of said Section 1 for 426.52 feet to the point of beginning; thence continue N.0°22'48"W. along said West line for 475.00 feet; thence run S.32°22'14"E. for 308.99 feet along the boundary of "The Forest Unit Three", as recorded in Plat Book 35 at Pages 34-37 of the Public Records of Lee County, Florida; thence run S.18°52'15"W. along said boundary for 135.00 feet; thence run S.53°58'15"W. along said boundary for 146.67 feet to the point of beginning.

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PARCEL 6

DESCRIPTION: Gulf Course at The Oaks

A tract of land for Gulf Course purposes being part of The Oaks, Unit One, a subdivision of part of Sections 1 and 2, Township 46 South, Range 24 East, Lee County, Florida, recorded in Plat Book 37 at Pages 51 through 55 of the Public Records of Lee County, Florida, being more particularly described as follows:

All of Tract "I" of The Oaks, Unit One, lying in said Section 2, containing 32.599 Acres, more or less.

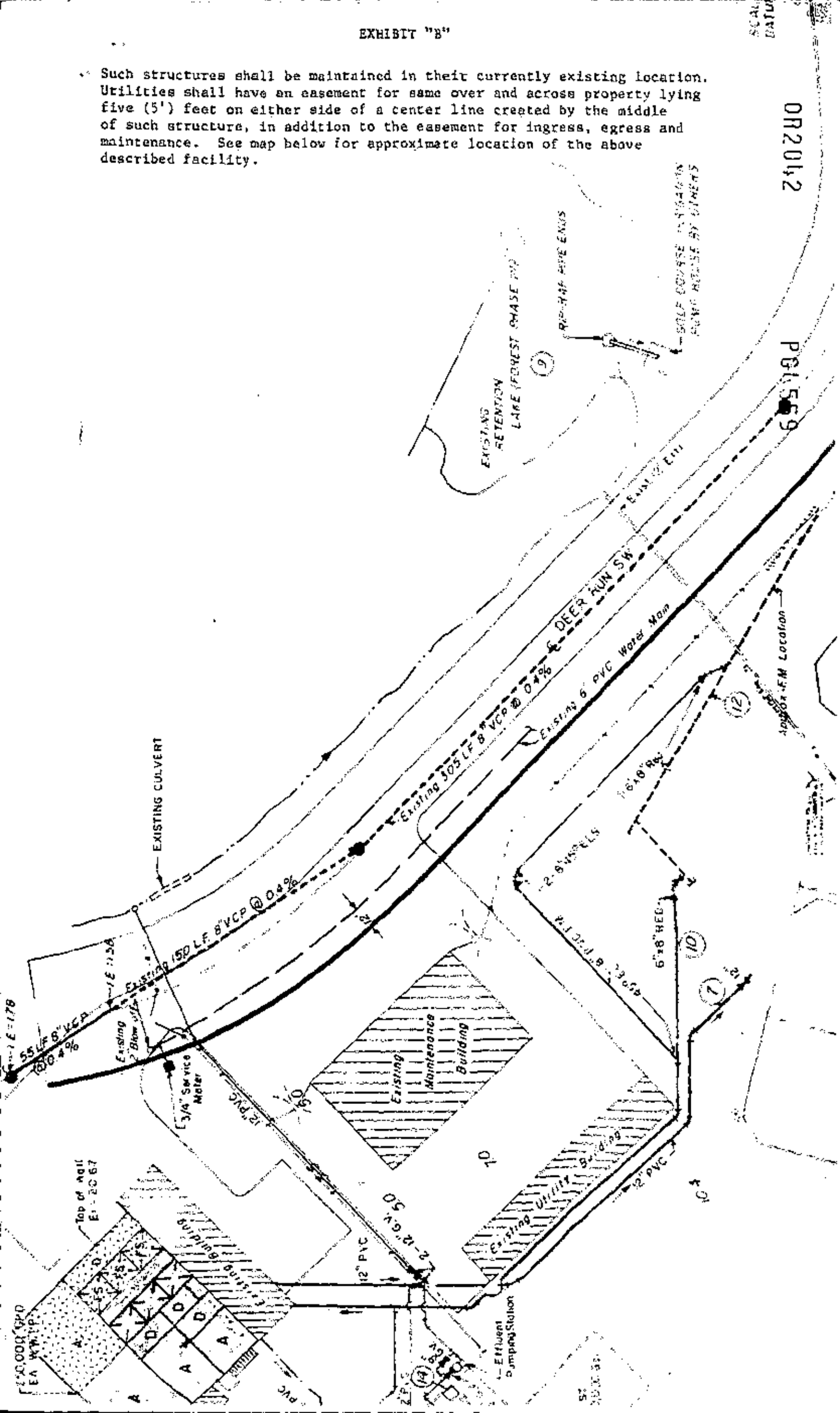
Together with: That part of Tract "N" of The Oaks, Unit One, described as follows:

Beginning at the Southeast corner of said Section 2, being also the Southeast corner of said Tract "N"; thence run N.0°22'48"W. along the East line of said Tract "N" for 982.00 feet; thence run S.89°37'12"W. along the boundary of said Tract "N" for 382.00 feet; thence run N.0°18'10"W. along said boundary for 1222.33 feet; thence run N.37°09'30"W. along said boundary for 119.20 feet; thence run N.25°13'33"W. along said boundary for 67.62 feet; thence run S.67°22'27"W. for 173.50 feet; thence run S.8°15'35"W. for 681.81 feet; thence run S.37°09'43"W. for 241.57 feet; thence run N.86°31'41"W. for 185.00 feet to a point on the boundary line of said Tract "N"; thence run S.5°43'48"E. along said boundary for 333.27 feet; thence run S.14°46'18"E. along said boundary for 175.62 feet; thence run S.20°25'19"E. along said boundary for 247.20 feet; thence run S.2°50'27"W. along said boundary for 223.23 feet; thence run S.72°18'43"E. along said boundary for 130.56 feet; thence run S.53°47'35"W. along said boundary for 210.92 feet; thence run S.7°26'45"E. along said boundary for 335.74 feet to the South line of said Section 2; thence run N.88°51'38"E. along said South line for 934.75 feet to the point of beginning.

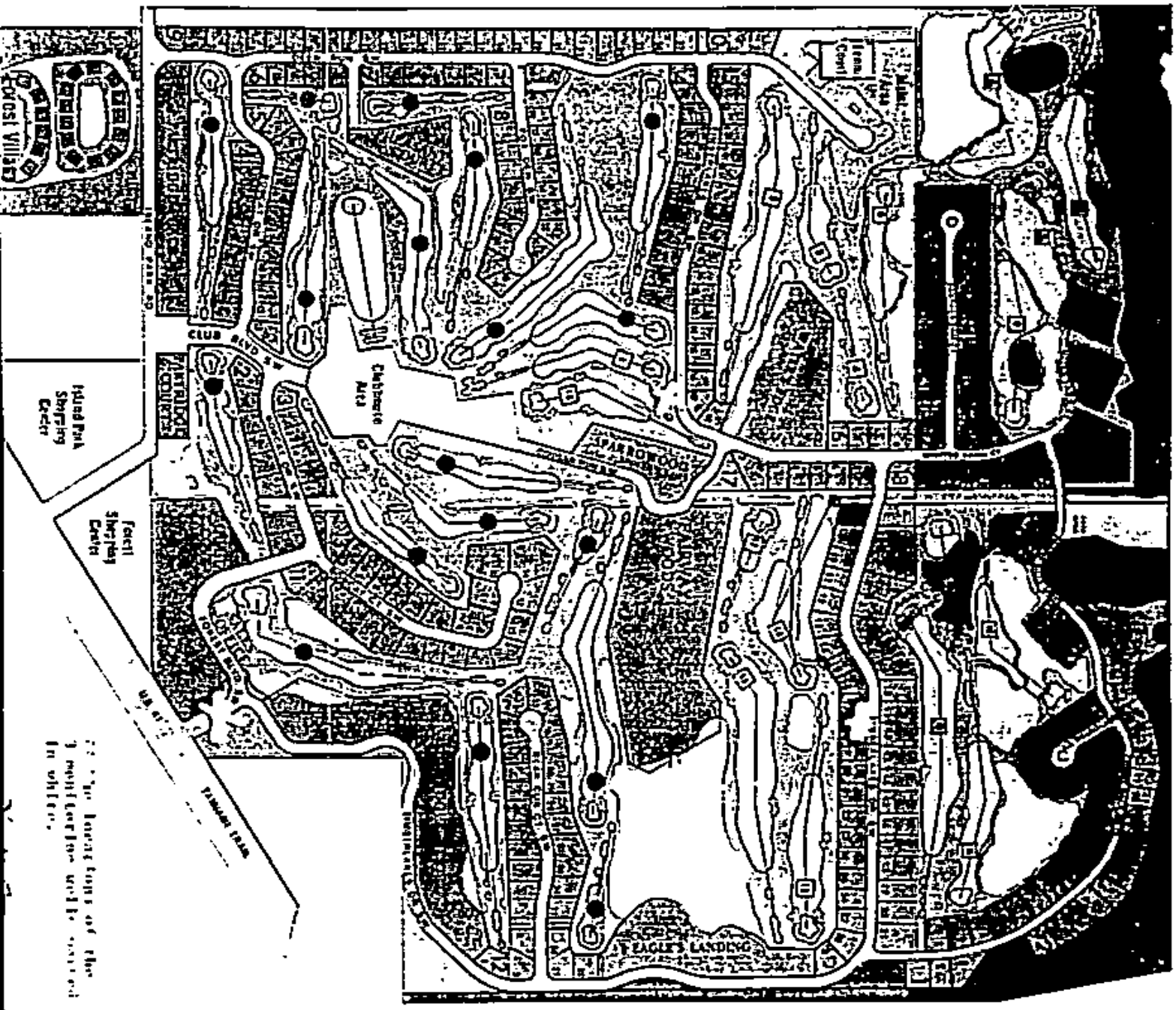
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EXHIBIT "B"

Such structures shall be maintained in their currently existing location. Utilities shall have an easement for same over and across property lying five (5') feet on either side of a center line created by the middle of such structure, in addition to the easement for ingress, egress and maintenance. See map below for approximate location of the above described facility.



In accord with the minimum requirements of all governmental bodies with jurisdiction, monitoring wells are located off the Exhibit "A" property adjacent to Lot 18 and Timberlakes Drive, S.W., Block 17, The Forest, Unit Two, a subdivision, recorded in Plat Book 34, Pages 20-22; adjacent to Forest Boulevard, S.W., prior to its juncture with U.S. 41 and on the property described in Exhibit "A" between the first green and the eighteenth tee of the Bear Course and the Forest Country Club. (See map below)



ADDENDUM TO RECOVERED WATER AGREEMENT DATED JANUARY 3, 1989 BETWEEN FOREST UTILITIES, INC. AND THE FOREST COUNTRY CLUB.

TERMS AND CONDITIONS

Paragraph 6 as written is null and void and replaced as follows with no other changes:

Par.6. This Addendum Agreement shall be in effect for 3 years commencing January 1, 2014. The Forest Country Club shall pay Forest Utilities an Affluent Rate of 15¢ per 1000 gallons, billed monthly for 24 months ending December 31, 2015. The meter for calculating flow volume is located at the Affluent discharge pipe that is presently monitored by Forest Maintenance.

Effective January 1, 2016 the Affluent Rate will increase to 20¢ per 1000 gallons for 12 months ending December 31, 2016. Both parties will agree to further extensions prior to July 1, 2016.

Witnesses:

FOREST UTILITIES, INC.

By: _____
"UTILITY" PRESIDENT

THE FOREST COUNTRY CLUB

By: _____
PRESIDENT

STATE OF FLORIDA

COUNTY OF Lee

BEFORE ME, this day, personally appeared _____ DAVID W. SWOR, as President of FOREST UTILITIES, INC., to me well known and known to me to be the person described in and who executed the foregoing agreement and he acknowledged before me the execution of the same

STATE OF FLORIDA

COUNTY OF LEE

BEFORE ME, this day, personally appeared Lorraine Giese _____, as President of THE FOREST COUNTRY CLUB MEMBERSHIP ASSOCIATION, INC., to me well known and known to me to be the person described in and who executed the foregoing agreement and he acknowledged before me the execution of the same.

WITNESS my hand and official seal this 18th day of November.

ROBIN A. YEOMANS
MY COMMISSION # FF 053238
EXPIRES: November 3, 2017
Bonded Thru Notary Public Underwriters

Robin A. Yeomans
Notary Public

My Commission Expires:
November 3, 2017

ADDITIONAL DOCUMENTS

a. Authorization Letter
b. Operational Protocol
c. Effluent Monitoring Plan to Supplement Groundwater Monitoring Plan for Forest Utilities WWTP
d. Wastewater Collection System Operation and Maintenance Plan
e. Operation and Maintenance Performance Report

Forest Utilities, Inc. 6000 Forest Boulevard • Fort Myers, FL • 33908 • (239) 481-5333

March 17, 2011

Florida Department of

Environmental Protection

South District Office

PO Box 2549

Fort Myers, FL 33902

Dear Mr. Moon:

Per your letter of March 2, 2011, Wade Moser is authorized to sign permitting application and supporting documents.

Sincerely,

David W. Swor

President

Forest Utilities, Inc.

RECEIVED
MAR 28 2011
D.E.P. South District

OPERATIONAL PROTOCOL

FOREST UTILITIES, INC.
THE FOREST WASTEWATER TREATMENT FACILITY
800,000 GPD

Lee County, FL
GMS ID #5236P0009

FDEP Permit No. FLA 014478
Issued May 5, 2016
Expires May 4, 2021

for

FOREST UTILITIES, INC.
Owner/Operator
6341 Deer Run Road, SW
Fort Myers, FL 33908

Prepared by

SOURCE, INC.
Engineers-Planners
E.B. #34338

1334 Lafayette Street
Cape Coral, FL 33904
(239) 549-2345



October 22, 2020 **JAMES P. ELLIOTT, P.E.**
FL REG. NO. 21022

Revised:
07/29/94
12/06/94
01/25/95
12/28/95
10/11/99
05/03/00
06/21/00
07/28/00
11/30/06
03/19/09
01/12/11
04/13/16
08/26/20

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TABLES

I. Effluent Water Quality Testing and Monitoring

ATTACHMENTS

A. Notification of Occurrence
B. DEP-SOP-001/01, FT 1600, FT 1900 & FT 2000

EXHIBITS

1. Hydraulic Profile
2. Process Flow Diagram
3. WWTP Site Plan
4. Bobcat Reuse Storage Pond
5. Bear Reuse Storage Pond

1. GENERAL

As required by FDEP Chapter 62-610.463(2), this Operational Protocol is being established to ensure that effluent water quality meets applicable standards prior to being released to the reuse disposal system as outlined in FDEP Chapter 62-600 and as stipulated in the Operation Permit.

The effluent treated at this facility is used for irrigation on the golf course at the Forest Country Club, for on-site wash-down water and chlorination water supply. Exhibit No. 1 illustrates the process flow and sampling points for the treatment facility.

The effluent disposal site for this treatment facility is a privately-owned golf course (the Forest Country Club) to which the wastewater treatment facility is immediately adjacent. The golf course is a 36-hole course which includes approximately 280 acres of land area. The course is owned by the Forest Country Club Membership Association, Inc. and the Association has entered into a long-term agreement with the utility for accepting the treated effluent generated from the treatment facility.

2. STAFFING

As defined by the FDEP Permit, this facility is a Category II facility and is required to be manned by a Class “C” or above licensed operator for a minimum of six (6) hours per day, seven (7) days per week. The utility company maintains on its present staff a minimum of two (2) licensed operators holding a Class “C” license or higher rating.

3. OPERATIONAL PROCEDURES

Filtered treatment effluent leaving this facility is continuously monitored and recorded for flow volume, chlorine residual and turbidity. The facility is equipped such that should chlorine residual in the effluent fall below the preset “low level” reading continuously for ten (10) minutes or should effluent turbidity exceed the preset point continuously for ten (10) minutes, effluent flow is diverted into a 0.80 million gallon “substandard” storage tank on the site. Should it become necessary for diverting flow, plant operators are notified of the default condition via an automatic dialer. Upon arrival at the site, the problem with effluent quality is corrected and the flow rerouted to the standard effluent storage pond. Effluent

diverted to substandard storage is rechecked for compliance and retreated as necessary to meet required effluent quality standards established for this facility.

Effluent meeting permitting standards is normally routed to the Bobcat irrigation storage pond located just north of the Forest Utilities plant site. Effluent is also transferred to the Bear irrigation storage pond located approximately 2,500 ft. east of the plant site.

The effluent is continuously monitored for chlorine residual (total) and turbidity. Motorized butterfly valves have been installed for diverting flow in the event of monitoring equipment detection of chlorine residual dropping below minimum diversion set-point of 1.5 ppm or if the effluent turbidity exceeds the maximum diversion set-point of 3.0 NTU's.[1] Readings which exceed diversion set-points continuously for at least ten (10) minutes is considered a default condition. Upon detecting a "default" condition, the monitoring equipment signals the valve controller which closes the motorized Valve No. 1 (MV-1) and opens the motorized Valve No. 2 (MV-2), routing flow to the effluent pumping station for pumping to 800,000-gallon "substandard" storage tank. At the onset of a default condition, the monitoring equipment will also actuate the auto-dialer to notify the on-site operator. Once the plant has returned to produce standard effluent, the motorized valves (MV-1 and MV-2) are to be reset. This is to be performed manually. Reset lag time is subject to the operator's judgment. Substandard effluent is reprocessed as necessary by draining the tank (opening Valve No. 11) to the plant pumping station for total reprocessing, or through filtration/chlorination (opening Valve No. 10), depending on the level of treatment necessary to bring the effluent quality to within permitted standards. Any reprocessing of substandard effluent tank contents must be conducted with respect to the present plant auxiliary flow capacity restrictions (e.g. minimum 15 minute detention time in the chlorine contact chamber). Plant permit effluent standards for chlorine residual and Total Suspended Solids (TSS) are 1.0 ppm/5.0 ppm respectively. Effluent not meeting either of these criteria, which is released to the reuse disposal system is a compliance violation and must be reported to FDEP as such. Whenever the automatic diversion valves are actuated in response to a default condition, FDEP may be notified regarding this "potential noncompliance" event, however this is not required. In the case of required reporting (compliance violations), verbal notification is to be made within 24 hours of event, followed by written notification within one week of event. (ref. Attachment "A")

[1] If through operating the facility using the prescribed set-points, the operator takes notice of any large volumes of standard effluent found to be directed to substandard storage for re-treatment, the operator should track and document these occurrences, as well as the correlation between TSS and turbidity. It is with this documentation, that the set-points will be reviewed and may be revised with FDEP approval.

Note: An optional overnight procedure would allow the “on-call” operator to by-pass the auto-dialer pager. With the use of the optional overnight procedure, the plant would be set to operate in the “default” mode, with the flow routed to the effluent pumping station for pumping to “substandard” storage. Upon return of the operator the following morning, the operator should assess the overnight flow condition and direct the stored water for retreatment as deemed appropriate. At a minimum, the stored water should be re-filtered and re-chlorinated prior to being discharged to the reuse system. If standard effluent is being produced, the motorized valves should be reset to the “normal” operating position.

Wet weather storage for treated effluent meeting the required water quality standards for unrestricted irrigation is provided in two isolated storage ponds within the Forest golf course. The Bobcat reuse irrigation storage pond located north of the plant site boundary provided 1,960,000 gallons of storage volume. The Bear reuse irrigation storage pond located east of the plant site provides approximately 2,340,000 gallons of storage volume. The combined volume is 4,300,000 gallons for wet weather storage. At an effluent production rate of 0.800 MGD, approximately 5 days - 9 hours storage is provided in the two golf course irrigation ponds.

4. EFFLUENT WATER QUALITY TESTING AND MONITORING

As a minimum and as required by the plant’s permit, testing and monitoring is carried out under a regularly scheduled program. The type of testing and/or monitoring, frequency and type sample taken are as shown on Table I, attached. When necessary and to improve operational efficiency, additional field tests are conducted. The effluent flow meter is checked on a daily basis. Re-calibration and required adjustments on this instrument are accomplished as recommended by the manufacturer. The effluent flow meter is re-calibrated on a 12-month basis. The utility personnel take all wastewater and effluent samples. The groundwater monitor well samples are taken and analyzed by an independent laboratory. The independent laboratory also tests for fecal coliform, TSS, $CBOD_5$ and the residual sludge parameters. Results are received verbally from the laboratory as soon as they are available. These verbal reports are followed up with a written report that is received within 48 hours after lab testing is performed and results become available. If any of the testing indicates a problem, re-sampling is accomplished immediately, and any required adjustments to the flow processes are made.

5. FILTRATION

The treatment facility is equipped with two (2) automatic backwash traveling bridge filter units. One unit has a rated capacity to filter secondary effluent at 500,000 gallons per day based on 2.0 gpm per square foot of media area. The second unit has a rated capacity to filter 800,000 gallons per day based on 2.0 gpm per square foot of media area.

The filtration units are automatic backwashing, traveling bridge, shallow bed sand filter type having a combined total of 455± square feet of filter area. The filters are designed to allow backwashing automatically when the hydraulic head on the filter reaches a preset point. Backwashing can also be accomplished at regular time intervals by adjusting a time clock. The filters at the Forest WWTF have been designed so that backwashing is accomplished on individual filter compartments within the filter unit without the necessity of removing the complete filter unit from the process stream. At no time during backwashing is there more than 5% of the available filter area removed from service.

6. CHLORINATION FACILITIES

The Forest WWTF utilizes gas chlorination for effluent disinfection. The system consists of two cylinder-mounted gas chlorinators mounted on 150-pound cylinders. The chlorine cylinders are continuously weighted and when cylinder weight drops to 10 pounds, the chlorine feed is automatically switched over to the standby cylinder. The chlorination system's water supply has been set up to provide and adequate supply of solution water from the chlorine contact tank (recycled effluent). Duplex chlorine solution pumps have been provided to ensure adequate pressure is available for chlorine injection into the system. The system continuously circulates a chlorine solution to the chlorine contact tanks. A minimum of one extra 150-pound chlorine gas cylinder is provided at all times for backup to cylinders being used.

The chlorine contact tankage for the facility has been designed having a total detention time of approximately 37 minutes at the permitted plant design rate of 0.800 MGD, or 15 minutes at a flow rate of 2.5 times this design rate.

7. RESIDUAL SLUDGE

Residual sludge generated by the facility is stabilized on site utilizing a four (4) step process consisting of aerobic handing, anaerobic thickening, air drying on sand beds. The dried sludge is transferred to paved storage bin. Final disposal of the dried residuals includes transport to Karle Enviro-Organic Recycling, Inc.'s facility for further dewatering/thickening, and then transferred to landfill for disposal.

8. CONTINUOUS ON-LINE MONITORING EQUIPMENT

The treatment facility is equipped with a continuos on-line chlorine residual monitor and a continuous on-line turbidity monitor. Back-up chlorine and turbidity monitors to the on-line units are maintained in inventory to enable immediate replacement of the on-line units in event of failure. A calibration check must be performed on each of the on-line monitors daily, following the manufacturer's recommended procedures. If the check should find the monitor to be outside of the manufacturer's tolerance specifications, then the monitor must be recalibrated. In general, the chlorine monitor is calibrated against a portable chlorine residual meter and the turbidity monitor is calibrated using a 4.0 NTU cylinder blank. Both the portable chlorine residual meter and the 4 NTU cylinder blank must be calibrated within their respective manufacturer's specifications and time frames. When calibrating the on-line turbidity monitor, the monitor will be reading an out of standard parameter (4 NTU). This should be left in place for at least 15 minutes to verify the operation of the diversion valves for detecting a "default condition" as described in Section 3 of this Operational Protocol. Activation of the diversion valves by this test should not be reported to the local FDEP office.

In the instance of monitoring equipment malfunctions, it will be assumed that a default condition exists. All effluent is to be diverted to substandard storage for retreatment while either repairs are made or the back-up monitoring equipment is set up and placed into service. As an option, effluent may be directed to the golf course reuse system during this situation if every 15 minutes during the discharge, sampling and testing is performed for the constituent that is not being monitored by the malfunctioning equipment. This testing is to be performed by a portable meter (e.g. a hand held chlorine residual meter or a hand held turbidity meter). These portable meters must be calibrated within their respective manufacturer's specifications and time frames. The option for directing effluent to reuse and

sampling/testing during the discharge should be considered when extensive set up delays of the back up monitor is anticipated or being realized.

The treatment facility operators shall conduct field measurements and testing following the general guidelines of DEP-SOP-001/01, FT 1600, for Field Measurement of Turbidity, FT 1900 for Continuous Monitoring With Installed Meters, and FT 2000 for Field Measurement of Residual Cholorine. See Attachment B DEP-SOP-001/01 Revision Date: March 1, 2014

9. REUSE OPERATIONAL PROTOCOL

9.01 SYSTEM DESCRIPTION

The Forest golf course reuse irrigation system includes two reuse storage ponds that provide a combined storage volume to enable approximately 5.35 days of wet weather storage (4.300 MG), based on the facility producing an average daily flow of 800,000 gallons of reuse effluent.

The first pond is the Bobcat Storage Pond, located adjacent to the Forest Wastewater Treatment Facilities and alongside the #3 tee of the Bobcat Golf Course. The Bobcat Storage Pond is a 1.5± acre standard effluent irrigation storage pond that provides approximately 1,961,740 gallons storage above the high season water elevation. All reuse quality effluent produced by the Forest Wastewater Treatment Plant that is to be used for irrigation is discharged into this pond. A golf course irrigation pumping station is provided which withdraws irrigation water through a pond water suction intake pipe connected to slab mounted pumping units that supply the golf course irrigation system and transfer reuse water to the second storage pond. A staff gauge is provided to visually check the storage control elevations in the pond. Exhibit 4 details the pond configuration and operation.

The Bear Storage Pond is the second reuse storage pond, located between the #8 fairway and the #9 tee of the Bear Golf Course. The Bear Storage Pond is a 2.14± acre standard effluent irrigation storage pond that provides approximately 2,340,000 gallons storage above the high season water elevation. The reuse water that enters this pond is transferred from the Bobcat Storage Pond. A golf course irrigation pumping station for the Bear Golf Course is located adjacent to the Bear Storage Pond. Upon startup of the Bear irrigation pumps, reuse water is provided to the Bear golf course irrigation pump station wet well using a submersible pumping unit in the Bear Storage Pond, which transfers the water for

irrigation. A staff gauge is provided to visually check the storage control elevations in the pond. Exhibit 5 details the pond configuration and operation.

9.02 OPERATIONAL DESCRIPTION

The following general operational guidelines shall be followed to provide assurance that the Forest golf course reuse system functions in accordance with the permit parameters.

a. The wet weather standard effluent irrigation storage pond control elevation is established and calibrated to 2.5' NGVD datum. The "reuse only" operating range is from 2.50' NGVD to 6.50' NGVD that allows 4.00 feet differential. When the reuse pond stage is below 2.5' NGVD, both reuse water and well "make-up" water may be added into the ponds.

b. The staff gauges in the Forest golf course effluent storage ponds are to be checked and recorded daily each morning by the wastewater treatment plant operator. Communications with golf course superintendent will commence with a morning staff gauge reading of 6.0 ft NGVD, or above. A determination will be made as to how golf course irrigation and/or transfer of reuse water to the other pond will be able to adequately draw down the reuse storage pond(s) exhibiting the high staging.

c. The embankments of the Forest golf course effluent storage ponds shall be inspected on a weekly basis by the customer's golf course operations personnel. If leakage or embankment breaching is observed, Forest Utilities is to be notified to terminate flow to the storage pond as soon as possible.

d. The Forest golf course irrigation system shall be prudently operated to avoid ponding or standing water in the irrigated areas or surface saturation, causing runoff to occur.

e. The Forest golf course manager shall obtain monthly flow readings from Forest Utilities and prepare a water balance log of the daily reuse volume delivered, daily rainfall, daily well augmentation and the daily irrigation volume used. This log shall be furnished to Forest Utilities each month.

f. The Forest golf course reuse facilities will be inspected on a biweekly basis by Forest Utilities personnel to monitor the system function and condition.

g. The Forest golf course contact number(s) are:

Operations & Maintenance	**482-6818**	**(Field Office)**
Director of Golf Course Operations	**482-6818**	**(John Gallager)**

h. A copy of this reuse operation procedure shall be available at the golf course maintenance manager's office.

i. Forest Utilities contact numbers are:

Main Office (Swor Realty)		**481-0111**	**(During business hours)**
Operations & Maintenance		**481-5333**	**(Field Office)**
Operations Manager	**Cell -**	**848-5174**	**(Wade Moser)**

10. EVALUATION OF PROCEDURES AND CRITERIA TO MEET RULE REQUIREMENTS AND PERMIT REQUIREMENTS (Reference Rule 62-610.320(6)(e)(2)FAC)

Any violations of permit requirements during the operation permit period shall be evaluated. The evaluation is to consider the operation procedures and include an analysis and correlation of parameters monitored continuously against the parameters regulated by the permit.

FOREST UTILITIES, INC. - THE FOREST WASTEWATER TREATMENT FACILITY

GMS ID NUMBER: 5236P0009

PA FILE NUMBER: FLA014478-005-DW1P

EFFLUENT WATER QUALITY TESTING AND MONITORING

TABLE NO. I

Parameter	Units	Frequency	Sample Type	Location	Verbal	Written
Effluent Flow	MGD	Continuous	Flow meter w/recorder	CL_2 Cont Tank Eff Chamber	-	Cont. Recording Chart
$CBOD_5$	MG/L	Weekly	8-hr. Composite Sample	Filter Effluent Chamber	24 hrs after test comp.	48 hrs after test comp.
TSS	MG/L	Weekly	Grab Sample	Filter Effluent Chamber	Less than 8 hrs*	Less than 24 hrs*
Acidity (pH)	SU	Daily	Grab sample	CL_2 Cont Tank Eff Chamber	-	Logged
Fecal Coliform	#/100ML	Daily	Grab Sample	CL_2 Cont Tank Eff Chamber	Less than 24 hrs	Max. 48 hrs
Chlorine Residual	MG/L	Continuous	Chlorine Analyzer	CL_2 Cont Tank Eff Chamber	-	Logged
Turbidity	NTU	Continuous	Turbidity Analyzer	Filter Effluent Chamber	-	Cont. Recording Chart
Water Level	Feet	Daily	Staff Gauge	Effluent Storage Pond	-	Logged
Water Qual.Analysis**	-	Quarterly	8-hr. Composite Sample	CL_2 Cont Tank Eff Chamber	24 hrs after test comp.	48 hrs
GWM Wells Analysis**	-	Quarterly	Grab Sample (Baled)	Each Monitoring Well	24 hrs after test comp.	48 hrs

* Test samples taken by plant operating personnel and laboratory testing of samples performed by an independent testing laboratory.

** Test samples taken and laboratory testing of samples performed by Lee County Environmental Laboratory.

ATTACHMENT A

FOREST UTILITIES, INC.

6341 Deer Run Road, Ft. Myers, FL 33908 • Ph. (239) 481-5333 • Fax (239) 481-0327

NOTIFICATION OF OCCURRENCE

Date: _____

To: Florida Dept. of Environmental Protection - South District
P. O. Box 2549
Ft. Myers, FL 33902-2549
Attention: Ms. Deanna Newburg

Ms. Newburg:

Please allow this to serve as notification of an occurrence(s) from _____ to _____ on _____ at Forest Utilities, Inc. treatment facility and/or collection system of the following (circle one or both):

NATURE OF OCCURRENCE:

CAUSE OF OCCURRENCE:

CORRECTIVE ACTION:

PREVENTATIVE MEASURES:

COMMENTS:

This notification is: _____ Noncompliance notification
_____ Courtesy notification

Prepared by: _____ Date: _____

ATTACHMENT B

DEP-SOP-001/01

FT1600	Field Measurement of Turbidity
FT1900	Continuous Monitoring With Installed Motors
FT 2000	Field Measurement of Residual Chlorine

FT 1600. Field Measurement of Turbidity

Use in conjunction with:

- FT 1000 General Field Testing and Measurement
- FS 1000 General Sampling Procedures
- FD 1000 Documentation Procedures

1. INTRODUCTION: Turbidity measures the scattering effect that suspended solids have on the propagation of light through a body of water (surface or ground waters). The higher the effect (i.e., intensity of scattered light), the higher the turbidity value. Suspended and colloidal matter such as clay, silt, finely divided organic and inorganic matter, and plankton and other microscopic organisms cause turbidity in water.

This SOP describes the use of true nephelometric measurement using instruments meeting the specifications outlined in 2.1.

Exceptions to the requirements specified in 2.1 below include:

1.1. *In situ* probes with turbidity sensors used for screening purposes (e.g., groundwater purge stabilization measurements).

1.2. Non standard light sources, detectors or other turbidity measuring devices may be proposed for use in studies that entail comparison measurements (dredge and fill) or unattended deployment for monitoring purposes.

1.3. **Do not report results from "non standard" sensors or configurations for regulatory purposes such as permit compliance unless the Department has approved the use for the specific project.**

1.4. All "non-standard" instruments must be calibrated and verified according to the requirements in this SOP.

2. EQUIPMENT AND SUPPLIES

2.1. Field Instrument: Use a turbidimeter (nephelometer) or a spectrophotometer consisting of a light source and one or more photoelectric detectors with a readout device to indicate the intensity of light. The instrument must meet these specifications:

2.1.1. The light source must have a tungsten-filament lamp operated at a color temperature between 2000 and 3000 K.

2.1.2. The distance traversed by the incident light and scattered light within the sample tube must not exceed 10 cm.

2.1.3. The light detector, positioned at 90° to the incident light, must have an acceptance angle that does not exceed ± 30° from 90°.

2.1.4. The detector and any filter system must have a spectral peak response between 400 and 600 nanometers.

2.1.5. The instrument sensitivity must permit detection of a turbidity difference of 0.02 NTU at the 0 – 1.0 NTU scale.

2.1.6. Note: using the appropriate equipment and following the procedures in this SOP, the field accuracy of this measurement is close to %R = 100 ± 10% for turbidities in the range of 1 to 100 NTU.

2.2. Sample Cells (cuvettes): Use sample cells or tubes of clear, colorless glass or plastic.

2.2.1. Keep cells clean, both inside and out, and discard if scratched or etched.

2.2.1.1. Never handle them where the light beam strikes the sample.

2.2.1.2. Clean sample cells by thorough washing with laboratory soap (inside and out) followed by multiple rinses with distilled or de-ionized water, and let air-dry.

2.2.2. Use a very thin layer of silicone oil on the outside surfaces to mask minor imperfections or scratches in the cells.

2.2.2.1. Use silicone oil with the same refractive index of the glass; making sure the cell appear to be nearly dry with little or no visible signs of oil.

2.2.3. Because small differences between cells significantly impact measurement, use either matched pairs or the same cell for standardization and sample measurement.

2.3. Standards:

2.3.1. Primary standards: Use these standards for initial calibration.

2.3.1.1. Formazin standards can be either obtained commercially or prepared according to method 2130B (2011), section 3. in Standard Methods for the Examination of Water and Wastewater (see Standard Methods Online, http://www.standardmethods.org/store/).

2.3.1.2. Some instruments may require the use of styrene divinylbenzene (SDVB) standards for calibration.

2.3.2. Secondary Standards: Use only those certified by the manufacturer for a specific instrument. Secondary standards must only be used for continuing calibration verifications according to the procedures in section 3.4 below. Determine or verify the values of secondary standards according to the procedure in section 3.3 below.

2.3.3. Turbidity-free water: Use filtered, laboratory reagent water demonstrated to be free of measurable turbidity (<0.01 NTU) or purchase commercially prepared turbidity-free water.

3. CALIBRATION AND USE

3.1. General Concerns

3.1.1. Light absorption by dissolved and suspended matter may cause a negative bias on the turbidity measurement. When present in significant concentrations, particles of light-absorbing materials such as activated carbon will cause a negative interference. Likewise, the presence of dissolved, color-causing substances that absorb light may also cause a negative interference. Some commercial instruments may have the capability of either correcting for slight color interference or optically blanking out the color effect.

3.1.2. Handle samples with natural effervescence as described in 3.5.5.1 below.

3.2. Calibration and Initial Calibration Verification

3.2.1. Follow the calibration activities in FT 1000, section 2.2.

3.2.2. Perform an initial calibration using at least two primary standards.

3.2.2.1. If the instrument cannot be calibrated with two standards, calibrate the instrument with one standard and verify with a second standard per 3.2.3 below.

3.2.2.2. For measurement of samples of very low turbidity, select the lowest standard commercially available for bracketing the lower end of the anticipated sample turbidity range or dilute higher turbidity standards with turbidity-free water.

3.2.2.3. Do not use turbidity-free water as a calibration verification standard.

3.2.3. Perform an initial calibration verification by reading at least one primary standard as a sample. The acceptance criterion for the initial calibration verification depends on the range of turbidity of the standard value:

- Standard Value = 0.1-10 NTU: the response must be within 10% of the standard except specified in 3.2.3.1 below;
- Standard Value = 11-40 NTU: the response must be within 8% of the standard;
- Standard Value = 41-100 NTU: the response must be within 6.5% of the standard; and
- Standard Value > 100 NTU: the response must be within 5% of the standard.

3.2.3.1. Turbidity–free water sold as a standard by a vendor (i.e., a blank) does not have to meet the acceptance requirement of ± 10%, but must meet the vendor's stated value (typically < 0.1 NTU) or be less than the reporting limit. The user may still use this blank to set the zero point according to the instrument manufacturer's manual.

3.3. Determining the Values of Secondary Standards

3.3.1. Use only those standards certified by the manufacturer for a specific instrument.

3.3.2. Use verified secondary standards only for continuing calibration verifications.

3.3.3. Determining the initial value(s) of secondary standard(s):

3.3.3.1. Calibrate or verify the instrument with primary standards. Select primary standards that bracket the range of the secondary standards.

3.3.3.2. Immediately after the an initial calibration with primary standards or verification with a primary standard, read each secondary standard as a sample use the reading from the instrument as the first assigned value.

3.3.4. Verifying Secondary Standards

3.3.4.1. At least once per quarter or at other documented intervals (see 3.3.5 below), determine or verify the values of secondary standards immediately after the instrument has been calibrated or verified with primary standards.

3.3.4.2. Read each secondary standard as a sample. This reading must be within the manufacturer's stated tolerance range and within the acceptance ranges of the assigned standard value as listed in 3.2.3., above. If the criteria in section 3.2.3., above are not met, assign this reading as the value of the standard. If the reading is outside the manufacturer's stated tolerance range, discard the secondary standard.

3.3.5. **More frequent calibration verifications may be required for discharge permit compliance measurements or other regulatory requirements.**

3.4. Continuing Calibration Verification: Perform a continuing calibration verification using at least one primary or secondary standard. The calibration acceptance criteria are the same as those listed in section 3.2.3 above.

3.5. Measuring Turbidity in Samples

3.5.1. Gently agitate the sample and wait until air bubbles disappear.

3.5.2. Double-rinse the sample cell or cuvette with a small amount of the sample. Discard, and pour an aliquot into the sample cell or cuvette.

3.5.3. Gently dry out its external surface with lint-free paper.

3.5.4. Insert the cell in the instrument and read the turbidity directly from the meter display.

3.5.5. Do not use vacuum degassing, ultrasonic bath or other devices to remove bubbles from the sample. If the sample contains visible bubbles or if it effervesces (as in groundwater, with changes in pressure and temperature), make a note of this in the field records and collect a sample for laboratory measurement.

3.5.5.1. If effervescing samples are collected for laboratory analysis collect the sample without leaving headspace in the container and ship it as soon as possible to the laboratory (the holding time for this measurement is only 48 hrs). Ship this sample in wet ice at 4°C.

3.5.6. Pour out the sample, double-rinse the cuvette with de-ionized water in preparation for the next sample.

4. PREVENTIVE MAINTENANCE: Refer to FT 1000, section 3.

5. DOCUMENTATION

5.1. Standard and Reagent Documentation: Document information about standards and reagents used for calibrations, verifications, and sample measurements.

5.1.1. Note the date of receipt, the expiration date and the date of first use for all standards and reagents.

5.1.1.1. Document acceptable verification of any standard used after its expiration date.

5.1.2. Record the concentration or other value for the standard in the appropriate measurement units.

5.1.2.1. Note vendor catalog number and description for preformulated solutions as well as for neat liquids and powdered standards.

5.1.2.2. Retain vendor assay specifications for standards as part of the calibration record.

5.1.3. Record the grade of standard or reagent used.

5.1.4. When formulated in-house, document all calculations used to formulate calibration standards.

5.1.4.1. Record the date of preparation for all in-house formulations.

5.1.5. Describe or cite the procedure(s) used to prepare any standards in-house (DEP SOP or internal SOP).

5.2. Field Instrument Calibration Documentation: Document acceptable calibration and calibration verification for each instrument unit and field test or analysis, linking this record with affected sample measurements.

5.2.1. Retain vendor certifications of all factory-calibrated instrumentation.

5.2.2. Designate the identity of specific instrumentation in the documentation with a unique description or code for each instrument unit used.

5.2.2.1. Record manufacturer name, model number, and identifying number (such as a serial number) for each instrument unit.

5.2.3. Record the time and date of all initial calibrations and all calibration verifications.

5.2.4. Record the instrument reading (value in appropriate measurement units) of all calibration verifications.

5.2.5. Record the name of the analyst(s) performing the calibration.

5.2.6. Document the specific standards used to calibrate or verify the instrument or field test with the following information:

- Type of standard or standard name (e.g., formazin)
- Value of standard, including correct units (e.g., 20 NTU)
- Link to information recorded according to section 5.1 above

5.2.7. Retain manufacturers' instrument specifications.

5.2.8. Document whether successful initial calibration occurred.

5.2.9. Document whether each calibration verification passed or failed.

5.2.10. Document any corrective actions taken to correct instrument performance according to records requirements of FD 3000.

5.2.10.1. Document date and time of any corrective action.

5.2.10.2. Note any incidence of discontinuation of use of the instrument due to calibration failure.

5.2.11. Describe or cite the specific calibration or verification procedure performed (DEP SOP or internal SOP).

5.3. Record all field-testing measurement data, to include the following:

- Project name
- Date and time of measurement or test (including time zone, if applicable)
- Source and location of the measurement or test sample (e.g., monitoring well identification number, outfall number, station number or other description)
- Latitude and longitude of sampling source location (if required)
- Analyte or parameter measured
- Measurement or test sample value
- Reporting units
- Initials or name of analyst performing the measurement
- Unique identification of the specific instrument unit(s) used for the test(s)

FT 1900. Continuous Monitoring with Installed Meters

Use in conjunction with:

- FT 1000 General Field Testing and Measurement
- FT-series Field Testing SOPs for applicable parameters
- FS 1000 General Sampling Procedures
- FD 1000 Documentation Procedures

1. INTRODUCTION: Many facilities rely on in-line continuous measurement devices to monitor parameters such as dissolved oxygen, conductivity, pH, temperature, residual chlorine and turbidity. In order to ensure the stability and reliability of such measurements, the calibration of these instruments must be checked regularly. In cases where it is impractical to take these instruments off-line on a daily basis, use the calibration procedures described below. This SOP is not applicable to unattended instrument deployment for environmental monitoring; refer to FT 1000 sections 2.2.5.1-2.2.5.4.

2. CALIBRATION AND VERIFICATION

2.1. Calibrate the continuous monitoring instrument **before installation** according to the manufacturer's specifications for initial calibration. Ensure that the instrument has been calibrated and the calibration verified according to the requirements in the applicable DEP SOPs for the analyte(s) to be measured.

2.2. **On a daily basis**, measure a grab sample taken at or as near as possible to the same location as the in-line meter. The grab-sample test measurements must be taken with an instrument that has been properly calibrated and verified per the applicable DEP SOPs for individual parameter tests.

2.3. Compare the results of the daily verification with the continuous meter reading taken at the same time as the grab sample was collected. The continuous meter calibration is acceptable for the applicable parameters if the differences with the grab-sample results meet the following criteria:

2.3.1. Dissolved Oxygen: no greater than 0.2 mg/L difference (or historically established criteria not to exceed 0.5 mg/L difference);

2.3.2. Specific Conductance: no greater than 10% of the calibrated instrument reading;

2.3.3. pH: no greater than 0.2 pH units difference (or historically established criteria not to exceed 0.5 pH units difference);

2.3.4. Temperature: no greater than 0.5°C difference;

2.3.5. Residual Chlorine: no greater than 20% of the calibrated instrument reading; and

2.3.6. Turbidity: no greater than 20% of the calibrated instrument reading.

2.4. When the comparisons performed in section 2.3 above indicate a changing trend in the difference between the grab sample measurement and the continuous meter measurement for any parameter, determine the cause of the problem and perform appropriate corrective actions, such as maintenance, repair, calibration or other activities needed for the proper operation of the continuous meter under calibrated conditions.

2.5. Perform the initial calibration (per section 2.1 above) each time the instrument is taken off-line, after every preventative maintenance activity, and **immediately** after determining that any of the criteria verifications in 2.3.1 through 2.3.6 above are not met.

2.6. All acceptable field data must be bracketed by acceptable calibration verifications (see section 2.3 above). Qualify data that are not bracketed by acceptable calibration verifications.

3. EXTENDED VERIFICATION INTERVALS

3.1. If historically generated data demonstrate that a specific instrument remains stable for longer periods of time the time interval between initial calibration and calibration verifications may be increased.

3.2. The maximum time interval is one month or at the conclusion of the monitoring period, whichever is less.

3.3. Base the selected time interval on the shortest interval that the instrument maintains stability.

3.4. If an extended time interval is used, and the instrument consistently fails to meet the final calibration verification:

3.4.1. The instrument may need maintenance to correct the problem; or

3.4.2. The time period is too long and must be decreased.

3.5. Retain all data associated with studies that support a decreased frequency of calibration verifications for at least five years after the procedure was last used.

4. PREVENTIVE MAINTENANCE: Refer to FT 1000, section 3.

5. DOCUMENTATION

5.1. Record all information specified in the individual field-testing SOPs.

5.2. Document the daily verifications of the continuous meter by recording:

- Project name (if applicable)
- Date and time (including time zone, if applicable)
- Source and location of the measurement or test sample (e.g., monitoring well identification number, outfall number, station number or other description)
- Analyte or parameter measured
- Reading from the continuous meter, including reporting units
- Reading from the second instrument used for the grab-sample measurement, including reporting units
- The name of the person conducting the verification
- Unique identification of the specific instrument unit(s) used for the test(s)

5.3. Where applicable, record the differences for the results of meter comparisons as specified in section 2.3 above.

5.3.1. Calculate the differences in the results between the meter measurements of the grab sample with the corresponding measurements from the continuous meter for the applicable parameters

5.4. Indicate the acceptability of the verifications per the criteria in section 2.3

FT 2000. Field Measurement of Residual Chlorine

Use in conjunction with:

- FA 1000 Regulatory Scope and Administrative Procedures for Use of DEP SOPs
- FT 1000 General Field Testing and Measurement
- FS 1000 General Sampling Procedures
- FS 2000 General Aqueous Sampling
- FD 1000 Documentation Procedures
- FC 1000 Cleaning / Decontamination Procedures
- FM 1000 Field Planning and Mobilization

Chlorinating water supplies and polluted waters at treatment facilities is a common practice to destroy or deactivate disease-producing microorganisms. This SOP describes the most commonly used field procedures for measuring the residual chlorine that remains after chlorination.

For reporting limits below 0.2 mg Cl/L, use the titrimetric methods in FT 2020. The methods in FT 2010 or FT 2030 may be used if a lower detection limit and range of calibration can be demonstrated in the sample matrix of interest.

See the applicable referenced methods in FT 2050 if measurements other than total residual chlorine are required. Use this SOP when analyzing drinking water compliance samples for free or total chlorine (section 2.1.2).

FT 2010. DPD Colorimetric Method

1. Scope and Applicability: DEP recommends this method if the testing levels that must be met are between 0.2 to 4.0 mg/L residual chlorine. This method is least affected by the presence of organic matter.

2. Equipment and Supplies

2.1. Field Instruments:

2.1.1. Use any of the following photometric instruments for residual chlorine measurements. The instrument must allow calibration using **at least** two standards and a blank, except as noted in 3.2.2 below.

- Spectrophotometer, for use at a wavelength of 515 nm and a light path of 1 cm or longer;
- Filter Photometer, equipped with a filter having maximum transmission in the wavelength range of 490 to 530 nm and providing a light path of 1 cm or longer or
- Colorimeters designed for residual chlorine measurement

2.1.2. Color Comparator: use only for the analysis of free and total chlorine in drinking water samples for compliance monitoring

2.2. Appropriate laboratory glassware such as volumetric flasks and volumetric pipets.

2.3. Sample Cells (cuvettes): Use sample cells or tubes of clear, colorless glass or plastic specifically designed for the test instrument.

2.3.1. Keep cells clean, both inside and out, and discard if scratched or etched.

2.3.2. Never handle cells where the light beam strikes the sample.

2.3.3. Clean sample cells by thorough washing with laboratory detergent solution (inside and out) followed by multiple rinses with distilled or de-ionized water. Air dry sample cells prior to use or rinse thoroughly with sample before color development and measurement.

2.3.3.1. Sample cells may be rinsed in the field with the detergent step omitted if it is determined that no interference with accurate measurement will occur and that the sample has not left insoluble residue on the surfaces of the cell.

2.3.4. Mask minor imperfections or scratches in the cells with a very thin layer of silicone oil on the outside surfaces. Use silicone oil with the same refractive index of the glass; making sure the cell appear to be nearly dry with little or no visible signs of oil.

2.3.5. Because small differences between cells significantly impact measurement, use optically matched cells or use the same cell for calibration and sample measurement.

2.4. Reagents and Standards:

- DPD reagent powder pillows (from commercial supplier) or
- Phosphate buffer solution and DPD indicator solution (prepared according to SM 4500-Cl-G, 2011, Standard Methods for the Examination of Water and Wastewater).
- Chlorine-demand-free water

2.4.1. Primary Standards: Use standard potassium permanganate solutions or chlorine standards prepared in the appropriate concentration range of interest according to method SM 4500-Cl-G (2011). The primary standards should only be prepared by persons or organizations proficient in preparing analytical standards. Do not reuse primary standards.

2.4.2. Secondary Standards: Use secondary standards certified by the manufacturer for a specific instrument model. Use secondary standards only for continuing calibration verifications according to the procedures in section 3.2.6. Verify the values of secondary standards according to the procedure and frequency outlined in section 3.2.5.

2.4.2.1. Care of Secondary Standards: Protect standards from direct sunlight, heat and scratches.

- Store the standards in the upright position. The most convenient way is to keep the standards in the original storage box provided by the manufacturer.
- During transport to and from the field, keep the standards in an air-conditioned vehicle away from the sun. Do not store on the dashboard or in the trunk if a vehicle.
- If the vehicle is not air conditioned, the standards may be placed in a watertight plastic bag and kept cooled in an ice chest.
- When not in use, store the standards in air conditioning or in ambient air not to exceed 90°F.
- Avoid getting fingerprints on the glass vial. Handle the standards only by the cap.
- Before daily use, inspect the secondary standard vials and, if necessary, clean the outside of the standard vials with a dilute solution of detergent, followed by a deionized is distilled water rinse. Wipe dry with lint-free paper or cloth.

2.4.2.2. Discard the standards set when:

- the standard value can no longer be verified (3.2.5);
- obvious discoloration or fading has occurred,
- residue on the surfaces of the vials cannot be removed,
- scratches are visible on the glass vials; or
- a secondary gel standard has melted or resolidified in a position different from the original.

2.5. Recordkeeping and Documentation Supplies:

- Field notebook or forms (waterproof paper is recommended)
- Indelible pens

3. CALIBRATION AND USE

3.1. Interferences: Sample color and turbidity may interfere in all colorimetric procedures applied to natural and treated waters. Other possible interferences are from: bromine, chlorine dioxide, iodine, permanganate, hydrogen peroxide, and ozone. If interferences are suspected, consult the applicable method for guidance (see FT 2050).

3.2. Calibration

3.2.1. Follow the calibration activities in FT 1000.

3.2.2. Initial Calibration: Use the primary standards (see 2.4.1 above) for initial calibration. An initial calibration must be performed if verification attempts are not successful (see 3.2.4 and 3.2.6 below).

3.2.2.1. Use a minimum of a blank and two standards that bracket the range of the sample measurements.

3.2.2.2. If the instrument cannot be calibrated with a blank and two standards, calibrate with a blank and one standard that bracket the range of the sample measurements.

3.2.2.3. Verify instruments with pre-set or factory calibrations against primary standards per 3.2.3 below.

3.2.2.4. The correlation coefficient of the standard calibration curve must be greater than or equal to 0.995 for all calibrations.

3.2.3. Instruments with Pre-Set or Factory Calibration

3.2.3.1. Instruments with a pre-set calibration do not require an initial calibration if the instrument calibration is verified with primary standards over the range of use (see 3.2.4 and 3.2.6 below for verification procedures).

3.2.3.2. Verify with primary standards before first use and at least annually.

3.2.3.3. Perform an initial calibration (3.2.2 above) when verification attempts are not successful.

3.2.4. Initial Calibration Verification: Immediately after calibrating an instrument, perform an initial calibration verification by reading at least one primary standard as a sample. The value of this standard must be within quantitative calibration bracket established in 3.2.2 above. The instrument reading from this standard must be within 10% of its standard value.

3.2.4.1. Perform initial verifications of color comparators per 3.2.6.4 below.

3.2.5. Determining or Verifying the Values of Secondary Standards:

3.2.5.1. Use only those certified by the manufacturer for a specific instrument. The values of secondary standards may be dependent on the make and model of the instrument. **Perform all steps of the verification process on the same instrument model that will be used with the secondary standards.**

3.2.5.2. At a minimum, verify the values of secondary standards annually or when

- The standards appear to have been damaged;
- The standards were stored in direct sunlight;
- The meter failed to meet verification requirements with the secondary standards
- **More frequent calibration verifications are required for discharge permit compliance measurements or other regulatory requirements.**

3.2.5.3. Determine or verify the values of secondary standards using the following procedure

- Perform an initial calibration or calibration verification with primary standards.

- Select the primary standard concentrations so that the secondary standard concentrations are bracketed with acceptable primary standards.
- Immediately after verifying the acceptability of the calibration, read each secondary standard as a sample.
- This result must be within the manufacturer's stated tolerance range and +/- 10% of the stated standard value.
- If the +/- 10% criterion is not met, but the result is within the manufacturer's stated tolerance range, assign the reading as the value of the standard.
- If the reading is outside the +/- 10% criterion **and** the manufacturer's stated tolerance range, discard the secondary standard.

3.2.6. Continuing Calibration Verification:

3.2.6.1. Perform a continuing calibration verification using at least one primary or secondary standard. The concentration of the CCV standard should be within the initial calibration bracket established in 3.2.2 above and cannot be a zero or blank standard.

- If sample concentrations are outside the range established by the initial calibration, the range may be extended by selecting a continuing calibration verification standard that will bracket the sample concentrations.
- If sample concentrations exceed the range setting of the instrument (e.g., high or low range), verify at least two standards that bracket the sample in the alternate range setting.

3.2.6.2. Each CCV measurement must be within 10% of the known standard value. For secondary standards, use the known value(s) determined in 3.2.5 above. If any CCV attempt fails to meet the 10% acceptance criterion, establish the cause of the failure and reattempt the CCV before analyzing samples. The instrument must be recalibrated with an initial calibration (see 3.2.2 above) if the CCV acceptance criterion cannot be achieved. Qualify as estimated all sample measurement data obtained since the last acceptable verification.

3.2.6.3. Perform a CCV after the last sample measurement has been taken, but no longer than 24 hours after the previous verification. If historically generated data demonstrate that a specific instrument remains stable for longer periods of time, the time interval between calibration verifications may be increased (see FT 1000 section 2.2.5).

3.2.6.4. For color comparators, verify comparator accuracy every six months by evaluating the comparator against primary standards with concentration values bracketing sample measurements. If the comparator readings differ from the standard values by more than 10%, qualify all sample measurements made since the last verification as estimated. Plot the comparator readings against the primary standard values. Use the plotted graph as a correction curve to be applied to future analyses of samples with the comparator. Replace comparators if color scales appear faded or discolored.

3.3. Sample Analysis (spectrophotometer or photometer):

3.3.1. Rinse the cuvette with a small amount of sample.

3.3.2. Discard the rinsate, and fill the cuvette with sample.

3.3.2.1. If samples are colored or turbid, compensate for these interferences by "zeroing" the meter with the sample before adding the chemicals for color development.

3.3.3. Add the reagents (DPD, buffer, etc.) to the sample according to the manufacturer's instructions.

3.3.4. Invert the container to mix.

3.3.5. Wait the required time for color development as specified in the referenced method or manufacturer's instructions. Do not exceed the maximum allowable time for color development before reading the sample.

3.3.6. Gently wipe the sides with a lint-free tissue and insert the cuvette into the instrument.

3.3.7. Follow the instrument's instructions for obtaining the sample value (either by direct read-out or by using a plot of the calibration curve).

3.3.8. After recording the sample reading, remove the cuvette, discard the sample and rinse the cuvette 3 – 5 times with de-ionized or distilled water.

3.3.9. Repeat steps 3.3.1 through 3.3.8 until all samples have been tested.

3.3.10. If the concentration of the samples exceeds the range setting of the instrument (e.g., high or low), change the range setting, and read the samples again. See 3.2.6.1 concerning calibration verification in a different range from the original initial calibration.

3.4. Color Wheel Comparator: Follow the manufacturer's instructions for obtaining the sample value from a color wheel when used for drinking water sample analysis.

4. PREVENTIVE MAINTENANCE: Refer to FT 1000, section 3.

5. DOCUMENTATION:

5.1. Standard and Reagent Documentation: Document information about standards and reagents used for calibrations, verifications, and sample measurements.

6.1.1. Note the date of receipt, the expiration date and the date of first use for all standards and reagents.

5.1.1.1. Document acceptable verification of any standard used after its expiration date.

5.1.2. Record the concentration or other value for the standard in the appropriate measurement units.

5.1.2.1. Note vendor catalog number and description for preformulated solutions as well as for neat liquids and powdered standards.

5.1.2.2. Retain vendor assay specifications for standards as part of the calibration record.

5.1.3. Record the grade of standard or reagent used.

5.1.4. When formulated in-house, document all calculations used to formulate calibration standards.

5.1.4.1. Record the date of preparation for all in-house formulations.

5.1.5. Describe or cite the procedure(s) used to prepare any standards in-house (DEP SOP or internal SOP).

5.2. Field Instrument Calibration Documentation: Document acceptable calibration and calibration verification for each instrument unit and field test or analysis, linking this record with affected sample measurements.

5.2.1. Retain vendor certifications of all factory-calibrated instrumentation.

5.2.2. Designate the identity of specific instrumentation in the documentation with a unique description or code for each instrument unit used.

5.2.2.1. Record manufacturer name, model number, and identifying number such as a serial number for each instrument unit.

5.2.3. Record the time and date of all initial calibrations and all calibration verifications.

5.2.4. Record the instrument reading (value in appropriate measurement units) of all calibration verifications.

5.2.5. Record the name of the analyst(s) performing the calibration.

5.2.6. Document the specific standards used to calibrate or verify the instrument or field test with the following information:

- Type of standard or standard name (e.g., potassium permanganate)
- Value of standard, including correct units (e.g., $KMnO_4$ = 1 mg/L)
- Link to information recorded according to section 5.1 above

5.2.7. Retain manufacturers' instrument specifications.

5.2.8. Document whether successful initial calibration occurred.

5.2.9. Document whether each calibration verification passed or failed.

5.2.10. Document any corrective actions taken to correct instrument performance according to records requirements of FD 3000.

5.2.10.1. Document date and time of any corrective action.

5.2.10.2. Note any incidence of discontinuation of use of the instrument due to calibration failure.

5.2.11. Describe or cite the specific calibration or verification procedure performed (DEP SOP or internal SOP).

5.3. Record all field-testing measurement data, to include the following:

- Project name
- Date and time of measurement or test (including time zone, if applicable)
- Source and location of the measurement or test sample (e.g., monitoring well identification number, outfall number, station number or other description)
- Latitude and longitude of sampling source location (if required)
- Analyte or parameter measured
- Measurement or test sample value
- Reporting units
- Initials or name of analyst performing the measurement
- Unique identification of the specific instrument unit(s) used for the test(s).

FT 2020. TITRIMETRIC METHODS

Residual chlorine can be measured using several different titrimetric methods. These methods take more time, require some skill in making chemical measurements, require several different reagents, and must be performed within 15 minutes of sample collection. Unless the expected concentration levels are below the analytical sensitivity of colorimeters, DEP recommends using the DPD colorimetric method (FT 2010).

If a titrimetric method must be used, select one of the following methods from Standard Methods for the Examination of Water and Wastewater (see Standard Methods Online, http://www.standardmethods.org/store/): SM 4500-Cl B, SM 4500-Cl C, SM 4500-Cl D, SM 4500-Cl E or SM 4500-Cl F (2011 versions). The following general discussions deal with using the titrimetric equipment only.

Quantitative and chronological brackets are not required for these methods.

Titrant solutions must be standardized at the frequencies specified in the above reference methods.

1. The volumetric glassware that is used to transfer and to titrate must be thoroughly clean.

1.1. Use class A pipets for transferring samples and reagents; use a class A buret for titration.

1.2. The volumetric pipets and the buret must be free flowing. This means that there cannot be any droplets remaining on the sides of the glassware when the liquid is dispensed.

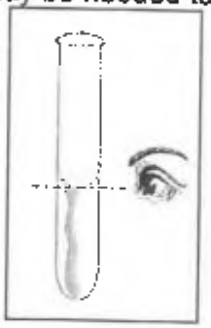
1.3. Check the glassware before use by filling with de-ionized or distilled water and allowing to drain. Do not use the glassware if droplets appear.

1.4. Clean by using a buret brush or soaking. Use hot water and laboratory detergent.

1.5. Rinse with tap water to remove the detergent.

1.6. Rinse with de-ionized water and check for water droplets.

1.7. Additional cleaning with chromic acid, or alcoholic potassium hydroxide may be needed to remove stubborn oil or films.



2. Rinse all glassware with a small amount of the solution to be dispensed or titrated, and discard the rinse.

2.1. Carefully fill (or pipet) with the solution.

2.2. Read the volume from the **bottom** of the meniscus [see figure⇒].

2.3. After filling the buret, record the initial volume.

3. When performing the titration, add the titrant slowly.

3.1. Swirl the flask gently while adding the titrant.

3.2. As the solution comes closer the endpoint, the color change will last for a longer period of time. When this occurs, add the titrant dropwise and mix thoroughly between drops.

3.3. The reaction is complete when the color change is permanent. Take the reading on the buret at the completion of the titration and record the reading.

4. Titrate at least two aliquots of each sample.

5. Titrate at least one blank.

6. DOCUMENTATION:

6.1. Standard and Reagent Documentation: Document information about standards and reagents used for calibrations, verifications, and sample measurements.

6.1.1. Note the date of receipt, the expiration date and the date of first use for all standards and reagents.

6.1.1.1. Document acceptable verification of any standard used after its expiration date.

6.1.2. Record the concentration or other value for the standard in the appropriate measurement units.

6.1.2.1. Note vendor catalog number and description for preformulated solutions as well as for neat liquids and powdered standards.

6.1.2.2. Retain vendor assay specifications for standards as part of the calibration record.

6.1.3. Record the grade of standard or reagent used.

6.1.4. When formulated in-house, document all calculations used to formulate calibration standards.

6.1.4.1. Record the date of preparation for all in-house formulations.

6.1.5. Describe or cite the procedure(s) used to prepare any standards in-house (DEP SOP or internal SOP).

6.1.6. Record the preparation of all reagents in the field notebook or in a form specifically designed for this purpose.

6.1.6.1. Document all titrant standardizations.

7. For each sample and blank, record the volume of each sample, and the beginning and ending readings on the buret.

FT 2030. ION-SELECTIVE ELECTRODE METHODS

1. INTRODUCTION AND SCOPE: Adapted from the "Orion Research Instruction Manual", Residual Chlorine Electrode Model 97-70, 1997, which is cited here for informational purposes. This method may be used if a method detection limit study verifies that the method can achieve the desired permit limits. This is not recommended for on-site use.

2. EQUIPMENT AND SUPPLIES

2.1. Instrument

2.1.1. pH-millivolt meter capable of an expanded 0.1 mV reading.

2.1.2. Platinum-iodide combination electrode (recommended) or

2.1.3. A platinum and an iodide ion selective electrodes.

2.1.4. Magnetic Stirrer

2.2. Reagents and Standards

- pH 4.0 Buffer
- Acetic acid
- Potassium Iodide Solution: Dissolve 42 g potassium iodide and 0.2 g sodium carbonate in 500 mL chlorine demand-free deionized/distilled water.
- Potassium iodate (Primary Standard – 0.00281 N): Dissolve 0.1005 g potassium iodate (KIO_3) in chlorine demand-free deionized/distilled water. Dilute to 1000 mL.

2.3. Recordkeeping and Documentation Supplies:

- Field notebook forms (waterproof paper is recommended) or
- Indelible pens

3. CALIBRATION AND USE

3.1. Standard Preparation: Prepare standards by volumetrically pipetting 0.2, 1.0, and 5.0 mL of the potassium iodate into 100 mL volumetric flasks.

3.1.1. Add 1 mL of the buffer and 1 mL potassium iodide solution to each.

3.1.2. Swirl and let stand for 2 minutes.

3.1.3. Bring to 100 mL, stopper and invert several times to mix.

3.1.4. Prepare a blank by adding all reagents except the potassium iodate to a 100 mL volumetric and bring the volume to 100 mL.

3.2. Initial Calibration: Follow manufacturer's instructions on the use of the instrument. Use the three standards and the blank to calibrate. Plot the curve on semilogarithmic graph paper or enter values into a direct-reading ion meter.

3.3. Verify the initial calibration before proceeding with sample analysis. Read at least one calibration standard as a sample. The measured value must be within 10% of the known value of the standard.

3.4. Continuing Calibration Verification: Use at least one of the standards to check the stability of the standard curve at the end of the analytical run or batch as in 3.3 above.

3.5. Follow the calibration and verification requirements in FT 1000, section 2.2.

3.6. Sample Analysis:

3.6.1. Adjust the pH of the sample with acetic acid to 4 – 5 pH units.

3.6.2. Pipet 1 mL buffer and 1mL potassium iodide into a 100 mL volumetric flask. Swirl to mix and let stand for at least 2 minutes.

3.6.3. Bring to the volume to 100 mL with the pH-adjusted sample, stopper, and invert several times to mix.

3.6.4. Follow manufacturer's instructions for the use of the instrument.

3.7. Calculations:

3.7.1. Read the residual chlorine value in mg/L (R) from the calibration curve: mg/L residual chlorine = R X 100/mL sample used

3.7.2. Record all calculations.

4. PREVENTIVE MAINTENANCE: Refer to FT 1000, section 3.

5. DOCUMENTATION:

5.1. Standard and Reagent Documentation: Document information about standards and reagents used for calibrations, verifications, and sample measurements.

5.1.1. Note the date of receipt, the expiration date and the date of first use for all standards and reagents.

5.1.1.1. Document acceptable verification of any standard used after its expiration date.

5.1.2. Record the concentration or other value for the standard in the appropriate measurement units.

5.1.2.1. Note vendor catalog number and description for preformulated solutions as well as for neat liquids and powdered standards.

5.1.2.2. Retain vendor assay specifications for standards as part of the calibration record.

5.1.3. Record the grade of standard or reagent used.

5.1.4. When formulated in-house, document all calculations used to formulate calibration standards.

5.1.4.1. Record the date of preparation for all in-house formulations.

5.1.5. Describe or cite the procedure(s) used to prepare any standards in-house (DEP SOP or internal SOP).

5.2. Field Instrument Calibration Documentation: Document acceptable calibration and calibration verification for each instrument unit and field test or analysis, linking this record with affected sample measurements.

5.2.1. Retain vendor certifications of all factory-calibrated instrumentation.

5.2.2. Designate the identity of specific instrumentation in the documentation with a unique description or code for each instrument unit used.

5.2.2.1. Record manufacturer name, model number, and identifying number such as a serial number for each instrument unit.

5.2.3. Record the time and date of all initial calibrations and all calibration verifications.

5.2.4. Record the instrument reading (value in appropriate measurement units) of all calibration verifications.

5.2.5. Record the name of the analyst(s) performing the calibration.

5.2.6. Document the specific standards used to calibrate or verify the instrument or field test with the following information:

- Type of standard or standard name (e.g., potassium permanganate)
- Value of standard, including correct units (e.g., $KMnO_4$ = 1 mg/L)
- Link to information recorded according to section 5.1 above

5.2.7. Retain manufacturers' instrument specifications.

5.2.8. Document whether successful initial calibration occurred.

5.2.9. Document whether each calibration verification passed or failed.

5.2.10. Document any corrective actions taken to correct instrument performance according to records requirements of FD 3000.

5.2.10.1. Document date and time of any corrective action.

5.2.10.2. Note any incidence of discontinuation of use of the instrument due to calibration failure.

5.2.11. Describe or cite the specific calibration or verification procedure performed (DEP SOP or internal SOP).

5.3. Record all field-testing measurement data, to include the following:

- Project name
- Date and time of measurement or test (including time zone, if applicable)
- Source and location of the measurement or test sample (e.g., monitoring well identification number, outfall number, station number or other description)
- Latitude and longitude of sampling source location (if required)
- Analyte or parameter measured
- Measurement or test sample value
- Reporting units
- Initials or name of analyst performing the measurement
- Unique identification of the specific instrument unit(s) used for the test(s)

FT 2040. SCREENING METHOD TO DETERMINE THE ABSENCE OF RESIDUAL CHLORINE

1. INTRODUCTION AND SCOPE: In some cases, wastewater treatment plants may need to determine the complete absence of residual chlorine after dechlorination. Some metered instruments may not have sufficient sensitivity to measure below 0.2-mg/L. This procedure was developed by Region 4 of the Environmental Protection Agency to be used to **determine, but not report** the absence of residual chlorine.

2. METHOD: Use any residual chlorine method. If a colorimetric method (FT 2010) is used, the spectrophotometer or colorimeter must be able to distinguish between 0.02 and 0.05 mg/L chlorine. To document the sensitivity, perform a method detection limit study to verify that the method detection limit is at least 0.02 mg/L.

3. PROCEDURE:
   See Figure FT 2000-1

   3.1. If used, calibrate the meter following FT 2010. Otherwise, use a titrimetric method (FT 2020).

   3.2. Perform all tests within 15 minutes of collecting the samples.

   3.3. Collect a grab sample at a point just before dechlorination or the effluent of the chlorine contact basin. This is sample **A**.

   3.4. Collect a second grab sample <u>after</u> dechlorination. This should correspond to the final effluent monitoring point (sample **B**).

      3.4.1. Sample **A** and Sample **B** must differ <u>only</u> by the dechlorination treatment. **There cannot be any waste streams that enter the system between the two collection points.**

   3.5. Measure and pour equal volumes of Sample **A** and Sample **B** into a clean container that can be sealed. Use a container that leaves little or no headspace when filled. This is sample **C**.

      3.5.1. Cap and gently invert the container (sample **C**) several times to mix the contents. **Do not shake vigorously.**

   3.6. Measure the total residual chlorine in samples **A** and **C**.

   3.7. Calculate the concentration in sample **B**:

      Residual Chlorine in **B** (mg/L) = [**C***2] – **A**

   3.8. The absence of residual chlorine is verified if the residual chlorine in **B** is less than or equal to ½ **A***1.10. Refer to figure FT 2000-1 for illustrative examples.

   3.9. If the value results in a negative number and a sulfite salt (e.g., sodium bisulfite, sodium metabisulfite) was used to dechlorinate the effluent, less dechlorination agent can be added.

4. DOCUMENTATION: Document the following items as applicable.

   4.1. <u>Standard and Reagent Documentation</u>: Document information about standards and reagents used for calibrations, verifications, and sample measurements.

4.1.1. Note the date of receipt, the expiration date and the date of first use for all standards and reagents.

4.1.1.1. Document acceptable verification of any standard used after its expiration date.

4.1.2. Record the concentration or other value for the standard in the appropriate measurement units.

4.1.2.1. Note vendor catalog number and description for preformulated solutions as well as for neat liquids and powdered standards.

4.1.2.2. Retain vendor assay specifications for standards as part of the calibration record.

4.1.3. Record the grade of standard or reagent used.

4.1.4. When formulated in-house, document all calculations used to formulate calibration standards.

4.1.4.1. Record the date of preparation for all in-house formulations.

4.1.5. Describe or cite the procedure(s) used to prepare any standards in-house (DEP SOP or internal SOP).

4.2. Field Instrument Calibration Documentation: Document acceptable calibration and calibration verification for each instrument unit and field test or analysis, linking this record with affected sample measurements.

4.2.1. Retain vendor certifications of all factory-calibrated instrumentation.

4.2.2. Designate the identity of specific instrumentation in the documentation with a unique description or code for each instrument unit used.

4.2.2.1. Record manufacturer name, model number, and identifying number such as a serial number for each instrument unit.

4.2.3. Record the time and date of all initial calibrations and all calibration verifications.

4.2.4. Record the instrument reading (value in appropriate measurement units) of all calibration verifications.

4.2.5. Record the name of the analyst(s) performing the calibration.

4.2.6. Document the specific standards used to calibrate or verify the instrument or field test with the following information:

- Type of standard or standard name (e.g., potassium permanganate)
- Value of standard, including correct units (e.g., $KMnO_4$ = 1 mg/L)
- Link to information recorded according to section 5.1 above

4.2.7. Retain manufacturers' instrument specifications.

4.2.8. Document whether successful initial calibration occurred.

4.2.9. Document whether each calibration verification passed or failed.

4.2.10. Document any corrective actions taken to correct instrument performance according to records requirements of FD 3000.

4.2.10.1. Document date and time of any corrective action.

4.2.10.2. Note any incidence of discontinuation of use of the instrument due to calibration failure.

4.2.11. Describe or cite the specific calibration or verification procedure performed (DEP SOP or internal SOP).

4.3. Record all field-testing measurement data, to include the following:

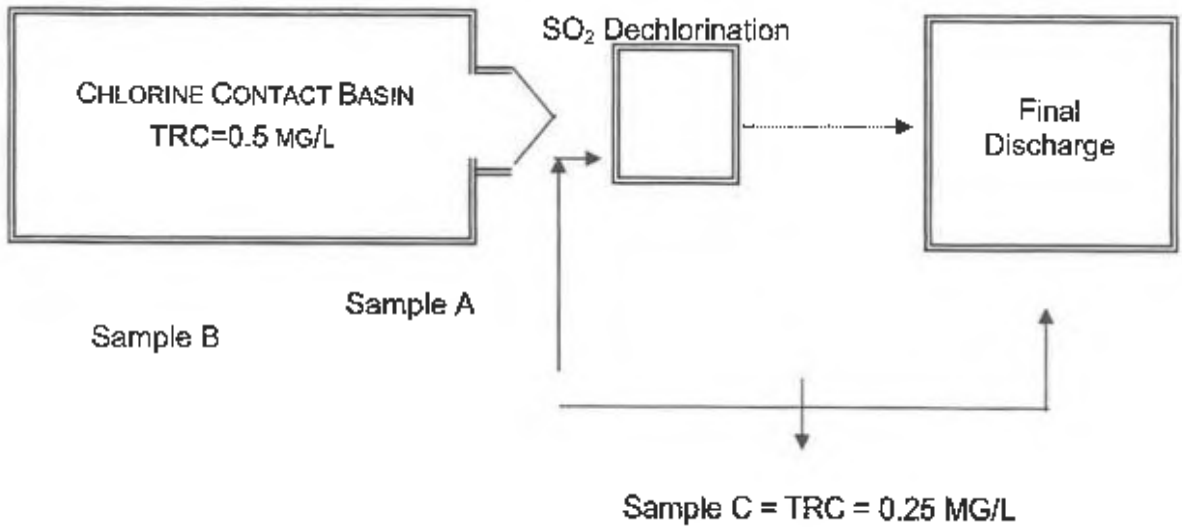
- Project name
- Date and time of measurement or test (including time zone, if applicable)
- Source and location of the measurement or test sample (e.g., monitoring well identification number, outfall number, station number or other description)
- Latitude and longitude of sampling source location (if required)
- Analyte or parameter measured
- Measurement or test sample value
- Reporting units
- Initials or name of analyst performing the measurement
- Unique identification of the specific instrument unit(s) used for the test(s)

Appendix FT 2000
Tables, Figures and Forms

Figure FT 2000-1 Screening Method for Determining Absence of Residual Chlorine

Figure FT 2000-1

SCREENING METHOD FOR DETERMINING ABSENCE OF RESIDUAL CHLORINE



A = Grab sample collected just prior to dechlorination.

B = Grab sample collected downstream of dechlorination at final discharge point.

C = Equal volumes of A & B mixed without aeration and the expectant

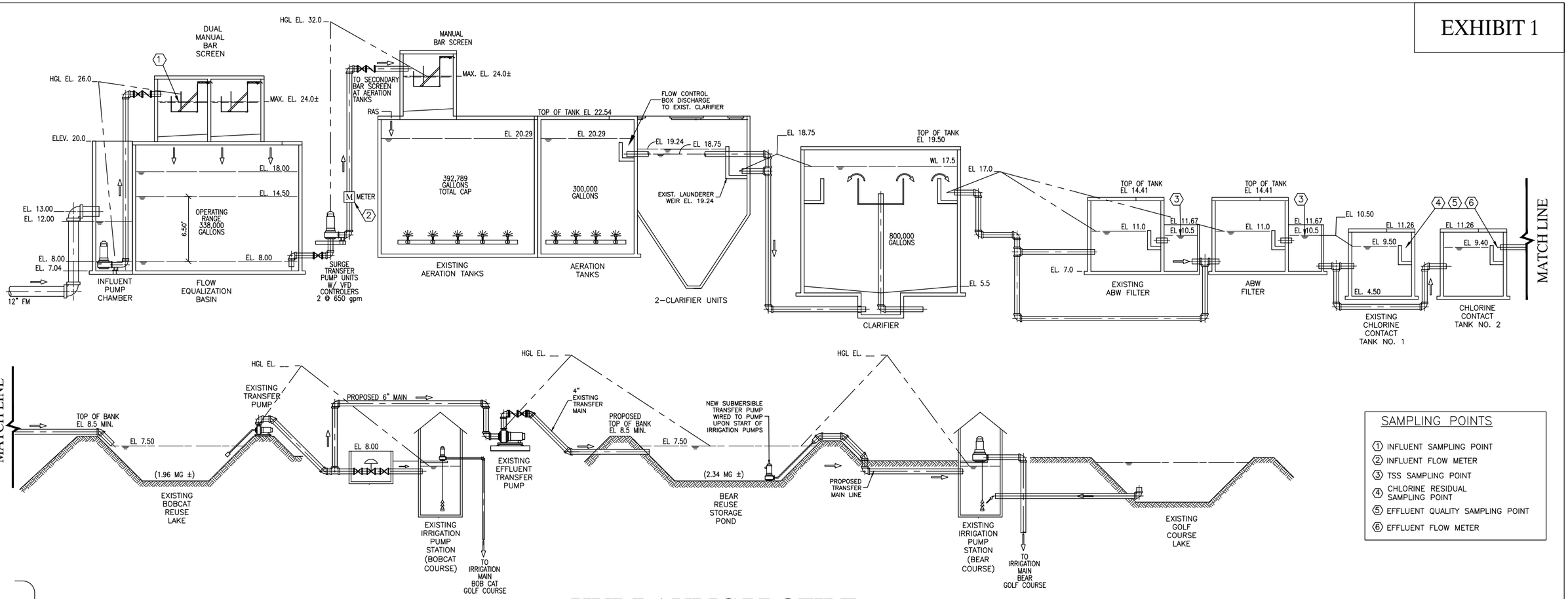
$$\text{TRC concentration mg/L} = \frac{A + B}{2} = \frac{0.5 + 0.0}{2} = 0.25$$

If 1/2 A = C, then the TRC at Sample B = <0.01 or the MDL value determined on the instrument whichever was greater.

If 1/2 A > C, then excess SO_2 was added. The TRC concentration would be <0.25 mg/L at Sample C and the TRC for Sample B = 0.0 mg/L and would be reported as a < value.

If C > 1/2 A, then Sample B would have TRC present in final effluent. To calculate the Sample B value: [C * 2] - A = TRC concentration. Example: If the TRC concentration of C = 0.27 and A = 0.5, then B = 0.04.

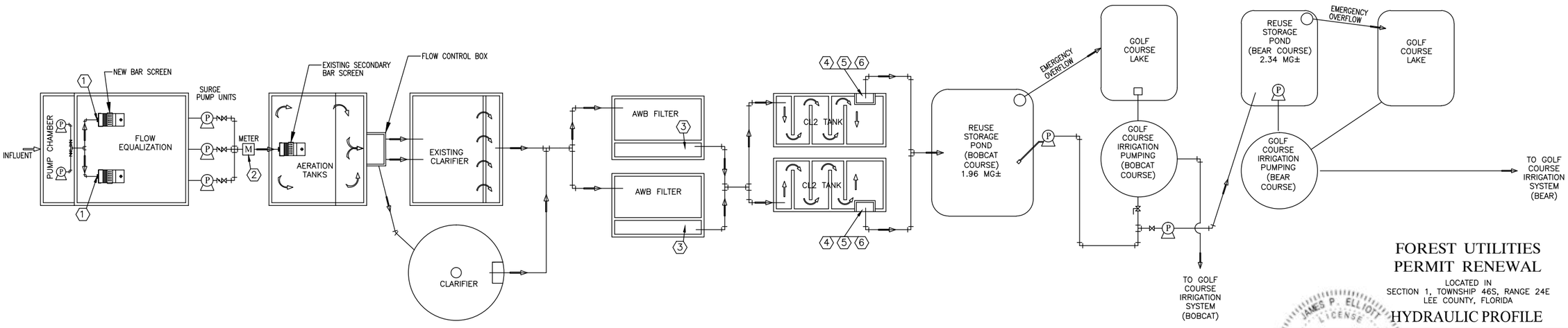
EXHIBIT 1



SAMPLING POINTS

1. INFLUENT SAMPLING POINT
2. INFLUENT FLOW METER
3. TSS SAMPLING POINT
4. CHLORINE RESIDUAL SAMPLING POINT
5. EFFLUENT QUALITY SAMPLING POINT
6. EFFLUENT FLOW METER

HYDRAULIC PROFILE



SIMPLIFIED FLOW DIAGRAM

REVISION	DATE	REMARKS	CHG. BY

FOREST UTILITIES
PERMIT RENEWAL

LOCATED IN
SECTION 1, TOWNSHIP 46S, RANGE 24E
LEE COUNTY, FLORIDA

HYDRAULIC PROFILE

JAMES P. ELLIOTT LICENSE No. 21022 STATE OF FLORIDA PROFESSIONAL ENGINEER

JAMES P. ELLIOTT, P.E.
FLORIDA LICENSE NUMBER 21022
DATE October 22, 2020

SOURCE, INC.
ENGINEERS / PLANNERS
Engineering Business #34338
1334 LAFAYETTE STREET • CAPE CORAL, FL 33904
TELEPHONE (239)549-2345 FAX (239)549-6779

JOB NO.	SHEET NO.
170-01-10	1 OF 5
DATE 08-26-20	DRAWN BY: JN
	FILE NAME: 01-170.DWG

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Oct 22, 2020 - 11:03am C:\Projects\Current Projects\100's\170-02-20 FUI WWTP Permit Renewal\Exhibits 1 Thru 5\01-170-02-20 Exhibit 1.dwg
C.O. Nejerro

EXHIBIT 2

M 10

M 11

800,000 GAL.
SUBSTANDARD
EFFL. STORAGE

325,000 GAL.
ADDITIONAL
SURGE TANK

PRIMARY BAR
SCREEN

OVERFLOW
FLAP VALVE

(1) INFL-1

(2) FLW-1

MAGNETIC
FLOW METER

SURGE
TANK
375,000
GAL. ±

PUMP
CHAMBER

SURGE TANK
CELL NO. 2

SURGE TANK
CELL NO. 1

OVERFLOW

MASTER INFLUENT
PUMP STATION

SURGE PUMPING
UNITS

MAGNETIC
FLOW METER

PLANT
PUMPING
STATION

MANUAL REMOVAL
OF SLUDGE CAKE

DRIED SLUDGE
HOLDING BIN

DRIED SLUDGE TRUCKED
TO SANITARY LANDFILL

SLUDGE
DRYING
BED #4

SLUDGE
DRYING
BED #3

SLUDGE
DRYING
BED #2

SLUDGE
DRYING
BED #1

SLUDGE DRYING BED
DRAIN LINES

SECONDARY BAR
SCREEN

AERATION
TANK 1
(ANOXIC ZONE)

AERATION
TANK
2

AERATION TANK
3

AERATION
TANK
4

AERATION
TANK
5

AERATION
TANK
6

AERATION TANK
7

(4)(5)(6) FLA-1 METERING CHAMBER

CONTACT
CHAMBER 1

CHLORINE CONTACT
TANK CONTROL WEIR

(4)(5)(6) FLA-2

CHLORINE
CONTACT
TANKS

CHLORINE CONTACT
TANK CONTROL WEIR
IN METERING CHAMBER

RETURN ACTIVATED SLUDGE

EFB-2 (3)

TRAVELING
BRIDGE
SAND
FILTERS

NO. 2
FILTER

NO. 1
FILTER

(3) EFB-1

MV #2

M

MV #1

PLANT EFFLUENT
PUMPING STATION

SLUDGE TRANSFER
WETWELL

CONTROL
GATES

CLARIFIER
NO. 1

CLARIFIER
NO. 2

TELESCOPING
VALVES

CLARIFIER
TANK
NO. 3

R.A.S./W.A.S. PUMPING

WASTE ACTIVATED SLUDGE

SLUDGE
HOLDING
TANK
NO. 3
(ANAEROBIC)

SLUDGE
HOLDING
TANK
NO. 2
(ANAEROBIC)

SLUDGE HOLDING TANK NO. 1
(ANAEROBIC)

AEROBIC
DIGESTER
NO. 3

AEROBIC
DIGESTER
NO. 2

AEROBIC
DIGESTER
NO. 1

PLANT INFLUENT FROM
COLLECTION SYSTEM

COLLECTION SYSTEM

TO BOBCAT
G.C. IRRIGATION

BOBCAT
G.C. LAKE

M

MV #3

BOBCAT
STANDARD EFFLUENT STORAGE POND
1.96 MG±

AUGMENTATION
FROM BOBCAT
G.C. LAKE

TO BEAR
G.C. IRRIGATION

BEAR
STANDARD EFFLUENT STORAGE POND
2.34 MG±

AUGMENTATION
FROM BEAR
G.C. LAKE

MOTORIZED CONTROL VALVES

CONTROL VALVE MV#1 – NORMALLY OPEN
CLOSES ON DEFAULT CONDITION.

CONTROL VALVE MV#2 – NORMALLY CLOSED,
OPENS ON DEFAULT CONDITION

**MANUAL VALVES – FOR
RETREATMENT OF SUBSTANDARD EFFLUENT**

VALVE M10 – RECYCLE FOR
TOTAL TREATMENT

VALVE M11 – RECYCLE FOR
FILTRATION AND CHLORINATION ONLY

SAMPLING POINTS

(1) INFLUENT SAMPLING POINT
(2) INFLUENT FLOW METER
(3) TSS SAMPLING POINT
(4) CHLORINE RESIDUAL SAMPLING POINT
(5) EFFLUENT QUALITY SAMPLE POINT
(6) EFFLUENT FLOW METER

LEGEND

M = MOTORIZED VALVE

FLA-2 SAMPLE STATION

REVISION	DATE	REMARKS	CHG. BY

(REDUCED TO HALF SCALE)

FOREST UTILITIES
WASTEWATER TREATMENT FACILITY

FOREST UTILITIES, INC.
6341 DEER RUN, S.W.
FORT MYERS, FLORIDA 33908

SECTION 1, TWP. 46S, RNG. 24E
LEE COUNTY, FLORIDA

PROCESS FLOW DIAGRAM

JAMES P. ELLIOTT
LICENSE
No. 21022
STATE OF FLORIDA
PROFESSIONAL ENGINEER

JAMES P. ELLIOTT, P.E.
FLORIDA LICENSE NUMBER 21022

DATE October 22, 2020

SOURCE, INC.
ENGINEERS - PLANNERS
Engineering Business #34338
1334 LAFAYETTE STREET * CAPE CORAL, FL 33904
TELEPHONE (239)549-2345 FAX (239)549-6779

JOB NO.	SHEET NO.
170-02-20	2 OF 5
DATE	DRAWN BY:
08-26-20	JN
	FILE NAME: 02-170

Oct 22, 2020 - 11:04am C:\D. Holgers
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EXHIBIT 3

FROM TANK DRAIN

MV 11

MV 10

DETAIL "A"

HEAVY UNDERBRUSH WOODS

TOP OF BERM

3.5' ± HIGH

ELEC. X-FORMER

NEW 6" PVC DECANT TO DRAIN

GRAVEL DRIVE

8" PVC FORCE MAIN

HEAVY UNDERBRUSH WOODS

POND OVERFLOW STRUCTURE

TRENCH DRAIN

SLOPE

NEW DRY SLUDGE STORAGE

GEN-SET

SLUDGE HOLDING TANK 3

AERATION TANK 4

AERATION TANK 6

AERATION TANK 5

SLUDGE HOLDING TANK 4

ONE WAY

STORAGE BUILDING

STORMWATER LAKE

SLUDGE DRYING BED #2

SLUDGE DRYING BED #1

SLUDGE HOLDING TANK 2

800,000 GAL. SUBSTANDARD EFFL. STORAGE

SLUDGE DRYING BED #4

SLUDGE DRYING BED #3

AERATION TANK 3

AERATION TANK 7

CLARIFIER 3

SCUM BOX

ONE WAY GRAVEL DRIVE

SEE DETAIL "A"

AERATION TANK 2

DIGESTER 3

CLARIFIER 1

SLUDGE TRANSFER

CLARIFIER 2

SLUDGE HOLDING TANK NO. 1

800,000 GPD CLARIFIER

BLOWER EQUIPMENT

AERATION TANK 1

DIGESTER 1

DIGESTER 2

RAS/WAS PUMPS

PLANT SITE L.S.

325,000 GAL. ADDITIONAL SURGE TANK

FILTER NO. 1

OFFICE/GARAGE

SURGE TANK 375,000 GAL. ±

FILTER NO. 2

NEW 12" TEE

12" CLARIFIER EFFLUENT

EXISTING 6" DIP WM

8" PVC FORCE MAIN

GRAVEL DRIVE

IRRIGATION TRANSFER PUMPS

PUMP CHAMBER

CHLORINE BUILDING

CONTACT CHAMBER 1

SEE DETAIL "B"

METER

POND INLET

BAR SCREEN FACILITIES

EFFLUENT PUMPING STATION

TO BOBCAT IRRIGATION PUMP STATION/ BEAR REUSE POND

CHLORINE CONTACT TANK #2

EXISTING GOLF COURSE MAINTENANCE BLDG

N

20 10 0 20

SCALE IN FEET
1" = 20'

BOBCAT
1.96 MGD STANDARD
EFFLUENT
STORAGE POND

PLANT SITE LS

LS

MV 2

MV 1

DETAIL "B"

WHEN EFFLUENT MEETS PERMIT REQUIREMENTS:
MOTORIZED VALVE NO. MV-1 – NORMALLLY OPEN
MOTORIZED VALVE NO. MV-2 – NORMALLY CLOSED

NOTE: TRANSFER PUMP ENERGIZES WHEN G.C. IRRIGATION PUMPS ARE STARTED.

REVISION	DATE	REMARKS	CHG. BY

(REDUCED TO HALF SCALE)

FOREST UTILITY
WASTEWATER TREATMENT FACILITY

FOR
FOREST UTILITIES, INC.
6341 DEER RUN, S.W.
FORT MYERS, FLORIDA 33908
IN
SECTION 1, TWP. 46S, RNG. 24E
LEE COUNTY, FLORIDA

WWTP SITE PLAN

JAMES P. ELLIOTT LICENSE No. 21022 STATE OF FLORIDA PROFESSIONAL ENGINEER

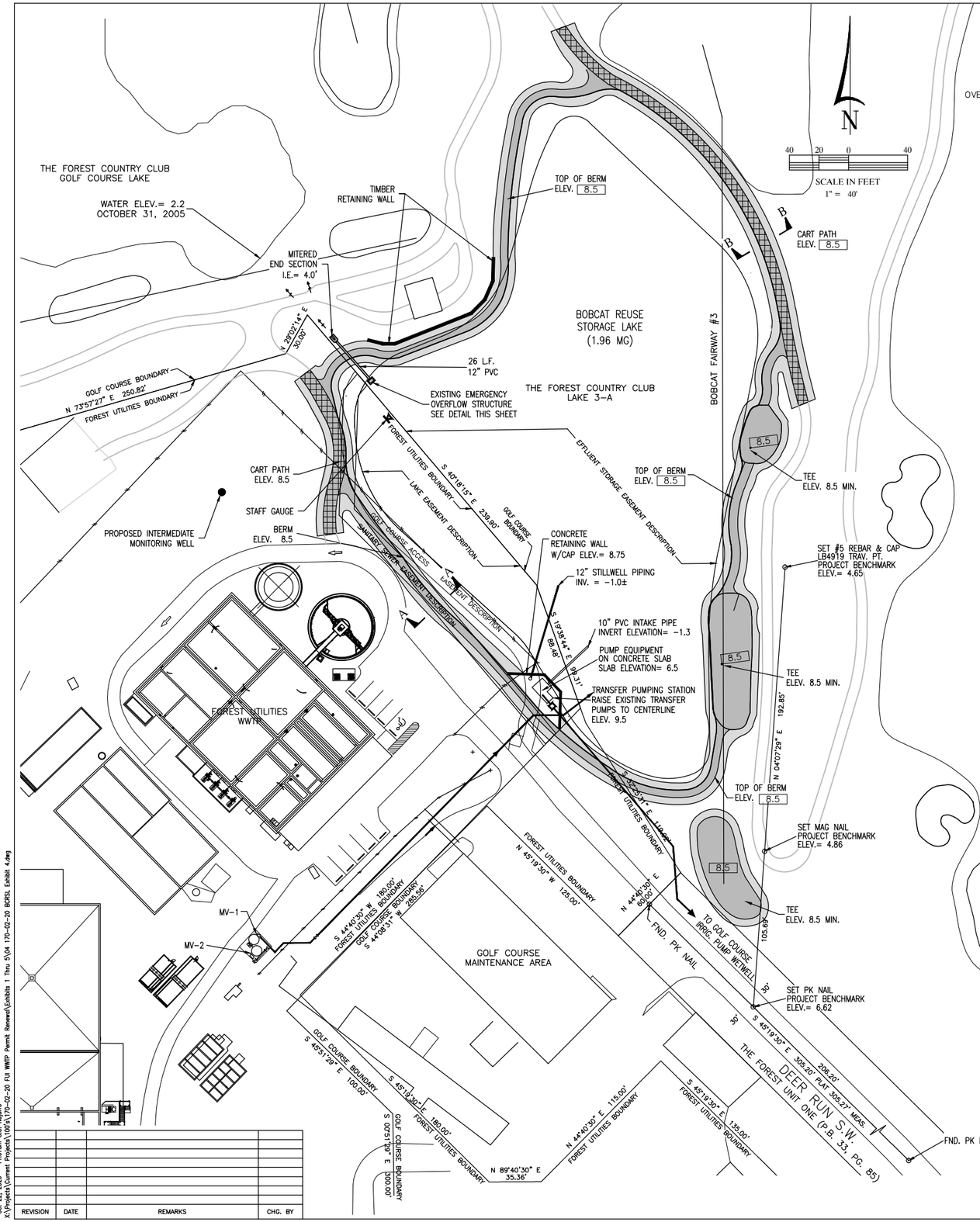
JAMES P. ELLIOTT, P.E.
FLORIDA LICENSE NUMBER 21022
DATE 10 October 22, 2020

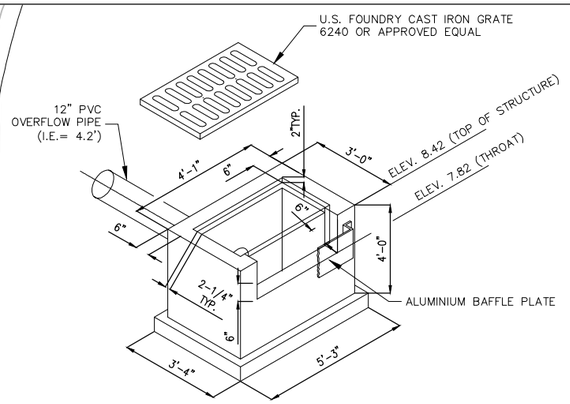
SOURCE, INC.
ENGINEERS - PLANNERS
Engineering Business #34338
1334 LAFAYETTE STREET * CAPE CORAL, FL 33904
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170-02-20	3 OF 5
DATE	DRAWN BY:
08-26-20	JN
	FILE NAME: 03-170.DWG

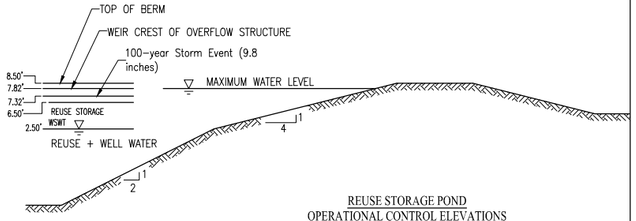
Oct 22, 2020 - 11:05am C.O. Waters
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EXHIBIT 4

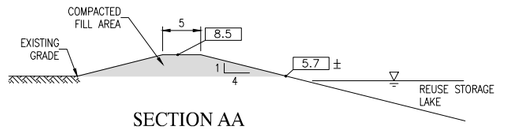




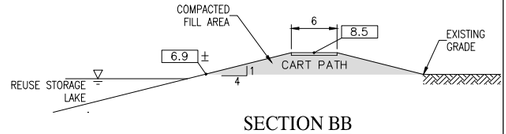
EXISTING EMERGENCY OVERFLOW STRUCTURE DETAIL
N.T.S.



REUSE STORAGE POND
OPERATIONAL CONTROL ELEVATIONS
N.T.S.



SECTION AA
N.T.S.



SECTION BB
N.T.S.

OPERATIONAL PROTOCOL:

THE FOLLOWING OPERATIONAL GUIDELINES SHALL BE FOLLOWED TO STOP UNAUTHORIZED DISCHARGE OF REUSE WATER FROM THE PERMITTED REUSE RETENTION LAKE:

1. ONE FLAGGED STAFF GAUGE INSTALLED IN THE REUSE LAKES SHALL BE USED FOR MONITORING ELEVATIONS. THE STAFF GAUGE SHALL BE READABLE FROM ELEVATION 1.0' NGVD TO ELEVATION 9.0' NGVD. THIS ALLOWS THE WATER LEVEL TO BE MONITORED FROM THE BASE OF THE REUSE STORAGE AT ELEVATION AT 2.5' NGVD TO THE TOP OF THE REUSE STORAGE AT ELEVATION 6.5' NGVD.

2. THE SUPPLEMENTAL WELL WATER DISCHARGE SHALL BE ALLOWED WHEN THE WATER ELEVATION IN THE LAKE IS BELOW ELEVATION 2.5' NGVD. THE SUPPLEMENTAL WELL DISCHARGE SHALL BE TERMINATED WHEN THE LAKE STAGING ACHIEVES THE ELEVATION OF 2.5' NGVD. PUMPING OF THE IRRIGATION WELLS MAY BE REDUCED OR ELIMINATED IF SUFFICIENT REUSE WATER IS AVAILABLE. ONLY EFFLUENT REUSE WATER MAY BE PUMPED INTO THE STORAGE LAKE ABOVE ELEVATION 2.5'.

3. THE IRRIGATION TRANSFER PUMP OPERATIONAL RANGE EXTENDS TO A LOW LAKE STAGE OF ELEV. 1.00' NGVD. BELOW ELEV. 1.00' NGVD A SAFETY CUT-OFF SWITCH SHALL BE ACTIVATED TO DISABLE THE OPERATION OF THE IRRIGATION TRANSFER PUMPS.

4. FOREST UTILITIES, INC. SHALL SUPPLY MONTHLY FLOW READINGS OF THE EFFLUENT REUSE WATER DELIVERED. THE FOREST COUNTRY CLUB GOLF COURSE STAFF SHALL MAINTAIN A DAILY LOG WITH THE SUPPLIED AMOUNT OF EFFLUENT REUSE WATER, IRRIGATION WELL WATER, RAINFALL WATER, AND THE WATER LEVEL OF THE REUSE LAKE. THE DAILY LOG SHALL ALSO INCLUDE THE AMOUNT OF WATER PUMPED FROM THE REUSE LAKE AND APPLIED TO THE GOLF COURSE. NO RESIDENTIAL AREAS SHALL RECEIVE ANY REUSE WATER.

5. THE MOTORIZED VALVE (MV-1) IS TO BE USED TO CONTROL THE REUSE WATER ENTERING THE LAKE. IF MOTORIZED VALVE (MV-1) OR OTHER FOREST UTILITIES, INC. MAINTAINED EQUIPMENT IS NOT OPERATIONAL, FOREST UTILITIES, INC. SHALL BE NOTIFIED. UPON NOTIFICATION, FOREST UTILITIES, INC. SHALL CLOSE THE VALVE LOCATED AT THE POINT OF DELIVERY STATION OR A VALVE AT ANOTHER UPSTREAM LOCATION TO CEASE DELIVERY OF REUSE WATER AND ENABLE FOREST UTILITIES, INC. TO COMMENCE REPAIRS. FOREST UTILITIES, INC., SHALL ALSO NOTIFY THE FOREST COUNTRY CLUB GOLF COURSE SUPERINTENDENT'S OFFICE OF ANY DELAYS IN REUSE SUPPLY CAUSED BY MALFUNCTIONING EQUIPMENT.

A.	LEAD OPERATOR	(239) 848-5174
B.	FOREST UTILITIES OFFICE	(239) 481-5333
C.	GOLF COURSE SUPERINTENDENT	(239) 498-4213

UPON THE EQUIPMENT BECOMING OPERATIONAL, FOREST UTILITIES, INC. SHALL NOTIFY THE FOREST COUNTRY CLUB GOLF COURSE SUPERINTENDENT'S OFFICE OF THE SYSTEM RETURNING TO OPERATIONAL STATUS.

REUSE LAKE GENERAL NOTES

1. REUSE LAKE # 3-A
   WET SEASON STORAGE BEGINS @ CONTROL ELEVATION (WSWT) = 2.5' NGVD
   SHUT OFF ELEVATION = 6.5' NGVD
   TOTAL STORAGE HEIGHT = 4.0'
   TOTAL LAKE AREA @ 2.5' = 1.28 ACRES
   TOTAL LAKE AREA @ 6.5' = 1.73 ACRES
   AVERAGE LAKE AREA = 1.505 ACRES
   TOTAL STORAGE VOLUME = (4.0 FT.) X (1.505 AC.)
   TOTAL STORAGE VOLUME = 6.020 AC. FT.
   = 262,230 CU. FT.
   = 1,961,740 GAL (1.96 MG)

2. THIS LAKE IS ISOLATED AND DOES NOT CONTRIBUTE TO THE STORM WATER RUNOFF.

3. THE 1-DAY, 100-YEAR RAINFALL EVENT FOR THIS LAKE HAS BEEN DETERMINED TO BE 0.8' (9.8 INCHES).

4. A SOLENOID VALVE OR AN ENGINEER APPROVED EQUIVALENT DEVICE SHALL BE INSTALLED ON THE DISCHARGE PIPING FROM THE AUGMENTATION PUMP, SET TO CLOSE AT LAKE ELEVATION EQUAL TO OR GREATER THAN ELEVATION 2.5' NGVD. A HIGH PRESSURE SHUT-OFF SWITCH WITH MANUAL RESET SHALL BE INSTALLED FOR PROTECTION OF THE AUGMENTATION PUMP.

LEGEND

SHADED AREA NEW BERM FILL

CART PATH AREA TO BE RAISED

TIMBER RETAINING WALL

SURVEY INFORMATION PROVIDED BY
BEAN, WHITAKER, LUTZ & KAREH, INC.
JOB NO. 37652
DATED 9-29-05

(REDUCED TO HALF SCALE)

REVISION	DATE	REMARKS	CHG. BY

FOREST UTILITIES, INC.
6341 DEER RUN, S.W.
FORT MYERS, FLORIDA 33908
IN
SECTION 1, TWP. 46S, RNG. 24E
LEE COUNTY, FLORIDA

BOBCAT REUSE STORAGE POND

JAMES P. ELLIOTT, P.E.
LICENSE No. 21022
STATE OF FLORIDA
PROFESSIONAL ENGINEER

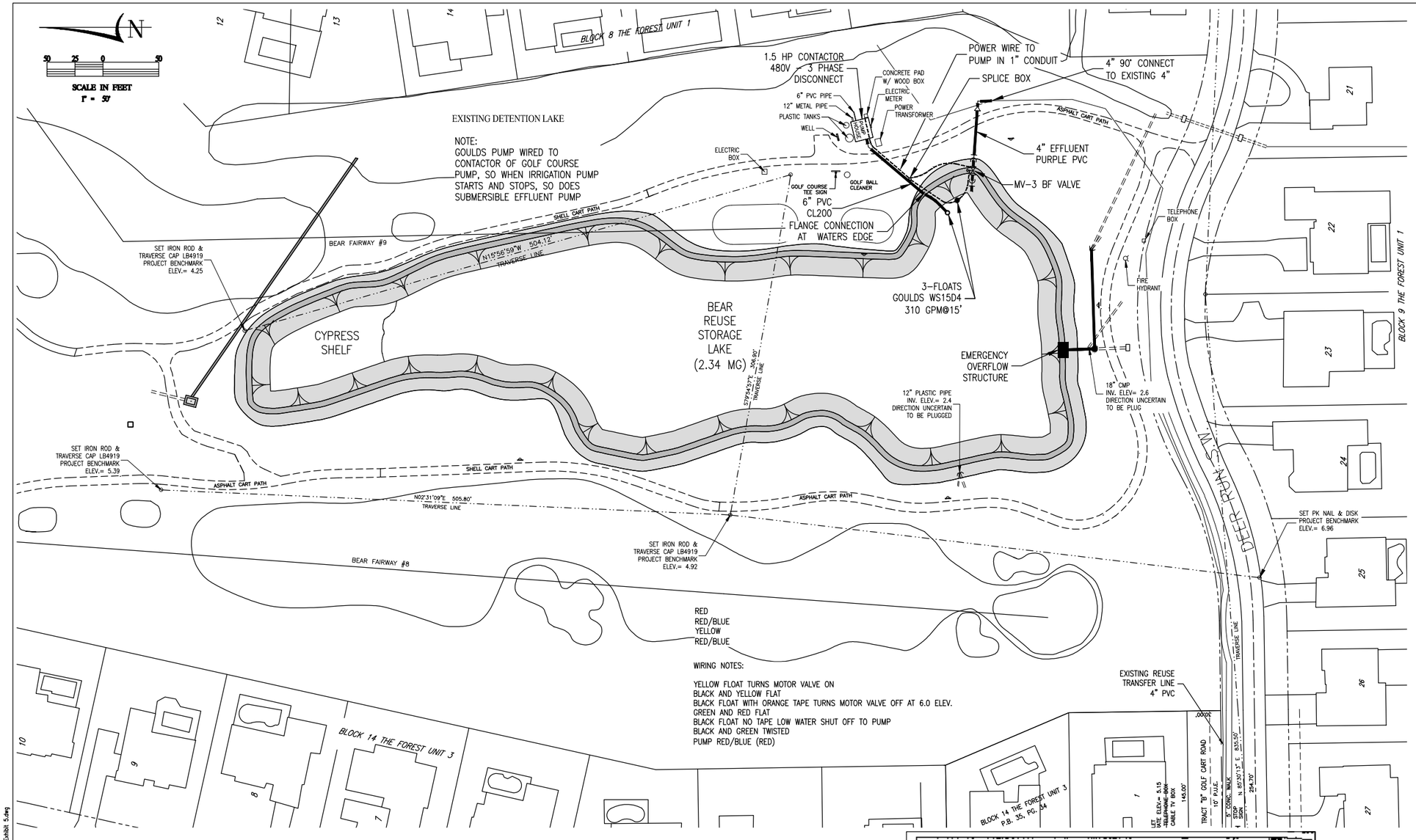
JAMES P. ELLIOTT, P.E.
FLORIDA LICENSE NUMBER 21022
DATE October 22, 2020

SOURCE, INC.
ENGINEERS - PLANNERS
Engineering Business #34338
1334 LAFAYETTE STREET * CAPE CORAL, FL 33904
TELEPHONE (239)549-2345 FAX (239)549-6779

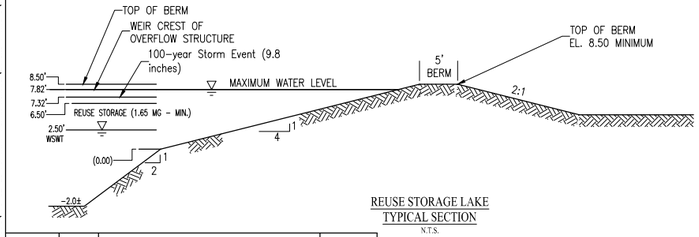
JOB NO.	SHEET NO.
170-02-20	4 OF 5
DATE	DRAWN BY:
08-26-20	JN
	FILE NAME: 05-170.DWG

Oct 22, 2020 - 11:07am C.O. Holmes
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EXHIBIT 5



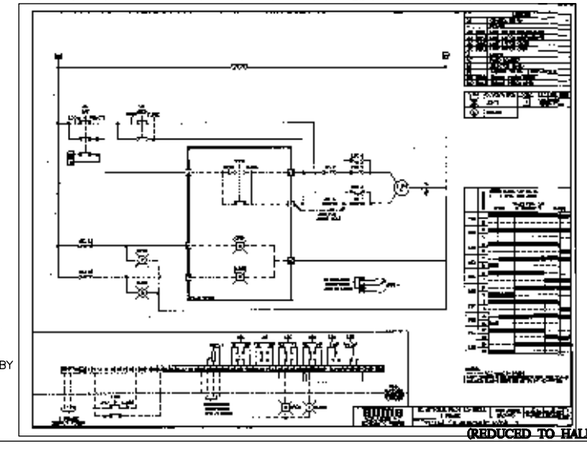
REUSE STORAGE POND
OPERATIONAL CONTROL ELEVATIONS



REUSE STORAGE LAKE
TYPICAL SECTION
N.T.S.

REVISION	DATE	REMARKS	CHG. BY

1. THIS LAKE IS TO BE ISOLATED AND DOES NOT CONTRIBUTE TO THE STORM WATER RUNOFF.
2. THE 1-DAY, 100-YEAR RAINFALL EVENT FOR THIS LAKE HAS BEEN DETERMINED TO BE 0.8' (9.8 INCHES).
3. THE NEW 6" IRRIGATION TRANSFER PUMP DISCHARGE SHALL CONNECT TO THE EXISTING PUMP HOUSE WET WELL. THE NEW TRANSFER PUMP SHALL BE WIRED TO BEGIN PUMPING ON STARTUP OF THE GOLF COURSE IRRIGATION PUMPS AND TO CEASE PUMPING WHEN THE GOLF COURSE IRRIGATION PUMPS STOP. THE NEW SUBMERSIBLE TRANSFER PUMP SHALL ALSO BE ELECTRICALLY INTERLOCKED TO THE EXISTING GOLF COURSE IRRIGATION PUMP CONTROLS.
4. OPERATIONAL CONTROLS SHALL BE PROVIDED TO ENABLE THE AUTOMATED VALVE OPERATIONS DESCRIBED IN THE OPERATIONAL PROTOCOL.
5. CONTRACTORS TO FIELD LOCATE EXISTING 4" PVC TRANSFER LINE TO VERIFY PIPING AND FITTINGS REQUIRED FOR TIE-IN.
6. REUSE BANK LOCATION MAY VARY TO PRESERVE EXISTING SPECIMEN TREES.
7. ALL MATERIAL EXCAVATED DURING CONSTRUCTION SHALL BE UTILIZED ONSITE. NO MATERIAL EXCAVATED ONSITE IS PERMITTED TO BE TRANSPORTED OFFSITE.
9. UNLESS OTHERWISE SPECIFIED, DRAINAGE PRODUCTS TO BE MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS, INC. / NYLOPLAST OR APPROVED EQUAL.



(REDUCED TO HALF SCALE)

OPERATIONAL PROTOCOL:

THE FOLLOWING OPERATIONAL GUIDELINES SHALL BE FOLLOWED TO STOP UNAUTHORIZED DISCHARGE OF REUSE WATER FROM THE PERMITTED REUSE RETENTION LAKE:

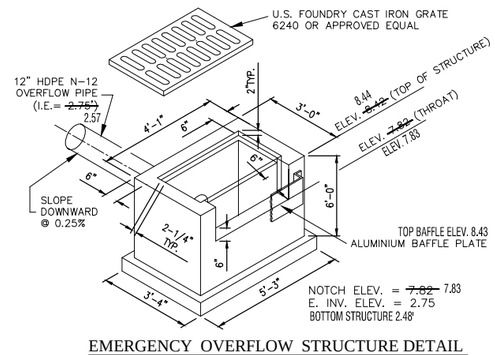
1. ONE FLAGGED STAFF GAUGE INSTALLED IN THE REUSE LAKES SHALL BE USED FOR MONITORING ELEVATIONS. THE STAFF GAUGE SHALL BE READABLE FROM ELEVATION 1.0' NGVD TO ELEVATION 9.0' NGVD. THIS ALLOWS THE WATER LEVEL TO BE MONITORED FROM THE BASE OF THE REUSE STORAGE AT ELEVATION AT 2.5' NGVD TO THE TOP OF THE REUSE STORAGE AT ELEVATION 6.0' NGVD.
2. THE IRRIGATION TRANSFER PUMP OPERATIONAL RANGE EXTENDS TO A LOW LAKE STAGE OF ELEV. 1.00' NGVD. BELOW ELEV. 1.00' NGVD A SAFETY CUT-OFF SWITCH SHALL BE ACTIVATED TO DISABLE THE OPERATION OF THE IRRIGATION TRANSFER PUMP.
3. FOREST UTILITIES, INC. SHALL SUPPLY MONTHLY FLOW READINGS OF THE EFFLUENT REUSE WATER DELIVERED. THE FOREST COUNTRY CLUB GOLF COURSE STAFF SHALL MAINTAIN A DAILY LOG WITH THE SUPPLIED AMOUNT OF EFFLUENT REUSE WATER, IRRIGATION WELL WATER, RAINFALL WATER, AND THE WATER LEVEL OF THE REUSE LAKE. THE DAILY LOG SHALL ALSO INCLUDE THE AMOUNT OF WATER PUMPED FROM THE REUSE LAKE AND APPLIED TO THE GOLF COURSE. NO RESIDENTIAL AREAS SHALL RECEIVE ANY REUSE WATER.
4. THE MOTORIZED VALVE (MV-3) IS TO BE USED TO CONTROL THE REUSE WATER ENTERING THE LAKE. IF MOTORIZED VALVE (MV-3) OR OTHER FOREST UTILITIES, INC. MAINTAINED EQUIPMENT IS NOT OPERATIONAL, FOREST UTILITIES, INC. SHALL BE NOTIFIED. UPON NOTIFICATION, FOREST UTILITIES, INC. SHALL CLOSE THE VALVE LOCATED AT THE POINT OF DELIVERY STATION OR A VALVE AT ANOTHER UPSTREAM LOCATION TO CEASE DELIVERY OF REUSE WATER AND ENABLE FOREST UTILITIES, INC. TO COMMENCE REPAIRS. FOREST UTILITIES, INC., SHALL ALSO NOTIFY THE FOREST COUNTRY CLUB GOLF COURSE SUPERINTENDENT'S OFFICE OF ANY DELAYS IN REUSE SUPPLY CAUSED BY MALFUNCTIONING EQUIPMENT.

A.	LEAD OPERATOR	(239) 848-5174
B.	FOREST UTILITIES OFFICE	(239) 481-5333
C.	GOLF COURSE SUPERINTENDENT	(239) 498-4213

UPON THE EQUIPMENT BECOMING OPERATIONAL, FOREST UTILITIES, INC. SHALL NOTIFY THE FOREST COUNTRY CLUB GOLF COURSE SUPERINTENDENT'S OFFICE OF THE SYSTEM RETURNING TO OPERATIONAL STATUS.

REUSE LAKE GENERAL NOTES

THE BEAR REUSE LAKE (LOCATED AT BEAR FAIRWAY #8)
WET SEASON STORAGE BEGINS @ CONTROL ELEVATION (WSWT) = 2.5' NGVD
SHUT OFF ELEVATION = 6.5' NGVD
TOTAL STORAGE HEIGHT = 4.0'
TOTAL LAKE AREA @ 2.5' = 1.430 ACRES
TOTAL LAKE AREA @ 3.0' = 1.498 ACRES
TOTAL LAKE AREA @ 4.5' = 1.822 ACRES
TOTAL LAKE AREA @ 6.5' = 2.142 ACRES
AVERAGE LAKE AREA BETWEEN ELEVATIONS 2.5' & 3.0' = 1.464 ACRES
AVERAGE LAKE AREA BETWEEN ELEVATIONS 3.0' & 4.5' = 1.660 ACRES
AVERAGE LAKE AREA BETWEEN ELEVATIONS 4.5' & 6.5' = 1.982 ACRES
TOTAL STORAGE VOLUME = (0.5 FT. X 1.464 AC.) + (1.5 FT. X 1.660 AC.) + (2.0 FT. X 1.982 AC.)
TOTAL STORAGE VOLUME = 7.186 AC. FT.
= 313,022.16 CU. FT.
=2,341,718.8 GAL (~ 2.34 MG) > 1.65 MG MIN.



EMERGENCY OVERFLOW STRUCTURE DETAIL
N.T.S.

FOREST UTILITIES, INC.
6341 DEER RUN, S.W.
FORT MYERS, FLORIDA 33908
IN
SECTION 1, TWP. 46S, RNG. 24E
LEE COUNTY, FLORIDA

BEAR REUSE STORAGE POND

JAMES P. ELLIOTT, P.E.
FLORIDA LICENSE NUMBER 21022
DATE ~~October 22, 2020~~ OCtober 22, 2020

SOURCE, INC.
ENGINEERS - PLANNERS
Engineering Business #34338
4224 EVANGELINE STREET • CAPE CORAL, FL 33904
TELEPHONE (239)549-2345 FAX (239)549-6779

JOB NO.	SHEET NO.
170-02-20	5 OF 5
DATE	DRAWN BY: JN
08-26-20	FILE NAME: 05-170.DWG

Oct 22, 2020 - 11:08am C.O. Hajjaro
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Effluent Monitoring Plan to Supplement Groundwater Monitoring Plan for Forest Utilities WWTP

To: Wade Moser - Forest Utilities, Jim Elliot P.E. - Source Engineering
From: Andy McThenia, P.G. Water Science Associates
Date July 22, 2020
Re: Supplemental Effluent Monitoring Plan

Background

Following a Compliance Evaluation Inspection conducted by the Florida Department of Environmental Protection (FDEP) at the Forest Utilities Wastewater Treatment Plant (WWTP) facility on September 25, 2019, FDEP issued a Compliance Assistance Offer (CAO) on October 30, 2019 which, in part, highlighted exceedances of groundwater monitoring parameters of chlorides and total dissolved solids (TDS) in several of the groundwater monitoring wells (see Figure 1) which are part of the Forest Utilities Groundwater Monitoring Plan (GWMP). The CAO requested that the Utility submit documentation to the Department outlining how the facility will address the groundwater exceedances.



Figure 1. Map Showing Forest Utilities Groundwater Monitoring Sites

The following summary timeline indicates pertinent communications between FDEP and Forest Utilities.

- 11/20/2019 - Forest Utilities submitted a response to the FDEP's CAO indicating that the source of excessive chlorides and TDS to groundwater originates from Forest Country Club irrigation source wells and lakes; and that mixing with effluent prior to application by the Country Club serves to dilute the water used for irrigation.

- 11/22/2019 - FDEP Interoffice Memorandum states that ***"the facility should sample the effluent with the groundwater requirements to provide additional information about the quality of the effluent versus the irrigation water."***

- 2/6/2020 – Forest Utilities meets with FDEP to discuss compliance issues.

- 2/12/2020 - Forest Utilities indicates that additional effluent sampling would be performed and monitoring well sampling would be conducted prior to irrigation of the area around each well. Forest Utilities also indicated that it would research relocating intermediate monitoring well F2 and abandoning compliance monitor well F3.

Water Science Associates was contracted by Forest Utilities Inc. to investigate the potential sources of chlorides and TDS in the water table aquifer which have been detected at elevated levels in groundwater monitoring wells. After conducting an investigation of groundwater quality including two site visits, a meeting and discussions with golf course staff, reviewing existing chlorides monitoring by the Golf Course, and review of private well water quality; Water Science Associates determined that Golf Course irrigation water from lake and well sources and Middle Hawthorn Aquifer water from private homeowner irrigation wells were the most probable sources of elevated chloride and TDS in the Water Table Aquifer onsite. Water Science Associates presented the results of the groundwater quality investigation to FDEP in maps and data submitted by Andrew McThenia to FDEP staff via e-mail on March 20, 2020 and April 1, 2020.

On April 7, 2020, a teleconference was held by FDEP with Forest Utilities, Water Science Associates, and Source Engineering in attendance. Water Science Associates indicated that the Utility was requesting removal of chlorides and TDS from the list of compliance parameters due to the contribution of these contaminants from the Golf Course and private homeowner irrigation sources beyond the control of Forest Utilities. FDEP indicated that Forest Utilities would need to demonstrate that the effluent was not contributing to levels of these contaminants in the Water Table Aquifer. In response to this request, Water Science submitted correspondence to FDEP on May 1, 2020 indicating that Forest Utilities would be conducting quarterly supplemental effluent sampling for chlorides and TDS through the remainder of the calendar year 2020 with the intention to determine whether the WWTP effluent is contributing to groundwater quality exceedances for those parameters. FDEP responded on May 13, 2020 stating the ***"The Department finds the timeline and proposed plan sufficient if a permit modification is submitted to the Department detailing the plan and timeline."***

Based on that guidance from FDEP, the plan for supplemental monitoring of effluent is as follows:

Proposed Supplemental Sampling of Effluent

The proposed modification to the Forest Utilities WWTP permit consists of supplemental quarterly monitoring of the effluent for chlorides and TDS for the remainder of calendar year 2020. Upon completion of these supplemental effluent samples, the results will be compared to concurrent groundwater monitoring results conducted as part of the existing permitted GWMP to determine if the effluent is negatively impacting the levels of chloride and TDS in the Water Table Aquifer. The quarterly effluent samples are to be collected by Sanders

Laboratory on the same day as the quarterly groundwater samples are collected from the existing monitor wells if possible. The quarterly effluent samples for chlorides and TDS are to be collected from the EFA-01 location which corresponds to the West Chlorine Contact Tanks Outfall. The following table provides the proposed sample parameters, units, limits, frequency, and site designation.

Parameter	Units	Limit	Frequency of Analysis	Monitoring Site Number
Chloride	mg/l	Report	Quarterly	EFA -01
Total Dissolved Solids (TDS)	mg/l	Report	Quarterly	EFA -01

The proposed supplemental sampling of the effluent will continue through the 4th quarter of 2020. The results of the effluent water quality will be compared to concurrent groundwater quality sampling results of the existing monitor wells to determine whether the effluent can be determined to be contributing to groundwater degradation with respect to the monitored parameters.

Wastewater Collection System Operation and Maintenance Plan

Forest Utilities WW Facilities
South Fort Myers, Florida

GMS ID #5236P00059

for:

Forest Utilities, Inc.
6341 Deer Run
Fort Myers, Florida 33908

Prepared by:

Source, Inc.
1334 Lafayette Street
Cape Coral, Florida 33904

Date:

October 2020

Wastewater Collection System
Operation and Maintenance Plan

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Appendix A - Forest Utilities - Collection System O&M Manual
Appendix B - Forest Utilities - Lift Station O&M Manual

1. COLLECTION SYSTEM MANAGEMENT

a. Goals

The Utility's preventive maintenance plan (PMP) covers the assets that are managed in its wastewater collection system and is one component of its overall Operation & Maintenance (O&M) Plan. The PMP combines preventive, predictive and corrective maintenance strategies with our best management practices. The O&M Plan and PMP have been prepared to help the Utility effectively manage our wastewater collection system and achieve the following goals:

- Prevent public health hazards
- Protect the environment
- Comply with regulations
- Minimize the frequency of sanitary sewer overflows (SSOs)
- Mitigate the impact of SSOs
- Minimize disruptions in service
- Minimize complaints
- Provide quick response to any disruption in service that occurs
- Protect the Utility's large investment in the sewer collection system by maintaining maximum capacity and extending the useful life of the associated assets
- Prevent unnecessary damage to public/private property
- Efficiently use the funds available for the maintenance of the infrastructure and the operation of services
- Reduce expenditures for emergency maintenance
- Convey wastewater to the water reclamation facilities (WRF s) with a minimum of infiltration, inflow and exfiltration
- Provide adequate capacity to convey peak flow
- Provide immediate, responsive, and efficient service to all emergency calls
- Provide a safe work environment for employees, employers, and residents within the
- Perform all operations in a safe manner to prevent personal injury
- Utilize evolving technology to increase our effectiveness and efficiency
- Provide reliable service now and into the future

A suggested future option for this utility would be the development of an Asset Management Plan. This Asset Management Plan will greatly enhance and possibly replace this O&M manual.

b. Organization

The Utility is a department responsible for all aspects of wastewater collection system and treatment.

c. Training/Safety

The Utility's training program provides a mechanism for educating employees and establishing their technical competence through various educational certification programs. The Utility utilizes a combination of in-house

skill training and the purchase of specialized training through state and national associations, the self-study technical Wastewater training courses offered through various educational institutions, conferences and vendor training programs to enhance skills for performing daily work duties and provide certified operators continuing education hours. Skills training for employees includes, but is not limited to:

- Routine Line Maintenance
- Heavy Equipment Operation
- Maintenance Equipment Operation
- Line Testing and Inspection
- Infrastructure Installation
- Lift Station Operation and Maintenance
- Electrical and Instrumentation
- Emergency Response
- Customer Service
- Safety

Safety training is obtained from training agencies including Risk Management or various vendors. The Utility Company expects employee adherence to the current safety policies/department procedures/administrative regulations.

- Confined Space Entry
- Vehicle Operation Policy
- Seat Belt Policy
- Excavation Safety Policy and Program
- Injury Reporting Policy
- Post-Accident Drug Testing Policy
- Safety Teams and Committee Policy
- Personal Protective Equipment (provided for the employee)
- First Aid, cardiopulmonary resuscitation (CPR) and automated external defibrillator (AED) (First aid supplies are available in all office areas and vehicles)
- Maintenance of Traffic (MOT)
- Hazard Communication Program
- Defensive Driving Program (employees who are required to maintain a commercial driver"s license must complete a four (4) hour defensive driving course)

Training records are maintained for each employee in their personnel files and/ or SABA. The Utility Company maintains appropriate safety equipment including: protective clothing, safety glasses, hard hats, hearing protection, gloves, respirators, filters, harnesses, tripods, hoists, fire extinguishers and protective footwear. The Utility Company also maintains and calibrates atmospheric testing equipment. Lights, barricades, signage and exhaust fans are also available at numerous utility owned facilities.

d. Customer Service

1. Complaint Management Program

Complaints and requests are received by various means. Once a complaint is assigned, our field personnel perform an investigation. If the problem cannot be immediately resolved, the Utility Company's personnel will take appropriate action for permanent correction of the problem. If the Utility Company is not responsible for correcting the problem, the Utility Company's personnel will provide the complainant with guidance on a recommended course of action.

2. Public Information and Education Program

Forest Utilities use a variety of outlets for providing information and education to customers. The outlet(s) used to disseminate information is often based on the type of information and the targeted audience. Forest Utilities use a variety of outlets listed below to help provide its residents with the most up-to-date information possible:

- Neighborhood/Utility Meetings
- Personal Visits / Phone Calls
- Customer Mailings

2. GENERAL INFORMATION ABOUT THE SANITARY SEWER SYSTEM

a. Wastewater Treatment and Collection System Description

Forest Utilities owns the Wastewater collection system within the development and maintains its collection systems. The collection system conveys the wastewater to lift stations where it is collected and then pumped to either another gravity collection system, a master pump station, or directly to the treatment facility.

The Utility Company performs planned maintenance tasks at scheduled frequencies. Frequencies are established based on experience and collection system information to minimize the risk of blockages or equipment failures that could lead to sewer overflows (see Cleaning, Inspection and Assessment, Section 3). Some portions of the Wastewater collection system are maintained more frequently than others based upon past history and their importance to the effective operation of the Wastewater collection system. Utility personnel and/or contractors also perform unplanned maintenance.

b. Sanitary Sewer Overflow Plan

A SSO Response Plan was developed to minimize the impact of SSOs on the public and on the environment. Spill containment and protection of public health shall be the highest priority. This plan is reviewed on a regular basis (at least annually) and updated as needed. Public observation is the most common way the Utility is notified of sewer blockages and spills. There are several ways the public can report SSOs:

- The local phone book and the Forest Utilities website have contact information for reporting spills.
- Telephone the Utility Company.

When a report of a sewer spill or backup is made, it is immediately routed to the Utility Company. The nearest crew is determined and dispatched to the spill/overflow site.

The emergency response plan and SOP for force main breaks and manhole overflow procedures are provided in Appendix A.

3. CLEANING, INSPECTION AND ASSESSMENT PROGRAM

The goal of this program is to continually monitor and assess the system. The Utility Company continually cleans, inspects and assesses the system with a focus on the known problem areas and the older sections of the system. The results from the cleaning, inspection and assessment program are used to categorize the cleaning frequency and the repair or replacement needs for each component. Critical infrastructure components will also be identified and assessed. Previous knowledge of the condition of the sewer system has also been used to establish more frequent cleaning scheduled for identified problem areas.

The cleaning, inspection and assessment efforts are performed by contractor personnel. The cleaning, inspection and assessment program includes: sewer cleaning, CCTV inspection of piping, visual inspection and classification of the manhole structures and their flow channels, an evaluation of the condition of the pipes and manholes.

Information from cleaning and inspections (refer to Pipe and Manhole Inspection subsection below), including any findings, is entered into various asset management programs, and incorporated into the scheduled maintenance and capital improvement plans. This information is also used to update this long-term PMP.

a. Cleaning

Our primary sewer maintenance activity is sewer line cleaning.

1. Cleaning Schedules - Priority Cleaning

Pipe-sections on a priority cleaning frequency are identified based on known Trouble Spots and Critical Service Area Lists. The Trouble Spots that have a history of blockages or overflows. The Critical Service Area locations where sewer malfunction would lead to major disruption, are inspected and maintained at greater frequency due to the importance of their function.

2. Cleaning - Gravity Lines Routine Cleaning

All cleaning records are kept on file that tracks the following:

- Date, time and location of cleaning activity;
- Specific lines cleaned;
- Equipment used;
- Identity of cleaning crew;
- Number of passes needed to clean the line;
- Presence of root, grease, or debris; and
- Problems identifed or other follow up actions necessary.

Each line segment cleaned is identified by an upstream and downstream manhole number. A log is submitted for each day of work completed.

b. Pipe and Manhole Inspection

Planned manhole and pipe inspections are coordinated with the cleaning program and generally follow the cleaning schedule. The purpose of the inspection is to document:

- The structural condition of the pipe
- Root intrusion
- Grease
- Protruding taps
- Evidence of inflow and infiltration (I/I) or surcharging
- Manhole pave-overs, and
- Other deficiencies that factor into condition assessment

Planned video inspections are generally scheduled to follow the planned cleaning schedule. However, in the event of a blockage, a video inspection assesses the cause of the blockage. After the blockage is removed the line is evaluated with a CCTV crawler to assess the condition of the pipe.

Manhole inspections help keep our asset inventory up to date and are used not only to update collection system maps, but to determine structural condition. During manhole inspections, field crews take a complete inventory of each manhole including construction materials, ring size, depth to invert, flow conditions and evidence of problems. Information is recorded in various asset management programs and used to schedule maintenance and repairs. A digital camera is used during the inspection to document defects.

Manhole inspection results are reviewed for condition rating. Those needing repair are placed on a priority schedule, and routine repairs are coordinated with re-paving Work, see Section 5. When repairs are recommended, as described below, Work orders are created and entered into asset management program.

Both Forest Utilities personnel and outside contractors are responsible for completing any structural repairs that may be required for the manholes. The repairs to the manholes include such items as invert work, frame and cover grade adjustment, and frame and cover replacement. The Utility Company maintains an inventory of frames and covers. Work is completed based on priority as noted on work orders which are tracked and completed in our work order database. Repairs are made on a priority basis.

c. Assessment

Routine cleaning and visual inspections are used to assess the condition of manholes and surface facilities.

Pipe condition information is used to determine short and long-term maintenance strategies including increased cleaning, root treatment, sewer line repair, cured in place pipe (CIPP) lining,or replacement. The condition assessment helps establish the cleaning frequency and inform the Utility's capital planning.

Condition assessments document the following details and deficiencies:

- Characteristics including pipe diameter, and age and type of material

- Dips in line
- Grease build-up
- Root intrusion
- Sediment accumulation and encrustation
- Structural condition, including cracks, corrosion and erosion
- Joint alignment and movement
- Reverse slope
- Obstructions
- Deformations in line
- Accidental damages

A ranking of each asset, based on its condition assessment rating is then used for prioritizing capital repairs and replacement.

d. Staffing and Equipment

The Utility Company has personnel trained for cleaning, inspection and assessment, and they are deployed daily for cleaning.

Crews are assigned a specific area of the collection system and are responsible for cleaning within the assigned area. The crews receive training on use of equipment and how to address problems that might be encountered While cleaning the collection system (roots, fats, oils and grease, etc.).

The crews report back on progress and problems including any inconsistencies between the system map and the actual sewer lines which are noted and submitted with their Work order to their immediate Supervisor for correction of mapping or location errors.

In addition, cleaning is performed during the manhole inspections.

4. GRAVITY LINE PREVENTIVE MAINTENANCE

a. Fats, Oils and Grease (FOG) Control

Grease and grease-like products can significantly increase the likelihood of sewer overflows. Grease can also cause blockages or aggravate blockages due to roots or structural deficiencies. Various food service operations can discharge grease as part of their normal sanitary flows that can lead, in time, to backups and overflows.

Although food service operations account for a high percentage of the grease blockages, they are not the only contributors of grease to the collection system, as residents in general, also contribute grease to the system. The Utility personnel reviews the line cleaning work orders to document historical blockages due to grease, and historical claims, to identify problem areas for further investigation and evaluation for grease management.

Forest Utilities's policies prohibit discharges to the collection system containing more than 100 parts per million

(ppm) of FOG, or at levels that interfere with the operation of the system. The policies also authorizes inspection of facilities during normal business hours.

Forest Utilities's policies dictate the need and maintenance of interceptors and separators. The policy also includes the authority to inspect the installations and proper maintenance of the interceptors and separators. If the grease interceptor has not been maintained (with documented removal of accumulated grease and cleaning), has been bypassed, or if significant grease is discovered within the service connection, Forest Utilities will issue a letter to giving notice of the policy non compliance and requiring action be taken to prevent further discharge of grease into the system.

Forest Utilities has the responsibility to clean the sewers in problem areas at a high priority frequency.

b. Service Laterals

If service lateral problems are found to be the result of blockage or a collapse in the portion of the lateral under the property owner's responsibility, the field crew provides the property owner with documentation.

5. LIFT STATION/FORCE MAIN PREVENTIVE MAINTENANCE

The pump stations that are owned and operated by the Utility and are routinely checked by trained personnel.

The performance of the pump stations is monitored by the Utility. Inspections of all lift stations is conducted by the Utility Company's personnel on a regular basis. Either by SCADA or during these inspections, the Utility Company's personnel review pump run hours, totalized flow, wet well levels and alarms. Back-up generators are exercised monthly. On a repetitive schedule, the Utility Company's personnel pump the wet wells, remove grease build up, and calibrate the floats.

If a problem or maintenance issue is encountered, personnel must also report it immediately to their Supervisor for resolution. Repairs are a higher priority than routine maintenance.

Manufacturer's O&M manuals for equipment that are installed in the Utility's lift stations are located in the Forest Utilities office.

Pump rebuilding, motor rewinds, and heating, ventilation and air conditioning (HVAC) repairs for the pump stations are contracted to various outside vendors. Repairs to motor control centers, flow meters, remote monitoring equipment, and valves, are typically repaired by the Utility Company's maintenance crews. In general, replacement parts that are difficult to acquire are kept in stock by the collections group; other parts are obtained from local vendors. It should be noted that as pumps and other parts are replaced, the Utility is trying to standardize pumping station equipment as much as possible.

a. Mechanical and Electrical Maintenance

The size of the pump station and its related equipment determine its specific mechanical and electrical maintenance needs. The Utility Department uses manufacturers O&M manuals to establish action items for

pump station equipment. The Utility owned pump stations have individual inspection protocols lift station technicians perform that are provided in Appendix B. A general description of weekly and bi-annual maintenance and inspections performed on pump stations by the utility personnel is listed in Table 5.1:

Table 5.1 Pump Station Maintenance

Mechanical Maintenance/Inspections	Electrical Maintenance/Inspections
Daily	
• Review pump run hours • Check Wet well levels, check for debris, turbulence or unusual noise • Check alarms • Ensure that all switches, controls and valves are in the correct position • Pick up litter, general housekeeping • Record findings by SCADA and/or in log book	• Ensure all breakers are on • Ensure that all switches and controls are in the correct position
Weekly	
• Log pump hours • Pump the Wet wells • Remove grease build up • Operate each pump • Check for pump vibrations, unusual noise, and excessive heat • Check pump and pump base connections • Check valve operations and signs of leakage • Lube and grease equipment (as required by manufacturer) • Check, clean and maintain property • Check odor control systems for proper operation	• Check Motor Control Centers (MCC) • Check level controllers • Check electrical service feed • Check remote monitoring equipment • Check indicator and alarm lamps • Check general electrical items (lighting, etc.) • Check and release intrusion alarm

Table 5.1 Pump Station Maintenance (Continued)

Bi-Monthly	
	• Check backup generator • Exercise stand-by power • Check Generator: ▸ Oil level ▸ Water level ▸ Fuel level ▸ Inspect hoses and belts ▸ Check piping for leaks ▸ Check battery condition
Annual	
• Inspect pumps • Inspect pump impellers and clearances • Inspect discharge piping • Check outflow pressure • Check for corrosion problems • Exercise check valves • Check air release valves • Check floats (clean and/ or replace) • Inspect building and grounds • Check operation of building heat and fans • Inspect HVAC equipment • Check building security • Service and calibrate all instrumentation: ▸ Includes all flow meters, level sensors, alarms, elapsed time meters and telemetry equipment	• Inspect internal MCC components • Check insulation resistance • Inspect & grease electrical contacts • Inspect electrical pump cables • Inspect electrical breakers • Check MCC for proper operations • Alternate Power Sources checked and run as part of emergency drill

b. Force Main Maintenance

Forest Utilities currently has a network of force mains in the collection system. The pressure on the discharge side of the pump is used to determine the need for force main cleaning. If the run times on lift station pumps show an increase, the discharge pipe will be inspected and cleaned, if necessary. Pressure gauges are replaced if incorrect or failed.

c. Corrosion control

The dissolved oxygen content of the Wastewater is often depleted in the Wet-Well of the pumping station. This wastewater passing through the force main not only lacks oxygen but often contains sulfides. These sulfides have led to corrosion in various lift stations and manholes. Frequent cleaning of lift stations and manholes is performed to prevent solids and grease buildup and minimize corrosion due to the high concentration of sulfides.

6. REACTIVE MAINTENANCE

This Section outlines the process used by Forest Utilities to respond to non-overflow, unplanned maintenance needs in our collection system. It also provides an overview of responsibilities for emergency events. Section 3 outlines the Utility's Preventive Maintenance and Emergency Response Plan, which details the response procedures for emergency sewer overflows, this Section is written to address those unscheduled maintenance events that don't result in overflows or backups into residences. The Standard Operating Procedure (SOPs) for emergency response are available through the Utility Company. The Utility Company's crews are trained on sewer overflow emergency response.

The following programs are typically utilized in a reactive maintenance situation:

- Equipment and supplies
- Customer service
- Water Quality Monitoring
- Pump station programs - SOPs

Sewer overflow response is always a priority situation, details are provided in Forest Utilities's Sewer Overflow Response Plan (SORP) that is provided in Appendix A. Responsibilities for reactive maintenance are assigned by the Utility Manager based on level of priority for response.

a. Corrective Maintenance

Most repair needs are identified while conducting routine maintenance, inspections and assessments. Because there is such a wide range of potential unexpected events that it is not possible to prescribe the appropriate repair for every possible scenario, Forest Utilities establishes a prioritization of repairs based on severity of situation. This is based on the types of problems that have occurred in the collection system in the past or could occur in the future. While this contingency analysis focuses on system upsets that would not result in immediate sewer overflow, the response timing is based on the potential for a resulting sanitary sewer overflow.

Low-risk items, such as indicator light bulbs and small non-critical valves, are planned for run-to-failure, and as such, are not part of the PMP. These items are replaced when they fail. When assets critical to the process fail, they are scheduled for corrective maintenance either on an urgent or routine schedule.

Corrective maintenance repairs include (but are not limited to):

- Cleaning to eliminate flow problems that are noted during inspections
- Spot repair or replacement of a pipe that shows signs of deterioration
- Replacing a rattling or failed manhole cover
- Repairing or replacing a pump that is becoming clogged or has been damaged by debris
- Responding to, investigating and mitigating customer complaints
- Repairing system parts subject to vandalism

b. Scheduling

Scheduling of repairs runs from repairing components found to be substandard condition during inspection, immediate repairs to pump stations that are malfunctioning, to major, capital-intensive, repair projects, such as a manhole-to-manhole pipe replacement or rehabilitation. An emergency, however, always supersedes scheduled maintenance.

Timing of other repairs is done by severity of situation. Major replacement or rehab may be capitalized outside of the annual operating budget.

c. Tracking and Recording Repairs

The Utility Company documents corrective maintenance needs at the time of the event. Any failure analysis may also be done by the Utility Company's personnel as a corrective maintenance task after a problem occurs, to diagnose the cause of the problem and recommend repairs and schedule changes, if necessary. Findings may lead to a spot repair of the pipe, root cutting, root foaming with an herbicide, re-cleaning for grease or debris removal on a periodic preventive basis.

d. Complaint Response

Forest Utilities is responsible for responding to sewer service complaints. Complaints are generally related to sewer stoppages, overflows, or odors. Response is performed during normal work hours and by on-call personnel during off work hours. Complaint response includes both assessing the complaint and resolving the problem.

7. EQUIPMENT AND TOOL INVENTORY

a. Essential Day-to-Day Items

The Utility Company provides O&M crews with the essential work-related items they use on a day-to-day routine basis.

b. Spare Equipment and Tools

The Utility Company keeps a limited supply of spare equipment and tools for personnel. Any large equipment and tools needed for certain tasks may be obtained through current rental contracts or purchased by the Utility for permanent acquisition of the item. An inventory of the equipment and tools used by Utility to maintain the wastewater collection system is available.

Appendix A

Forest Utilities

Collection System O&M Manual

FOREST UTILITIES

COLLECTION SYSTEM

O&M

MANUAL

WASTEWATER COLLECTION SYSTEMS MANAGEMENT

Prepared by the **Wastewater Collection Systems Management Task Force** of the **Water Environment Federation**

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Under the Direction of the **Collection Systems Subcommittee** of the **Technical Practice Committee**

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Sixth Edition

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Preface

For many local governments, the wastewater collection system is one of the most valuable assets they own. In addition to being a valuable physical asset, the value wastewater collection systems provide to protect public health and the environment is tremendous. Too often, however, this value is under-recognized and under-appreciated by the community. This can lead to inadequate reinvestment in the system and insufficient resources to provide for proper management, operations, and maintenance of the system.

To address these challenges, wastewater collection system managers must be exceptionally proficient in a multitude of technical and non-technical skills needed to efficiently and effectively operate and maintain a collection system. *Wastewater Collection Systems Management* (MOP 7; sixth edition) provides guidance, strategies, and ideas that may be used by a system manager to be successful within these many fields of expertise.

Since the 1999 version of this manual, the regulatory focus on wastewater collection systems has increased across the United States. This is evidenced by the issuance of numerous enforcement actions by the U.S. Environmental Protection Agency (U.S. EPA) and state water- quality agencies against wastewater utilities, mandating increased system investment and program improvements. In addition, U.S. EPA has developed capacity, management, operations, and maintenance program guidelines that outline best practices for wastewater collection system managers to use to improve overall system performance. These guidelines are referenced in numerous chapters of this manual and offer a good basis for assessing whether a wastewater collection system program is comprehensive and sustainable.

Asset-management principles have become more widely applied to wastewater collection systems than was true in 1999. Though the 1999 version of this manual included a chapter titled Capital Asset Management, this version has integrated asset-management principles to individual topics throughout the manual. For example, a new chapter titled Information Management has been added to this manual to emphasize the importance that having access to good data has to collection system management and to provide guidance on how managers can leverage digital tools to

improve decision-making. The chapter on Collection System Assessment and Capital Improvement Planning has been added to reflect the importance of understanding system condition and incorporating this knowledge and other aspects, such as system capacity needs, to the development of a capital improvements plan. Additionally, the budget and financial aspects of asset management have been divided into a new, separate chapter so that these important considerations can be more readily referenced.

In light of a number of natural and humanmade disasters that have occurred in the United States in recent years—including Hurricane Katrina hitting the Gulf Coast in 2005 and the terrorist attacks of September 11, 2001, in the United States—increased attention has been given to the need for utilities managers to prepare and plan for similar events. As a result, this manual includes a chapter titled Emergency Preparedness and Security that is new to this edition.

The sixth edition of this Manual of Practice was produced under the direction of S. Wayne Miles, P.E., BCEE, *Chair*. The principal authors of this Manual of Practice are as follows:

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GUIDE FOR EVALUATING CAPACITY, MANAGEMENT, OPERATION, AND MAINTENANCE (CMOM) PROGRAMS AT SANITARY SEWER COLLECTION SYSTEMS

CHAPTER 2. COLLECTION SYSTEM CAPACITY, MANAGEMENT, OPERATION, AND MAINTENANCE PROGRAMS

This chapter provides an overview of the CMOM program elements. The information will help evaluate wastewater collection system operation and maintenance (O&M) practices. The key elements of the CMOM program, which are presented in detail in the following sections, include:

- Collection System Management
- Collection System Operation
- Collection System Maintenance
- Collection System Capacity Evaluation

In addition to this overview, there are several areas (e.g., 2.1.3 Internal Communications, 2.1.4 Customer Service, etc.) in this guide that go into greater depth regarding the operation and maintenance of a collection system. The intent of this detail is not only to provide the owner or operator with suggestions as to what to look for in their own program, but to provide the reviewer a complete overview of good operations, in general, regardless of a particular item resulting in poor performance or a violation.

For EPA and state inspectors or other reviewers, conducting an evaluation of collection system CMOM programs shares many similarities with other types of compliance reviews. Overall, the reviewer would examine records, interview staff and conduct field investigations, generally in that order although tailored, if necessary, to meet site-specific needs. Prior to performing the on-site interviews and evaluations, preliminary information may be requested that will provide an overall understanding of the organization to allow for a more focused approach for the review. This information also provides a basis for more detailed data gathering during on site activities. The information typically requested prior to the review should include a schematic map of the collection system (could be as-built drawings) and any written operations or maintenance procedures. Depending on the volume of information, the collection system owner or operator may need ample lead time to gather and copy these documents. Alternatively, the reviewer may offer to examine the documents and bring them back when doing the on-site review so that extra copies are not necessary. No matter which method is used, the importance of up-front preparation cannot be overemphasized. With the exception of pump stations and manholes, much of the collection system is not visible. Therefore, the more complete the reviewer's understanding of the system is prior to the review, the more successful the assessment will be.

The reviewer would then proceed with the on-site activities. Guidance for conducting compliance reviews is provided in the *NPDES Compliance Inspection Manual* (EPA 2004). The manual provides the general procedures for performing compliance reviews and is a valuable source of information on such topics as entry, legal authority, and responsibilities of the reviewer. Although CMOM evaluations are not specifically addressed in the manual, the general

review procedures can be applied to CMOM reviews. Another good reference for general review information is the *Multi-Media Investigations Manual, NEIC* (EPA 1992). Some issues with entry are specific to CMOM reviews. Some facilities may be on private property and the reviewer may need property owner consent for entry.

Documents to Review On-site Include:

- Organization chart(s)
- Staffing plans
- Job descriptions
- Sewer use ordinance
- Overall map of system showing facilities such as pump stations, treatment plants, major gravity sewers, and force mains
- O&M budget with cost centers[1] for wastewater collection
- Performance measures for inspections, cleaning, repair, and rehabilitation
- Recent annual report, if available
- Routine reports regarding system O&M activities
- Collection system master plan
- Capital improvement projects (CIP) plan
- Flow records or monitoring
- Safety manual
- Emergency response plan
- Management policies and procedures
- Detailed maps/schematics of the collection system and pump stations
- Work order management system
- O&M manuals
- Materials management program
- Vehicle management and maintenance records
- Procurement process
- Training plan for employees
- Employee work schedules
- Public complaint log
- Rate ordinance or resolution
- Financial report ("notes" section)
- As built plans
- Discharge monitoring reports (DMRs)

The above list is not all inclusive nor will all utilities necessarily have formal, written documentation for each of the items listed. The *Collection System Performance Indicator Data Collection Form*, included as Appendix A, provides examples of the types of information a reviewer should attempt to obtain while on-site.

Interviews are generally conducted with line managers and supervisors who are responsible for the various O&M activities

Reviewer - Point to Note
A schedule should be established by the reviewer for the staff interviews and field assessments.

[1] A cost center is any unit of activity, group of employees, line of products, etc., isolated or arranged in order to allocate and assign costs more easily.

and support services staff from engineering, construction, human resources, and purchasing, where appropriate. Appendix B presents an example agenda and schedule that would be used for a large collection system owner or operator. The collection system's size and physical characteristics will determine the length of time needed for the review. A guideline for the time required, given a two person review team, would be two days for a small system, and a week or more for large systems.

Field reviews are typically conducted after interviews. The following is a list of typical field sites the team should visit:

- Mechanical and electrical maintenance shop(s)
- Fleet maintenance facilities (vehicles and other rolling stock)
- Materials management facilities (warehouse, outside storage yards)
- Field maintenance equipment storage locations (i.e., crew trucks, mechanical and hydraulic cleaning equipment, construction and repair equipment, and television inspection equipment)
- Safety equipment storage locations
- Pump stations
- Dispatch and supervisory control and data acquisition (SCADA) systems
- Crew and training facilities
- Chemical application equipment and chemical storage areas (use of chemicals for root and grease control, hydrogen sulfide control [odors, corrosion])
- Site of SSOs, if applicable
- A small, but representative, selection of manholes

Collection system operators typically assist with manhole cover removal and other physical activities. The inspector should refrain from entering confined spaces. A confined space is defined by the Occupational Safety and Health Administration (OSHA) as a space that: (1) is large enough and so configured that an employee can bodily enter and perform assigned work; and (2) has limited or restricted means for entry or exit; and (3) is not designed for continuous employee occupancy [29 CFR 1910.146(b)]. A "permit-required confined space (permit space)" is a confined space that has one or more of the following characteristics: (1) contains or has a potential to contain a hazardous atmosphere; (2) contains a material that has the potential for engulfing an entrant; (3) has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or (4) contains any other recognized serious safety or health hazard [29 CFR 1910.146(b)].

Though OSHA has promulgated standards for confined spaces, those standards do not apply directly to municipalities, except in those states that have approved plans and have asserted jurisdiction under Section 18 of the OSHA Act. Contract operators and private facilities do have to comply with the OSHA requirements and the inspector may find that some municipalities elect to do so voluntarily. In sewer collection systems, the two most common confined spaces are the underground pumping station and manholes. The underground pumping station is typically entered through a relatively narrow metal or concrete shaft via a fixed ladder. Inspectors conducting the field evaluation component of the CMOM audit should be able to identify and

avoid permit-required confined spaces. Although most confined spaces are unmarked, confined spaces that may have signage posted near their entry containing the following language:

> **DANGER–PERMIT REQUIRED–CONFINED SPACE**
> **AUTHORIZED PERSONNEL ONLY**
>
> If confined space entry is absolutely necessary, inspectors should consult with the collection system owner or operator first, have appropriate training on confined space entry, and use the proper hazard detection and personal safety equipment. More information on confined space entry can be found in *Operation and Maintenance of Wastewater Collection Systems Volumes I and II* (California State University (CSU) Sacramento 1996; CSU Sacramento 1998).

2.1 Collection System Management

Collection system management activities form the backbone for operation and effective maintenance activities. The goals of a management program should include:

- Protection of public health and prevention of unnecessary property damage
- Minimization of infiltration, inflow and exfiltration, and maximum conveyance of wastewater to the wastewater treatment plant
- Provision of prompt response to service interruptions
- Efficient use of allocated funds
- Identification of and remedy solutions to design, construction, and operational deficiencies
- Performance of all activities in a safe manner to avoid injuries

Management Documents to Review

- Organization chart(s)
- Staffing plans–Number of people and classifications
- Job descriptions for each classification
- Sewer use ordinance
- Safety manual
- Training program documentation
- Notes to financial reports

Without the proper procedures, management and training systems, O&M activities may lack organization and precision, resulting in a potential risk to human health and environmental contamination of surrounding water bodies, lands, dwellings, or groundwater. The following sections discuss the common elements of a robust collection system management program.

2.1.1 Organizational Structure

Well-established organizational structure, which delineates responsibilities and authority for each position, is an important component of a CMOM program for a collection system. This information may take the form of an organizational chart or narrative description of roles and

responsibilities, or both. The organizational chart should show the overall personnel structure, including operation and maintenance staff. Additionally, up-to-date job descriptions should be available. Job descriptions should include the nature of the work performed, the minimum requirements for the position, the necessary special qualifications or certifications, examples of the types work, lists of licences required for the position, performance measures or promotion potential. Other items to note in regard to the organizational structure are the percent of staff positions currently vacant, on average, the length of time positions remain vacant, and the percent of collection system work that is contracted out.

Reviewer - Point to Note
The reviewer may want to note the turnover rate and current levels of staffing (i.e., how many vacant positions exist and for how long they have been vacant). This may provide some indication of potential understaffing, which can create response problems.

Reviewers should evaluate specific qualifications of personnel and determine if the tasks designated to individuals, crews, or teams match the job descriptions and training requirements spelled out in the organizational structure. From an evaluation standpoint, the reviewer might try to determine what type of work is performed by outside contractors and what specific work is reserved for collection system personnel. If much of the work is contracted, it is appropriate to review the contract and to look at the contractor's capabilities. If the contractor handles emergency response, the reviewer should examine the contract with the owner or operator to determine if the emergency response procedures and requirements are outlined.

The inclusion of job descriptions in the organizational structure ensures that all employees know their specific job responsibilities and have the proper credentials. Additionally, it is useful in the course of interviews to discuss staff management. The reviewer should note whether staff receive a satisfactory explanation of their job descriptions and responsibilities. In addition, when evaluating the CMOM program, job descriptions will help a reviewer determine who should be interviewed.

Reviewer - Point to Note
A reviewer should look for indications that responsibilities are understood by employees. Such indications may include training programs, meetings between management and staff, or policies and procedures.

When evaluating the organizational structure, the reviewer should look for the following:

- Except in very small systems, operation and maintenance personnel ideally should report to the same supervisor or director. The supervisor or director should have overall responsibility for the collection system.
- In some systems, maintenance may be carried out by a city-wide maintenance

organization, which may also be responsible for such diverse activities as road repair and maintenance of the water distribution system. This can be an effective approach, but only if adequate lines of responsibility and communication are established.

- In general, one supervisor should manage a team of individuals small enough that is safe and effective. However, the individuals on the team may have additional employees reporting to them. This prevents the top supervisors from having to track too many individuals. The employee-supervisor ratio at individual collection systems will vary depending on their need for supervisors.

In a utility with well-established organizational structure, staff and management should be able to articulate their job and position responsibilities. Personnel should be trained to deal with constantly changing situations and requirements, both regulatory and operational.

The system's personnel requirements vary in relation to the overall size and complexity of the collection system. In very small systems, these responsibilities may include operation of the treatment plant as well as the collection system. In many systems, collection system personnel are responsible for the stormwater as well as wastewater collection system. References providing staff guidelines or recommendations are available to help the reviewer determine if staffing is adequate for the collection system being reviewed. Following is a list of available references:

- *Manpower Requirements for Wastewater Collection Systems in Cities of 150,000 to 500,000 Population* (EPA 1974)
- *Manpower Requirements for Wastewater Collection Systems in Cities and Towns of up to 150,000 Population* (EPA 1973)
- *Operation and Maintenance of Wastewater Collection Systems*, Volume II (California State University (CSU) Sacramento 1998)

Volumes I and II of *Operations and Maintenance of Wastewater Collection Systems* can be obtained through:

Office of Water Programs
California State University Sacramento
6000 J Street
Sacramento, CA 95819-6025
phone: 916/278-6142
www.owp.csus.edu

The following tables have been taken from the two EPA documents listed above to provide the reviewer with guidance. However, these documents may not take into account technological advances that have occurred since their publication date that might reduce staffing requirements. For instance, advances in remote data acquisition and telemetry have likely reduced the number

of field inspection staff needed for systems with several pump stations. Other system-specific characteristics should also be accounted for when using these tables. An example of this might be collection systems that are not primarily constructed of brick will not require the masons the tables specify.

STAFF COMPLEMENTS FOR WASTEWATER COLLECTION SYSTEM MAINTENANCE
POPULATION SIZE
(Estimated Number of Personnel)

Occupational Title	5,000		10,000		25,000		50,000		100,000	
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
Superintendent	1	5	1	10	1	20	1	40	1	40
Assistant Superintendent										
Maintenance Superviser							1	40	2	80
Foreman	1	15	1	20	1	20	1	40	1	40
Maintenance Man II	1	15	1	20	1	20	1	40	1	40
Maintenance Man I	1	15	1	20	2	60	3	120	5	200
Mason II							1	40	1	40
Mason I									1	40
Maint. Equipment Personnel					1	40	2	80	3	120
Construction Equipment Personnel	1	15	1	20	1	20	1	40	1	40
Auto. Equipment Personnel									1	40
Photo. Inspection Technician									1	40
Laborer	1	15	1	20	2	40	2	80	5	200
Dispatcher							1	40	2	80
Clerk Typist							1	20	1	20
Stock Clerk							1	40	1	40
Sewer Maint. Staff	6	80	6	110	9	220	16	620	27	1,060
Maintenance Mechanic II	see comment (c) below									
Maintenance Mechanic I	see comment (d) below									
Maintenance Mechanic Helper	see comment (d) below									
Construction Inspection Supervisor	see comments (e) and (f) below									
Total Staff										

(a) Estimated number of personnel.
(b) Estimated total man-hours per week.
(c) Multiply number of lift stations maintained by 8/3.
(d) Multiply number of lift station visits per week by 1.
(e) Multiply estimated construction site visits per week by 8/3.
(f) Determined by the number of Construction Inspectors employed and developed on a judgmental basis.

Unit processes included in this staffing table are:

1. Maintenance of sanitary sewer main lines & appurtenances (laterals not included).
2. Maintenance of storm sewer main lines.
3. Maintenance of lift stations.
4. Inspection of newly constructed sewer main lines and appurtenances.

(U.S. EPA 1973)

STAFF COMPLEMENTS FOR WASTEWATER COLLECTION SYSTEM MAINTENANCE
POPULATION SIZE
(Estimated Number of Personnel)

Occupational Title	150,000	200,000	300,000	400,000	500,000
Superintendent	1	1	1	1	1
Assistant Superintendent	1	1	1	1	1
Maintenance Supervisor II	1	1	1	1	1
Maintenance Supervisor I	1	2	2	3	3
Equipment Supervisor	1	1	1	1	1
TV Technician II	1	2	2	3	3
TV Technician I	1	2	2	3	3
Foreman	2	3	4	5	6
Maintenance Man II	3	5	6	8	9
Maintenance Man I	11	17	22	29	33
Mason II	1	2	2	3	3
Mason I	1	2	2	3	3
Maintenance Equipment Personnel	6	8	12	15	18
Construction Equipment Personnel	3	4	6	8	9
Auto. Equipment Personnel	2	3	4	5	6
Laborer	7	10	14	18	22
Dispatcher	2	2	2	3	3
Stock Clerk	1	2	2	3	3
Clerk Typist	2	2	2	3	3
Sewer Maintenance Staff	48	70	88	116	131
Maintenance Mechanic II	see comment (a) below				
Maintenance Mechanic I	see comment (b) below				
Maintenance Mechanic Helper	see comment (b) below				
Electrician	see comment (c) below				
Construction Inspector Supervisor	see comment (d) below				
Construction Inspector	see comment (e) below				
Total Staff					

(a) Divide number of lift stations maintained by 15.
(b) Divide number of lift station visits per week by 40
(c) Divide number of lift stations maintained by 15.
(d) Determined by the number of Construction Inspectors employed and developed on a judgmental basis.
(e) Divide estimated daily construction site visits by 2.

Unit processes included in this staffing table are:

1. Maintenance of sanitary sewer main lines & appurtenances (laterals not included).
2. Maintenance of storm sewer main lines.
3. Maintenance of lift stations.
4. Inspection of newly constructed main lines and appurtenances.

(U.S. EPA 1974)

2.1.2 Training

The commitment of management to training is key to a successful program. It is important to recognize training as a budget expense item. A guideline for the typical amount of funding for training is three to five percent of the gross budget for the collection system. However, in large collection systems or those undergoing extensive construction this percentage may be considerably lower, and, in systems with a high turnover, training costs may be higher due to orienting new employees. Other changes, such as incorporation of new technology, will have a short-term impact on training costs. Although training is not explicitly required under current regulations, a collection system with untrained or poorly trained collection system personnel runs a greater risk of experiencing noncompliance.

The following elements are essential for an effective training program:

- Fundamental mission, goals, and policies of the collection system are addressed
- Mandatory training requirements are identified for key employees
- On-the-job training progress and performance are measured
- Effectiveness of the training is assessed including periodic testing, drills, or demonstrations
- New employees receive training

The owner or operator should generally provide training in the following areas:

- Routine line maintenance (may be on-the-job training only)
- Safety during confined space entry (every system should also have a strict policy and permit program)
- Traffic control (where applicable)
- Record keeping
- Pump station O&M
- Electrical and instrumentation (may be a combination of formal and on-the-job training)
- Public relations and customer service
- SSO/Emergency response
- Pump station operations and maintenance
- Pipe repair; bursting or cured in place pipe (CIPP); or closed circuit TV and trench/shoring (where these activities are not outsourced)

Sources of Training

Training is required to safely perform inspections, follow replacement procedures, and lubricate and clean parts and equipment. Following are the many sources of maintenance training:

- Manufacturer
- In-house
- On-the-job (OJT)
- Industry-wide (e.g., consultants, regulatory authorities, professional associations, or educational institutions)

The training program should identify the types of training required and offered. Types of training vary, but may include general environmental awareness, specific equipment, policies and

procedures, and conducting maintenance activities. If the owner or operator is carrying out its own training, the reviewer should evaluate one or more examples of training materials to answer the following questions: are the materials appropriate to the training topic and the level of those being trained; and are they likely to accomplish the intended goal?

Owner or Operator - Point to Note
The owner or operator should routinely assess the effectiveness of training through periodic testing, drills, demonstrations, or informal reviews, and improve training based on this assessment.

2.1.3 Internal Communication

Communication is essential to ensuring that collection systems run efficiently and effectively. It is especially important that an effective communication link exists between wastewater treatment plant operators and collection system crews as well as with other municipal departments.

Effective communication requires the top-down, bottom-up, and lateral exchange of information amongst staff. Examples of top-down communication are bulletin board posters, paycheck inserts, regular staff meetings, e-mail or informal brown-bag lunch discussions. Examples of bottom-up communication may include the establishing environmental committees, confidential hotlines, e-mail, or direct open discussions. Collection system owners or operators may also offer incentives to employees for performance, and encourage them to submit suggestions for ways to improve the performance of the collection system. "Front line" employees are often an excellent source of ideas, issues, and information about how to improve performance at the work site. In this context, the reviewer can check for morale-boosting activities or reward programs, such as "Employee of the Month" and "Employee of the Year."

The reviewer should attempt to determine lines of internal communication to ensure all employees receive information and have an appropriate forum to provide feedback. The reviewer should assess the level of communication by interviewing several levels of staff or by simply observing collection system teams on work assignments. The owner or operator should have procedures and be able to demonstrate internal communication between the various levels and functions of the collection system regarding its management, operation, and maintenance programs.

2.1.4 Customer Service

The community often knows very little about the wastewater treatment and collection services performed for them. The community may only be aware of the collection system and its owner or operator through articles in local newspapers, public radio and television announcements, or only when there is an SSO. Collection system representatives should talk to schools and universities, make presentations to local officials and businesses about the wastewater field. Formal presentations can also be given to citizens, building inspectors, public utility officials,

and members of the media.

An effective customer service and public relations program ensures that the owner or operator addresses all incoming inquiries, requests, and complaints in a timely fashion. From this information, owners or operators may further develop or revise programs to better address areas of concern. The reviewer should examine customer service records for the following:

- Personnel who received the complaint or request
- Date and nature of the complaint or request
- Location of the problem
- Name, address, and telephone number of the customer
- Cause of the problem
- To whom the follow-up action was assigned
- The initial date of the follow-up action
- Date the complaint or request was resolved
- Total days to end the problem
- Feedback to the customer

Awareness of past issues, population served, compliance history, and other elements help a reviewer determine whether the amount and types of inquiries, requests, or complaints are increasing or decreasing. For example, there may have been many complaints during only a certain week. The reviewer can examine those records to determine if there were specific circumstances (e.g., a large precipitation event) that caused the increase in inquiries or complaints.

Reviewer - Point to Note
To fully understand the context of customer inquiries, requests, or complaints, a reviewer should understand the history, topography, boundaries, and demographics of the collection system's jurisdiction before site evaluations are conducted.

Employees who handle customer service should be specifically trained to handle complaints, requests, or inquiries. These employees should be provided with sample correspondence, Q/A's, or "scripts" to help guide them through written or oral responses to customers. The reviewer should look for procedures on how to answer the telephone, e-mail, and other communication used by personnel. A reviewer may evaluate staff telephone responses by evaluating:

- The number of persons available to answer calls
- The number of repeat callers
- The average length of calls
- The volume of calls per day

Collection system field crews and their activities are the most visible segment of any wastewater treatment organization. Workers project a public image for their system on city and town streets. For this reason, personnel need to be trained in what to expect in public situations. For example,

collection system supervisory staff should be familiar with the areas around public rights-of-way and easements to which their field crews must gain access to service facilities. Additionally, crew leaders should know how to deal with the public when approached.

Collection systems field crews influence the public's confidence in the collection system owner or operator. Reviewers should observe whether personnel wear uniforms or not, and if vehicles and equipment are identifiable as utility property and kept in good working order. Vehicles should be equipped with adequate emergency lighting and flashers, traffic control signs and barriers, etc. Before major construction or maintenance work begins, owners or operators should notify homeowners where properties may be affected. Methods of notification may include door hangers, newspaper notices, fliers, signs, or public radio or television announcements. Information should also be provided to residents on cleanup and safety procedures following basement backups and other overflows.

2.1.5 Management Information Systems

The ability of the owner or operator to effectively manage its collection system is directly related to its ability to maintain access to the most current information concerning the facilities. Maintenance of this current information is an effort involving all members of the collection system from the staff answering the telephone to the worker in the street. Operational information informs and clarifies financial information. This will make the financial information more useful for the policy makers, leading to better decisions. A satisfactory management information system should provide the owner or operator with the following advantages:



A growing number of sewer systems have shifted to computer-based collection system management [photo: Milwaukee Metropolitan Sewerage District (MMSD)].

- Maintain preventive maintenance and inspection schedules
- Offer budgetary justification
- Track repairs and work orders
- Organize capital replacement plans
- Manage tools and equipment inventories
- Create purchase orders
- Record customer service inquiries, complaints, or requests
- Provide measurement of effectiveness of program and O&M activities

Owners and operators have been shifting to computer-based systems to manage data. Only the smaller collection system owners or operators may still rely on paper management systems.

Computer-based Maintenance Management Systems (CMMSs) are designed to manage the data needed to track the collection system's O&M performance. Geographic Information Systems (GIS) are used to map and locate facilities and because of computer-based compatibility, can often easily be integrated with a CMMS. The computer-based system however, can only be as accurate as the data used to develop it, which was most likely paper files.

Types of Management Information Tracking

- Customer service
- Safety incident
- Emergency response
- Process change
- Inspection scheduling and tracking
- Monitoring and/or sampling schedules
- Compliance
- Planned maintenance (schedules and work orders)
- Parts inventory

Regardless of the information management style chosen, the collection system should have written instructions regarding the use of the management information systems. These procedures may include operating the system, upgrading the system, accessing data and information, and generating and printing reports. The system should be kept current with accurate information. Work reports from the field crews should be complete, accurate, and legible.

The reviewer may select some number of complaints and see how well they can be tracked through the system to an ultimate conclusion. Work reports generated by the field crew should be randomly chosen and scanned for legibility and completeness. The reviewer should do a random check of the timeliness and accuracy of data entry. Additionally, the reviewer should obtain selected original data sources (such as field reports) and compare them to the appropriate database output to determine how long entry takes. This will provide a check on how current the database is and what data entry backlog exists.

2.1.6 SSO Notification Program

The owner or operator should maintain a written procedure indicating the entities, (e.g., drinking water purveyors, the public, public health officials, and the regulatory authority) that should be notified in the event of an SSO. The procedure should clearly indicate the chain of communication used to notify the proper personnel of an SSO event for reporting and remediation. The procedure should include the names, titles, phone numbers, and responsibility of all personnel involved. The reviewer should verify that the personnel listed in the procedure are still in the position listed and are aware of their responsibilities.

Reviewer - Point to Note
To verify the effectiveness of the notification program, the reviewer should walk an overflow occurrence report through the chain of events that would occur from the time of initial notification.

The procedure may allow for different levels of response for different types of SSOs. For example, the regulatory authority may request that SSOs due to sewer line obstructions be

reported on a monthly basis. Therefore, the procedure may simply be to gather this information from the maintenance information system and have the appropriate personnel put together a reporting form. A chronic SSO at a pump station that discharges when overloaded during wet weather may require a more complex notification procedure, including immediate telephone notification to specified authorities.

To verify the effectiveness of the notification program, the reviewer should walk an overflow occurrence report through the chain of events that would occur from the time of initial notification. This can be done by choosing several random overflow events from the complaint records and observing whether they are handled as procedures dictate. The minimum information that should be reported for an SSO includes the date, time, location, cause, volume of the overflow (which may be estimated), how it was stopped, and any remediation methods taken. The reviewer should not only verify that the SSO notification procedures are appropriate, but also verify that the owner or operator has reliable methods for the detection of overflows and a phone number or hotline for the public to report observed overflow events.

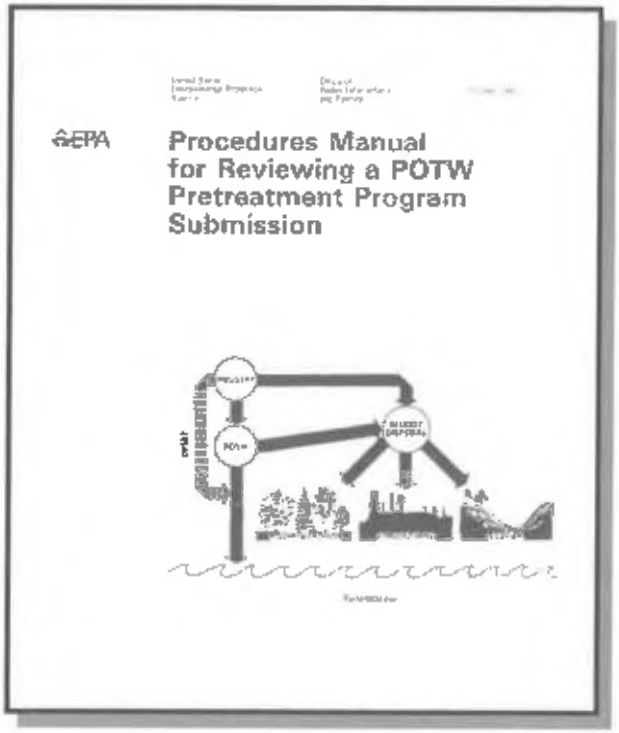
2.1.7 Legal Authority

The collection system owner or operator should select and enforce the legal authority necessary to regulate the volume of flow entering the collection system, including residential and commercial customers, satellite communities and industrial users. The legal authority may take the form of sewer use ordinances, contracts, service agreements, and other legally binding documents.

A **satellite community** is a collection systems which does not own the treatment facility to which it discharges.

The pretreatment program seeks to prevent the discharge of materials into the sewer system (by non-domestic users) that interfere with proper operation of the wastewater treatment plant or may pass through the plant untreated. At the time the operator of a wastewater treatment plant submits its pretreatment program to the regulatory authority for approval, the plant operator must include a statement from the city solicitor or other legal authority that the plant has the authority to carry out the program [40 CFR 403.9(a)(1)]. The reviewer should verify the existence of this statement and inquire as to whether any significant changes have occurred in the program such that the legal authority may need further review. Additionally, some owners or operators may have a pretreatment program approved by the state, through which discharge permits are issued to industrial users and enforcement is conducted. Further information on legal authority under the pretreatment program may be found in *Procedures Manual for Reviewing a POTW Pretreatment Program Submission* (EPA 1983).

The owner or operator should have the authority to ensure that new and rehabilitated sewers and connections have been properly designed, constructed, and tested before being put into service. This authority could take the form of design and performance specifications in a sewer use ordinance or other legal document such as a statute or series of contracts or joint powers agreements. The ordinance or legal document should contain, at a minimum, general prohibitions, adequate grease control requirements and measures, prohibitions on stormwater inflow, infiltration from laterals, and new construction standards.



The grease control section of the document should contain the requirement to install grease traps at appropriate facilities (e.g., restaurants). Additionally, these facilities should be required to properly maintain the grease traps and pump them out on a regular basis. The document should also address periodic inspections of grease traps by collection system personnel and the ability to enforce (i.e., levy fines on persistent offenders).

General Prohibitions

- Fire and explosion hazards
- Corrosive and obstructive materials
- Material which may cause interference at the wastewater treatment plant
- Heat which may inhibit biological activity at the wastewater treatment plant
- Oils or petroleum products which may cause interference or pass through the wastewater treatment plant

The owner or operator should maintain strict control over the connection of private sewer laterals to sewer mains. These connections have significant potential as sources of infiltration. Standards for new connections should be clearly specified. The sewer use ordinance should contain provisions for inspection, approval of new connections, and a program to implement the requirements. A method to maintain control over existing connections is to require an inspection of the lateral prior to sale of a property. It is important to note that implementing this type of program may require a change to the local ordinance or code.

The owner or operator should also have the legal authority to prohibit stormwater connections to the sanitary sewer. Stormwater connections may include catch basins; roof, cellar and yard drains; sump pumps; direct connections between the storm and sanitary sewers; leaking manhole covers; uncapped cleanouts; and the direct entrance of streams into the collection system. This practice is now discouraged. Direct stormwater connections to a separate sanitary sewer system are known as inflow. Inflow can severely impact the ability of the collection system to transport flows to the treatment plant during wet weather, leading to overflows and noncompliance with the wastewater treatment plant's NPDES permit.



Sources of stormwater in the collection system may include building downspouts connected directly to the system (photo: MMSD).

Satellite communities should not be allowed to contribute excessive flows that cause or contribute to overflows, flooding, or noncompliance at the wastewater treatment plant. Should any of these situations exist, it is not sufficient for the owner or operator to charge the satellite community for the excess flow. The owner or operator must be able to prohibit the contribution of the excess flow. This may be done through a legal inter-jurisdictional agreement between the wastewater treatment plant owner or operator and the satellite community that addresses allowable flows and sets requirements. The reviewer should examine all contracts between systems and their satellites (unless too numerous, then select representative contracts). Contracts should have a date of termination and allow for renewal under renegotiated terms. Contracts should limit flow from satellite communities and limit peak wet weather flow rates.

Owner or Operator – Point to Note
The owner or operator should have a comprehensive program which addresses flows from satellite communities.

2.2 Collection System Operation

Collection systems have little of what is traditionally referred to as "operability" as compared to a wastewater treatment plant (i.e., the number of ways to route the wastewater is typically limited). However, the design of some collection systems does allow flow to be diverted or routed from one pipe to another or even to different treatment plants. This can be accomplished by redirecting flow at a pump station from one discharge point to another or opening and closing valves on gravity sewers and force mains.

Owner or Operator – Point to Note
There should be detailed, written procedures available to guide owners or operators through flow routing activities. Also, there should be operating procedures for mechanical equipment such as pump station pump on/off and service rotation settings or in-line grit removal (grit trap) operations.

There are many reasons why the owner or operator may want to divert flows; among them, to relieve overloading on a system of piping or the wastewater treatment plant or to add more flow to piping serving an area not yet fully developed to maintain a cleansing velocity.

2.2.1 Budgeting

The budget is one of the most important variables in the CMOM program. Although an adequate budget is not a guarantee of a well operated collection system, an inadequate budget will make attaining this goal difficult. Funding can come from a variety of sources, including user fees or appropriations from the state or local government.

Reviewer - Point to Note
Reviewers need to determine the source of the funding for the collection system and who controls it. Reviewers should also request budget documents, summaries, or pie charts to learn more about the systems' budget.

A key element of the operation budget program is the tracking of costs in order to have accurate records each time the annual operating budget is developed. Having an annual baseline provides documentation for future budget considerations and provides justification for future rate increases. Collection system management should be aware of the procedures for calculating user rates and for recommending and making user rate changes.

Collection system and wastewater treatment plant costs may be combined into one budget, or budget line items may be divided into each of two individual budgets. For example, electrical and mechanical maintenance work performed by plant staff on a pump station may be carried as an O&M cost in the treatment plant budget, although pumping stations are generally considered to be a collection system component.

Examples of O&M Budget Items

- Labor (usually at least 50% of total budget)
- Utilities
- Capital
- Maintenance materials and supplies
- Chemicals
- Motor vehicles
- Contracted services

The cost of preventive and corrective maintenance and major collection system repairs and alterations are key items in the annual operating budget. The collection system owner or operator should keep adequate records of all maintenance costs, both in-house and contracted, plus the costs for spare parts. This will assist in the preparation of the following year's budget. In general, there should be an annual (12-month cycle) budget of discretionary and non-discretionary items. There may also be a Capital Improvement Plan (CIP) which may encompass small projects (one to two year cycles) or larger projects (three to five year cycles). Larger projects may include items such as equipment, labor, training, or root cause failure analysis.

The major categories of operating costs are labor, utilities, and supplies. Cost accounting for

these categories should include information on unit costs, total costs, and the amount and/or quantities used. The reviewer should evaluate the current and proposed budget, and current year balance sheets. In examining current and proposed expenditure levels, the reviewer should consider:

- Whether the budgets include contributions to capital reserve (sinking) funds. These funds are savings for replacement of system components once they reach their service life.
- Whether all income from water and sewer billings supports those functions, or if it goes into the general fund.
- Whether raising user fees is a feasible option to meet budget needs based on recent expenditure history.

2.2.2 Monitoring

The collection system owner or operator may be responsible for fulfilling some water quality or other monitoring requirements. Responsibilities may include:

- Monitoring discharges into the collection system from industrial users
- Monitoring to determine the effects of SSOs on receiving waters
- Monitoring required as part of an NPDES permit, a 308 letter, administrative order, or consent decree

The owner or operator should maintain written procedures to ensure that sampling is carried out in a safe, effective, and consistent manner. The procedures should specify, at a minimum the following:

- Sampling location(s)
- Sample volumes, preservatives, and holding times
- Instructions for the operation of any automatic sampling and/or field monitoring (e.g., pH or dissolved oxygen) equipment
- Sampling frequency
- Sampling and analytical methodologies
- Laboratory QA/QC

Records should be maintained of sampling events. These records should at a minimum include the following:

- Date, time, and location of sampling
- Sample parameters
- Date shipped or delivered to the laboratory

2.2.3 Hydrogen Sulfide Monitoring and Control

The collection system owner or operator should have a program under which they monitor areas of the collection system which may be vulnerable to the adverse effects of hydrogen sulfide. It may be possible to perform visual inspections of these areas. The records should note such items as the condition of metal components, the presence of exposed rebar (metal reinforcement in concrete), copper sulfate coating on copper pipes and electrical components, and loss of concrete from the pipe crown or walls.

Areas Subject to Generation of Hydrogen Sulfide:

- Sewers with low velocity conditions and/or long detention times
- Sewers subject to solids deposition
- Pump stations
- Turbulent areas, such as drop manholes or force main discharge points
- Inverted siphon discharges

As mentioned in Section 2.4.2, the collection system owner or operator should be carrying out routine manhole inspections. The hydrogen sulfide readings generated as a result of these inspections should be added to the records of potential areas of corrosion. A quick check of the pH of the pipe crown or structure enables early indication of potential hydrogen sulfide corrosion. A pH of less than four indicates further investigation is warranted. "Coupons" may be installed in structures or pipelines believed to be potentially subject to corrosion. Coupons are small pieces of steel inserted into the area and measured periodically to determine whether corrosion is occurring.

Reviewer - Point to Note
The reviewer should be aware that a system in which infiltration and inflow (I/I) has successfully been reduced may actually face an increased risk of corrosion. The reviewer should pay particular attention to the hydrogen sulfide monitoring program in these systems.

The reduction of flow through the pipes allows room for hydrogen sulfide gases to rise into the airway portion of the sewer pipe and react with the bacteria and moisture on the pipe walls to form sulfuric acid. Sulfuric acid corrodes ferrous metals and concrete.

There are several methods to prevent or control hydrogen sulfide corrosion. The first is proper design. Design considerations are beyond the scope of this manual but may be found in the *Design Manual: Odor and Corrosion Control in Sanitary Sewerage Systems and Treatment Plants* (EPA 1985). The level of dissolved sulfide in the wastewater may also be reduced by chemical or physical means such as aeration, or the addition of chlorine, hydrogen peroxide, potassium permanganate, iron salts, or sodium hydroxide. Whenever chemical control agents are used, the owner or operator should have procedures for their application and maintain records of the dosages of the various chemicals. Alternatively, sewer cleaning to remove deposited solids reduces hydrogen sulfide generation. Also, air relief valves may be installed at the high points of the force main system. The valve allows air to exit thus avoiding air space at the crown of the pipe where acid can form. The reviewer should examine the records to see that these valves are

receiving periodic maintenance.

Collection systems vary widely in their vulnerability to hydrogen sulfide corrosion. Vitrified clay and plastic pipes are very resistant to hydrogen sulfide corrosion while concrete, steel, and iron pipes are more susceptible. The physical aspects of the collection system are also important. Sewage in pipes on a decline that moves the wastewater at a higher velocity will have less hydrogen sulfide than sewage in pipes where the wastewater may experience longer detention times. Therefore, some systems may need a more comprehensive corrosion control program while some might limit observations to vulnerable points.

2.2.4 Safety

The reasons for development of a safety program should be obvious for any collection system owner or operator. The purpose of the program is to define the principles under which the work is to be accomplished, to make the employees aware of safe working procedures, and to establish and enforce specific regulations and procedures. The program should be in writing (e.g., procedures, policies, and training courses) and training should be well documented.

Point to Note
Although a safety program may not be explicitly required under current NPDES regulations, an excessive injury rate among personnel increases the likelihood of collection system noncompliance with other requirements. Furthermore, when good safety practices are not followed, there may be a risk to the public or to collection system workers.

The purpose of safety training is to stress the importance of safety to employees. Safety training can be accomplished through the use of manuals, meetings, posters, and a safety suggestion program. One of the most common reasons for injury and fatalities in wastewater collection systems is the failure of victims to recognize hazards. Safety training cuts across all job descriptions and should emphasize the need to recognize and address hazardous situations. Safety programs should be in place for the following areas:

- Confined spaces
- Chemical handling
- Trenching and excavations
- Material Safety Data Sheets (MSDS)
- Biological hazards in wastewater
- Traffic control and work site safety
- Lockout/Tagout
- Electrical and mechanical safety
- Pneumatic or hydraulic systems safety

The collection system owner or operator should have written procedures which address all of the

above issues and are made available to employees. In addition to training, safety programs should incorporate procedures to enforce the program. For example, this could include periodic tests or "pop" quizzes to monitor performance and/or compliance and follow-up on safety related incidents.

Reviewer - Point to Note
The reviewer should, in the course of interviewing personnel, determine their familiarity with health and safety procedures according to their job description.

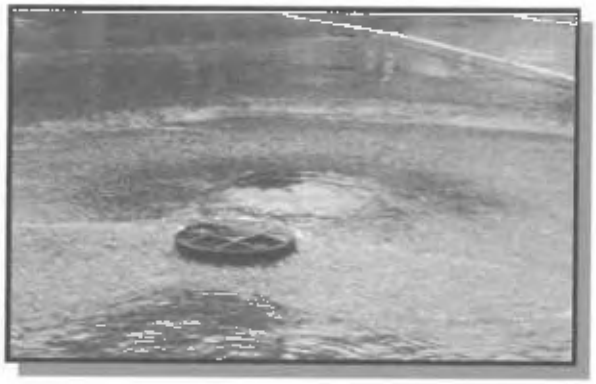
The owner or operator should maintain all of the safety equipment necessary for system staff to perform their daily activities and also undertake any emergency repairs. This equipment should include, at minimum:

- Atmospheric gas testing equipment
- Respirators and/or self-contained breathing apparatus
- Full body harness
- Tripods or non-entry rescue equipment
- Hard hats
- Safety glasses
- Rubber boots
- Rubber and/or disposable gloves
- Antibacterial soap
- First aid kit
- Protective clothing
- Confined space ventilation equipment
- Traffic and/or public access control equipment
- Hazardous gas meter

Each field crew vehicle should have adequate health and safety supplies. If the reviewer has access to the municipal vehicle storage area, he or she might choose to check actual vehicle stocks, not just supplies in storage.

2.2.5 Emergency Preparedness and Response

The collection system owner or operator should have a comprehensive plan in place for dealing with both routine and catastrophic emergencies. Routine emergencies include situations such as overflowing manholes, line breaks, localized electrical failure, and power outages at pump stations. Catastrophic emergencies include floods, tornados, earthquakes, other natural events, serious chemical spills, or widespread electrical



SSOs can include overflows out of manholes onto city streets, sidewalks, and surrounding areas (photo: U.S. EPA).

failure. Ideally, this plan is written, reviewed, and adjusted as needed at periodic intervals.

The reviewer should determine if the emergency response plan generally follows the guidelines described below. The location where the plan is housed may vary but, in general, such a document should be available in the yard office or other building commonly accessible to and frequented by collection system personnel. The emergency preparedness and response procedures may be contained in the collection system's O&M manual, or may be reflected in the descriptions of equipment and unit operations. Putting emergency procedures in a stand-alone document, rather than combining it with other information in the O&M manual, makes it easier for collection system personnel to find information.

The plan should utilize the most current information on the collection system. For larger systems, a structured analysis, or *risk assessment*, should be made of the collection system, treatment plant, and the community. The risk assessment should identify areas where the collection system is vulnerable to failure and determine the effect and relative severity to collection systems operations, equipment and public safety, and health of such a failure. The risk assessment should concentrate on such factors as topography, weather, sewer system size, and other site-specific factors which reflect the unique characteristics of the system. Once the areas of vulnerability are known, the collection system owner or operator should have appropriate plans in place to ensure collection system operations continue for the duration of the emergency.

The plans must clearly identify the steps staff should take in the event of emergency situations. Plans should include information on when it is appropriate to initiate and cease emergency operations. The plans should be very specific as to the collection system or repair equipment involved. Instructions should be available which explain how to operate equipment or systems during an emergency event when they are not functioning as intended but are not fully inoperable. The plan should also include specific procedures for reporting events that result in an overflow or other noncompliance event to the appropriate authorities.

The owner or operator should track emergency situations to become better prepared for future emergencies and to assist with reporting and maintaining compliance with emergency-related requirements. Typical components of an emergency program may include:

- General information regarding emergencies, such as telephone numbers of collection system personnel, fire department, and ambulance.
- Identification of hazards (e.g., chlorine storage areas) and use of universal classification system for hazards: combustible material, flammable liquids, energized electrical circuits, and hazardous materials.
- Vulnerability analysis that identifies the various types of emergencies that could occur, such as natural disasters, power outages, or equipment failures.
- Emergency response procedures.
- Methods to reduce risk of emergencies.
- Responsibilities of staff and management.

- Continuous training.

Procedures for emergency response plans should be understood and practiced by all personnel in order to ensure safety of the public and the collection system personnel responding. Procedures should be specific to the type of emergency that could occur. It is important to keep detailed records of all past emergencies in order to constantly improve response training, as well as the method and timing of future responses. The ability to deal with emergencies depends on the knowledge and skill of the responding crews, in addition to availability of equipment. The crew should be able to rapidly diagnose problems in the field under stress and select the right equipment needed to correct the problem. If resources are limited, consideration should be given to contracting other departments or private industries to respond to some emergency situations, for example, those rare emergencies that would exceed the capacity of staff.

2.2.6 Modeling

Computer programs (modeling programs) are available that are capable of simulating the different flows within the collection system. The purpose of modeling is to determine system capacity requirements with respect to sewer design and structural conditions. Therefore the input of accurate data on sizes, location, elevation, and condition of sewer system components such as pipes, manholes, and pump stations is necessary. When possible, flow monitoring data should be used to calibrate the model.

Reviewer - Point to Note
The reviewer should determine whether a model used by the owner or operator:

- Has user support
- Has adequate documentation such as a user's manual that describes data input requirements, output to be expected, model capabilities and limitations, and hardware

Modeling is also useful in examining effects before and after rehabilitation. For example, models can be applied to "before" and "after" scenarios to estimate the effects of repairs. If a collection system is not experiencing any capacity related issues (i.e., overflows, bypasses, basement backups, street flooding, hydraulic overload at the treatment plant, etc.) then maintenance of a model may be optional for that system, although most medium and large systems should maintain a model of the larger diameter portion of their system. If any of the mentioned conditions are occurring then development and maintenance of a model is essential to performing a capacity assessment in the problem areas.

Computer modeling is a specialized and complex subject. The reviewer may not have a comprehensive knowledge of modeling. If this is the case the he or she should obtain the following basic information:

- Is the owner or operator using a model?
- What areas of the collection system are being modeled and why?
- What model (including the version) is being used? Who developed the model and when?

- How are the modeling results being used?

2.2.7 Mapping

The importance of maintaining accurate, current maps of the collection system cannot be overstated. Efficient collection system maintenance and repairs are unlikely if mapping is not adequate. Collection system maps should clearly indicate the information that personnel need to carry out their assignments. The collection system maps should contain information on the following:

- Main, trunk and interceptor sewers
- Building/house laterals
- Manholes
- Cleanouts
- Force mains
- Pump stations
- Service area boundaries
- Other landmarks (roads, water bodies, etc.)

Collection system maps should have a numbering system which uniquely identifies all manholes and sewer cleanouts. The system should be simple and easy to understand. Manholes and sewer cleanouts should have permanently assigned numbers and never be renumbered. Maps should also indicate the property served and reference its cleanout.

Sewer line maps should indicate the diameter, the length between the centers of manholes, and the slope or direction of flow. The dimensions of easements and property lines should be included on the maps. Other information that should be included on maps are access and overflow points, a scale, and a north arrow. All maps should have the date the map was drafted and the date of the last revision. Although optional, maps often include materials of pipe construction. Maps may come in different sizes and scales to be used for different purposes. Detailed local maps may be used by maintenance or repair crews to perform the duties. However, these detailed local maps should be keyed to one overall map that shows the entire system.

Key Design Characteristics

- Line locations, grades, depths, and capacities
- Maximum manhole spacing and size
- Minimum pipe size
- Pumping Station dimensions and capacities
- Drop manholes
- Flow velocities and calculations (peak flow and low-flow)
- Accessibility features
- Other technical specifications (e.g., materials, equipment)

Geographic Information System (GIS) technology have made the mapping and map updating process considerably more efficient. GIS is a computerized mapping program capable of combining mapping with detailed information about the physical

structures within the collection system. If a GIS program is being used by the owner or operator, the reviewer should ask if the program is capable of accepting information from the owner or operator's management program.

Specific procedures should be established for correction of errors and updating maps and drawings. Field personnel should be properly trained to recognize discrepancies between field conditions and map data and record changes necessary to correct the existing mapping system. Reviewers should check to see that maps and plans are available to the personnel in the office and to field personnel or contractors involved in all engineering endeavors.

2.2.8 New Construction

The owner or operator should maintain strict control over the introduction of flows into the system from new construction. New construction may be public (i.e., an expansion of the collection system) or private (i.e., a developer constructing sewers for a new development). Quality sanitary sewer designs keep costs and problems associated with operations, maintenance, and construction to a minimum. Design flaws are difficult to correct once construction is complete. The reviewer should be aware that this has historically not been adequately addressed in some collection systems. The owner or operator should have standards for new construction, procedures for reviewing designs and protocols for inspection, start-up, testing, and approval of new construction. The procedures should provide documentation of all activities, especially inspection. Reviewers should examine construction inspection records and be able to answer the following:

- Does the volume of records seem reasonable given system size?
- Do records reflect that the public works inspectors are complying with procedures?

The state or other regulatory authority may also maintain standards for new construction. The standards held by the owner or operator should be at least as stringent. Start-up and testing should be in accordance with the manufacturers' recommendation where applicable and with recognized industry practices. Each step of the review, start-up, testing, and approval procedures should be documented.

The owner or operator approval procedure should reflect future ease of maintenance concerns. After construction is complete, a procedure for construction testing and inspection should be used. Construction supervision should be provided by qualified personnel such as a registered professional engineer.

2.2.9 Pump Stations

Proper operation, maintenance, and repair of pump stations typically requires special electrical, hydraulic, and mechanical knowledge. Pump station failure may damage equipment, the environment, or endanger public health. Variation in equipment types, pump station

configuration, and geographical factors determine pump station design and O&M requirements.

The reviewer should verify that the O&M manual contains procedures in writing for the following:

- Are pumps rotated manually or automatically? If manually, how frequently?
- Are wet well operating levels set to limit pump starts and stops?
- Is there a procedure for manipulating pump operations (manually or automatically) during wet weather to increase in-line storage of wet weather flows?
- Is flow monitoring provided? How is the data collected used?
- Does the pump station have capacity-related overflows? Maintenance related overflows? Is overflow monitoring provided?
- Is there a history of power outages? Is there a source of emergency power? If the emergency power source is a generator, is it regularly exercised under load?

2.3 Equipment and Collection System Maintenance

Every collection system owner or operator should have a well-planned, systematic, and comprehensive maintenance program. The goals of a maintenance program should include:

- Prevention of overflows
- Maximization of service and system reliability at minimum cost
- Assurance of infrastructure sustainability (i.e., ensure all components reach their service life)

There should then be procedures which describe the maintenance approach for various systems. In addition, there should be detailed instructions for the maintenance and repair of individual facilities. These instructions should provide a level of detail such that any qualified collection system personnel or repair technician could perform the repair or maintenance activity.

Maintenance may be planned or unplanned. There are essentially two types of planned maintenance; predictive and preventive. Predictive maintenance is a method that tries to look for early warning signs of equipment failure such that emergency maintenance is avoided. Preventive maintenance consists of scheduled maintenance activities performed on a regular basis. There are two types of unplanned maintenance, corrective and emergency. Corrective maintenance consists of scheduled repairs to problems identified under planned or predictive maintenance. Emergency maintenance are activities (typically repairs) performed in response to a serious equipment or line failure where action must be taken immediately. The goal of every owner or operator should be to reduce corrective and emergency maintenance through the use of planned and predictive maintenance. The reviewer should evaluate the progress of the owner or operator in achieving that goal. The goals of the reviewer in assessment of the maintenance program are:

- Identify SSOs caused by inadequate maintenance
- Determine maintenance trends (i.e., frequent emergency maintenance performed as opposed to predictive maintenance)
- Identify sustainability issues (i.e., inadequate maintenance to allow system components to reach service life and/or many components nearing or at service life)

2.3.1 Maintenance Budgeting

The cost of a maintenance program is a significant part of the annual operating budget. The collection system owner or operator should track all maintenance costs incurred throughout the year, both by internal staff and contractors, to ensure that the budget is based on representative costs from past years. Budgets should be developed from past cost records which usually are categorized according to preventive maintenance, corrective maintenance, and projected and actual major repair requirements. Annual costs should be compared to the budget periodically to control maintenance expenditures.

The reviewer should evaluate the maintenance budget keeping in mind the system's characteristics, such as age. Costs for emergency repairs should be a relatively small percentage of the budget; five to ten percent would not be considered excessive. The establishment of an "emergency reserve" may also be included as part of the maintenance budget. This is especially useful where full replacement is not funded. The budget should also be considered in light of maintenance work order backlog. The labor budget should be evaluated for consistency with local pay rates and staffing needs and the reviewer should compare local pay rates and staffing needs according to the tables in Section 2.1.1.

2.3.2 Planned and Unplanned Maintenance

A planned maintenance program is a systematic approach to performing maintenance activities so that equipment failure is avoided. Planned maintenance is composed of predictive and preventive maintenance. In the end, a good planned maintenance program should reduce material and capital repair and replacement costs, improve personnel utilization and morale, reduce SSOs, and sustain public confidence.

Examples of predictive maintenance includes monitoring equipment for early warning signs of impending failure, such as excess vibration, heat, dirty oil, and leakage. Assessment and inspection activities can be classified as predictive maintenance. Vibration and lubrication analyses, thermography, and ultrasonics are among the more common predictive maintenance tools. Predictive maintenance also takes into account historical information about the system as all systems will deteriorate over time. A predictive maintenance program strives to identify potential problem areas and

Reviewer - Point to Note
The reviewer should inquire as to whether tools such as vibration and lubrication analysis, thermography, or ultrasonics are used, and obtain information on the extent of the programs.

uncover trends that could affect equipment performance. Predictive maintenance offers an early warning. It allows collection system personnel to detect early signs of increasing rates of wear and therefore failure, and thus shift a "corrective" task into a "planned" task. To be truly effective predictive, however, maintenance should not spur personnel into doing the work too soon and wasting useful life and value of the equipment in question.

The basis of a good predictive maintenance program is recordkeeping. Only with accurate recordkeeping can baseline conditions be established, problem areas identified, and a proactive approach taken to repairs and replacement.

Effective preventive maintenance minimizes system costs and environmental impacts by reducing breakdowns and thus the need for corrective or emergency maintenance, improves reliability by minimizing the time equipment is out of service, increases the useful life of equipment thus avoiding costly premature replacement, and avoids potential noncompliance situations. An effective preventive maintenance program includes:

- Trained personnel
- Scheduling based on system specific knowledge
- Detailed instructions related to the maintenance of various pieces of equipment
- A system for recordkeeping
- System knowledge in the form of maps, historical knowledge and records

An effective preventive maintenance program builds on the inspection activities and predictive maintenance described in Sections 2.4.1 to 2.4.4, and includes a well thought-out schedule for these activities.

Lubrication

Lubrication is probably one of the most important maintenance activities for mechanical systems, such as pumps and motors. Frequency of lubrication, choice of lubricant and lubrication procedure are all important factors in this activity. These items should closely follow manufacturer instructions, but may be modified to fit site-specific conditions and particular equipment applications.

The basis of the schedule for mechanical equipment maintenance (i.e., pump station components) should be the manufacturers' recommended activities and frequencies. This schedule may then be augmented by the knowledge and experience of collection system personnel to reflect the site-specific requirements. The schedule for sewer line cleaning, inspection, root removal, and repair activities should be based on periodic inspection data. In most systems, uniform frequencies for sewer line cleaning, inspection, and root removal are not necessary and inefficient. In many systems, a relatively small percentage of the pipe generates most of the problems. Efficient use of inspection data allows the owner or operator to implement a schedule in the most constructive manner. In rare cases it may be appropriate to reduce maintenance frequency for a particular piece of equipment. An example of a scheduling code and maintenance schedule for a pump is shown below:

Rotary Pump Maintenance Schedule	
Frequency	**Maintenance Required**
D	Check packing gland assembly
D	Check discharge pressure
S	Inspect and lubricate bearings
A	Flush bearings and replace lubricant

D = Daily A = Annually
S = Semiannually

Typically, there is a maintenance card or record for each piece of equipment within the collection system. These records should contain maintenance recommendations, schedule, and instructions on conducting the specific maintenance activity. The records should include documentation regarding any maintenance activities conducted to date and other observations related to that piece of equipment or system. Maintenance records are generally kept where maintenance personnel have easy access to them. The reviewer should examine the full series of periodic work orders (i.e. weekly, monthly, semiannually, and annually) for a selection of system components (e.g., a few pump stations, several line segments). The reviewer should then compare the recommended maintenance frequency to that which is actually performed. He or she should also look at the backlog of work; not focusing solely on the number of backlogged work orders, but on what that number represents in time. A very large system can have a hundred orders backlogged and only be one week behind. In a computerized system, a listing of all open work orders is usually very simple for collection system personnel to generate. The owner or operator should be able to explain their system for prioritizing work orders.

The reviewer needs to clearly understand the following:

- How the maintenance data management system works
- How work orders are generated and distributed
- How field crews use the work orders
- How data from the field is collected and returned
- How and on whose authority work orders are closed out

The reviewer should check to see if data entry is timely and up to date.

Unplanned maintenance is that which takes place in response to equipment breakdowns or emergencies. Unplanned maintenance may be corrective or emergency maintenance. Corrective maintenance could occur as a result of preventive or predictive maintenance activities which identified a problem situation. A work order should be issued so that the request for corrective maintenance is directed to the proper personnel. An example of non-emergency corrective maintenance could be a broken belt on a belt driven pump. The worn belt was not detected and

replaced through preventive maintenance and therefore the pump is out of service until corrective maintenance can be performed. Although the pump station may function with one pump out of service, should another pump fail, the situation may become critical during peak flow periods.

If the information can be easily generated the reviewer should select a sampling of work orders and compare them to the corrective maintenance database to determine if repairs are being made in a timely manner. Reviewers should note the current backlog of corrective maintenance work orders. A corrective maintenance backlog of two weeks or less would indicate an owner or operator in control of corrective maintenance. The owner or operator should be able to explain corrective maintenance work orders that have not been completed within six months.

Corrective maintenance takes resources away from predictive and preventive maintenance. When corrective maintenance becomes a predominant activity, personnel may not be able to perform planned maintenance, thus leading to more corrective maintenance and emergency situations. Emergency maintenance occurs when a piece of equipment or system fails, creating a threat to public health, the environment, or associated equipment. This type of maintenance involves repairs, on short notice, of malfunctioning equipment or sewers. A broken force main, totally non-functional pump station, and street cave-ins are all examples of emergency situations.

Types of Portable Emergency Equipment

- Bypass pumps
- Portable generator
- Air compressor, trailer-mounted
- Manhole lifters and gas testing equipment
- Sewer rodder and/or flushing machine
- Portable lights and hand tools
- Chemical spray units (for insects and rodent control)
- Truck (1-ton) and trailers
- Vacuum truck
- Repair equipment for excavation (backhoe, shoring equipment, concrete mixers, gasoline operated saws, traffic control equipment, etc.)
- Confined space entry gear

Emergency crews should be geared to a 24-hour-a-day, year-round operation. Most large systems have staffed 24-hour crews; many small systems have an "on-call" system. The owner or operator should be able to produce written procedures which spell out the type of action to take in a particular type of emergency and the equipment and personnel requirements necessary to carry out the action. The crews should have copies of these procedures and be familiar with them. Equipment must be located in an easily accessible area and be ready to move in a short period of time. Vehicles and equipment must be ready to perform, under extreme climatic conditions if necessary. The emergency crew

Reviewer - Point to Note
The reviewer should note the presence of supplies during the review of the yard where equipment and spare parts are maintained and personnel are dispatched.

may need materials such as piping, pipe fittings, bedding materials and concrete. The owner or operator should have supplies on hand to allow for two point (i.e. segment, fitting, or appurtenance) repairs of any part of its system.

Pump stations should be subject to inspection and preventive maintenance on a regular schedule. The frequency of inspection may vary from once a week, for a reliable pump station equipped with a telemetry system, to continuous staffing at a large pump station. The basic inspection should include verification that alarm systems are operating properly, wet well levels are properly set, all indicator lights and voltage readings are within acceptable limits, suction and discharge pressures are within normal limits, that the pumps are running without excessive heat or vibration and have the required amount of lubrication, and that the emergency generator is ready if needed. Less frequent inspections may include such items as vibration analysis and internal inspection of pump components.

Owner or Operator - Point to Note
Occasionally a supervisor should perform an unscheduled inspection to confirm that tasks have been performed as expected.

Observations and tasks performed should be recorded in a log book or on a checklist at the pump station. It is important to note how this data returns to the central maintenance data management system. At the time of the inspection, collection system personnel may perform minor repairs if necessary. If non-emergency repairs are required that are beyond the staff's training, it will probably be necessary to prepare a work order which routs a request though the proper channels to initiate the repair action. During the review the reviewer should check a random number of work orders to see how they move through the system. The reviewer should note whether repairs are being carried out promptly. In pump stations, for critical equipment (pumps, drives, power equipment, and control equipment), there should not be much backlog, unless the staff is waiting for parts.

During the review, the reviewer should also make on-site observations of a representative pump stations. The reviewer should plan at least half an hour to look at the simplest two-pump prefabricated station, and one to two hours to look at a larger station. In large systems, drive time between stations may be significant. The reviewer should strive to see a range of pump station sizes and types (i.e., the largest, smallest, most remote and any that review of work orders has indicated might be problematic).

Overall, the pump station should be clean, in good structural condition and exhibit minimal odor. The reviewer should note the settings of the pumps (i.e., which are operating, which are on stand-by, and which are not operating and why). The operating pumps should be observed for noise, heat, and excessive vibration. The settings in the wet well should be noted (as indicated on the controls, as direct observation of the reviewer in the wet well is not recommended) and the presence of any flashing alarm lights. The reviewer is reminded of the atmospheric hazards in a pump station (make sure ventilation has been running prior to arrival) and to avoid confined

space entry. If the pump station has an overflow its outlet should be observed, if possible, for signs of any recent overflows such as floatable materials or toilet paper. The reviewer should check the log book and/or checklist kept at the pump station to ensure that records are current and all maintenance activities have been performed. Below is a listing of items that indicate inadequate maintenance:

- Overall poor housekeeping and cleanliness
- Excessive grease accumulation in wet well
- Excessive corrosion on railings, ladders, and other metal components
- Sagging, worn, improperly sized, or inadequate belts
- Excessive equipment out of service for repair or any equipment for which repair has not been ordered (i.e., a work order issued)
- Pumps running with excessive heat, vibration, or noise
- Peeling paint and/or dirty equipment (the care given to equipment's outer surfaces often, but not always, mirrors internal condition)
- Check valves not closing when pumps shut off
- Inoperative instrumentation, alarms, and recording equipment
- "Jury-rigged" repairs (i.e., "temporary" repairs using inappropriate materials)
- Leakage from pumps, piping, or valves (some types of pump seals are designed to "leak" seal water)
- Inadequate lighting or ineffective/inoperative ventilation equipment

2.3.3 Sewer Cleaning

The purpose of sewer cleaning is to remove accumulated material from the sewer. Cleaning helps to prevent blockages and is also used to prepare the sewer for inspections. Stoppages in gravity sewers are usually caused by a structural defect, poor design, poor construction, an accumulation of material in the pipe (especially grease), or root intrusion. Protruding traps (lateral sewer connections incorrectly installed so that they protrude into the main sewer) may catch debris which then causes a further buildup of solids that eventually block the sewer. If the flow is less than approximately 1.0 to 1.4 feet per second, grit and solids can accumulate leading to a potential blockage.

Results of Various Flow Velocities

Velocity	Result
2.0 ft/sec	Very little material buildup in pipe
1.4-2.0 ft/sec	Heavier grit (sand and gravel) begin to accumulate
1.0-1.4 ft/sec	Inorganic grit and solids accumulate
Below 1.0 ft/sec	Significant amounts of organic and inorganic solids accumulate

(EPA 1974)

There are three major methods of sewer cleaning: hydraulic, mechanical, and chemical.

Hydraulic cleaning (also referred to as flushing) refers to any application of water to clean the pipe. Mechanical cleaning uses physical devices to scrape, cut, or pull material from the sewer. Chemical cleaning can facilitate the control of odors, grease buildup, root growth, corrosion, and insect and rodent infestation. For additional information on sewer cleaning methods refer to Volumes I and II of *Operation and Maintenance of Wastewater Collection Systems* (CSU Sacramento 1996 and 1998).

Sewer Cleaning Records

- Date, time, and location of stoppage or routine cleaning activity
- Method of cleaning used
- Cause of stoppage
- Identity of cleaning crew
- Further actions necessary and/or initiated
- Weather conditions

The backbone of an effective sewer cleaning program is accurate recordkeeping. Accurate recordkeeping provides the collection system owner or operator with information on the areas of the collection system susceptible to stoppages such that all portions of the system can be on an appropriate schedule. The reviewer should examine the records for legibility and completeness. He or she should then review the database to determine if entry of the field notes is current and accurate.



Root and grease buildup can cause blockages in a sewer system [photo: North Carolina Department of Natural Research (NCDNR)].

Sewers vary widely in their need for preventive cleaning. The collection system in a restaurant district may require cleaning every six months in order to prevent grease blockages. An area of the sewer system with new PVC piping and no significant grease contribution with reasonable and consistent slopes (i.e., no sags) may be able to go five years with no problems.

The owner or operator should be able to identify problem collection system areas, preferably on a map. Potential problem areas identified should include those due to grease or industrial discharges, hydraulic bottlenecks in the collection system, areas of poor design (e.g., insufficiently sloped sewers), areas prone to root intrusion, sags, and displacements. The connection between problem areas in the collection system and the preventive maintenance cleaning schedule should be clear. The owner or operator should also be able to identify the number of stoppages experienced per mile of sewer pipe. If the system is experiencing a steady increase in stoppages, the reviewer should try to determine the cause (i.e., lack of preventive maintenance funding, deterioration of the sewers due to age, an increase in grease producing activities, etc).

2.3.4 Parts and Equipment Inventory

An inventory of spare parts, equipment, and supplies should be maintained by the collection system owner or operator. The inventory should be based on equipment manufacturer's recommendations, supplemented by historical experience with maintenance and equipment problems. Without such an inventory, the collection system may experience long down times or periods of inefficient operation in the event of a breakdown or malfunction.

Files should be maintained on all pieces of equipment and major tools. The owner or operator should have a system to assure that each crew always has adequate tools. Tools should be subject to sign out procedures to provide accountability. Tools and equipment should be replaced at the end of their useful life. The reviewer should inquire as to how this is determined and how funds are made available to ensure this is the case. In addition, the reviewer should look at the tools and note their condition.

Basic Equipment Inventory

- Type, age, and description of the equipment
- Manufacturer
- Fuel type and other special requirements
- Operating costs and repair history

The owner or operator should maintain a yard where equipment, supplies, and spare parts are maintained and personnel are dispatched. Very large systems may maintain more than one yard. In this case, the reviewer should perform a visual survey at the main yard. In small to medium size systems, collection system operations may share the yard with the department of public works, water department, or other municipal agencies. In this case the reviewer should determine what percentage is being allotted for collection system items. The most important features of the yard are convenience and accessibility.

The reviewer should observe a random sampling of inspection and maintenance crew vehicles for equipment as described above. A review of the equipment and manufacturer's manuals aids in determining what spare parts should be maintained. The owner or operator should then consider the frequency of usage of the part, how critical the part is, and finally how difficult the part is to obtain when determining how many of the part to keep in stock. Spare parts should be kept in a clean, well-protected stock room. Critical parts are those which are essential to the operation of the collection system. Similar to equipment and tools management, a tracking system should be in place, including procedures on logging out materials, when maintenance personnel must use them. The owner or operator should be able to produce the spare parts inventory and clearly identify those parts deemed critical. The reviewer should evaluate the inventory and selected items in the stockroom to determine whether the specified number of these parts are being maintained.

Owner or Operator - Point to Note
The owner or operator should have a procedure for determining which spare parts are critical.

2.4 Sewer System Capacity Evaluation - Testing and Inspection

The collection system owner or operator should have a program in place to periodically evaluate the capacity of the sewer system in both wet and dry weather flows and ensure the capacity is maintained as it was designed. The capacity evaluation program builds upon ongoing activities and the everyday preventive maintenance that takes place in a system. The capacity evaluation begins with an inventory and characterization of the system components. The inventory should include the following basic information about the system:

- Population served
- Total system size (feet or miles)
- Inventory of pipe length, size, material and age, and interior and exterior condition as available
- Inventory of appurtenances such as bypasses, siphons, diversions, pump stations, tide or flood gates and manholes, etc., including size or capacity, material and age, and condition as available
- Force main locations, length, size and materials, and condition as available
- Pipe slopes and inverts
- Location of house laterals - both upper and lower

The system then undergoes general inspection (described below in Sections 2.4.1 to 2.4.4) which serves to continuously update and add to the inventory information.

The next step in the capacity evaluation is to identify the location of wet weather related SSOs, surcharged lines, basement backups, and any other areas of known capacity limitations. These areas warrant further investigation in the form of flow and rainfall monitoring and inspection procedures to identify and quantify the problem. The reviewer should determine that the capacity evaluation includes an estimate peak flows experienced in the system, an estimate of the capacity of key system components, and identifies the major sources of I/I that contribute to hydraulic overloading events. The capacity evaluation should also make use of a hydraulic model, if any, to identify areas with hydraulic limitations and evaluate alternatives to alleviate capacity limitations. Short and long term alternatives to address hydraulic deficiencies should be identified, prioritized, and scheduled for implementation.



A sewer inspection is an important part of a sewer system capacity evaluation (photo: N.J. Department of Environmental Protection).

2.4.1 Flow Monitoring

Fundamental information about the collection system is obtained by flow monitoring. Flow monitoring provides information on dry weather flows as well as areas of the collection system potentially affected by I/I. Flow measurement may also be performed for billing purposes, to assess the need for new sewers in a certain area, or to calibrate a model. There are three techniques commonly used for monitoring flow rates: (1) permanent and long-term, (2) temporary, and (3) instantaneous. Permanent installations are done at key points in the collection system such as the discharge point of a satellite collection system, pump stations, and key junctions. Temporary monitoring consists of flow meters typically installed for 30-90 days. Instantaneous flow metering is performed by collection system personnel, one reading is taken and then the measuring device is removed. The collection system owner or operator should have a flow monitoring plan that describes their flow monitoring strategy or should at least be able to provide the following information:

- Purpose of the flow monitoring
- Location of all flow meters
- Type of flow meters
- Flow meter inspection and calibration frequency

A flow monitoring plan should provide for routine inspection, service, and calibration checks (as opposed to actual calibration). In some cases, the data is calibrated rather than the flow meter. Checks should include taking independent water level (and ideally velocity readings), cleaning accumulated debris and silt from the flow meter area, downloading data (sometimes only once per month), and checking the desiccant and battery state. Records of each inspection should be maintained.

Flow measurements performed for the purpose of quantifying I/I are typically separated into three components: base flow, infiltration, and inflow. Base flow is generally taken to mean the wastewater generated without any I/I component. Infiltration is the seepage of groundwater into pipes or manholes through defects such as cracks, broken joints, etc. Inflow is the water which enters the sewer through direct connections such as roof leaders, direct connections from storm drains or yard, area, and foundation drains, the holes in and around the rim of manhole covers, etc. Many collection system owners or operators add a third classification: rainfall induced infiltration (RII). RII is stormwater that enters the collection system through defects that lie so close to the ground surface that they are easily reached. Although not from piped sources, RII tends to act more like inflow than infiltration.

In addition to the use of flow meters, which may be expensive for a small owner or operator, other methods of inspecting flows may be employed such as visually monitoring manholes during low-flow periods to determine areas with excessive I/I. For a very small system, this technique may be an effective and low-cost means of identifying problem areas in the system which require further investigation.

The owner or operator should have in place a program for the efficient identification of excessive I/I. The program should look at the wastewater treatment plant, pump stations, permanent meter flows, and rainfall data to characterize peaking factors for the whole system and major drainage basins. The reviewer should evaluate the program including procedures and records associated with the flow monitoring plan. Temporary meters should be used on a "roving" basis to identify areas with high wet weather flows. Areas with high wet weather flows should then be subject to inspection and rehabilitation activities.

2.4.2 Sewer System Testing

Sewer system testing techniques are often used to identify leaks which allow unwanted infiltration into the sewer system and determine the location of illicit connections and other sources of stormwater inflow. Two commonly implemented techniques include smoke testing and dyed water testing. Regardless of the program(s) implemented by the owner or operator, the reviewer should evaluate any procedures and records that have been established for these programs. The reviewer should also evaluate any public relations program and assess how the owner or operator communicates with the public during these tests (i.e., when there is a possibility of smoke entering a home or building).

Smoke testing is a relatively inexpensive and quick method of detecting sources of inflow in sewer systems, such as down spouts, or driveway and yard drains and works best suited for detecting cross connections and point source inflow leaks. Smoke testing is not typically used on a routine basis, but rather when evidence of excessive I/I already exists. With each end of the sewer of interest plugged, smoke is introduced into the test section, usually via a manhole. Sources of inflow can then be identified when smoke escapes through them.

Areas Usually Smoke Tested

- Drainage paths
- Ponding areas
- Roof leaders
- Cellars
- Yard and area drains
- Fountain drains
- Abandoned building sewers
- Faulty service connections

If the collection system owner or operator implements a regular program of smoke testing, the program should include a public notification procedure. The owner or operator should also have procedures to define:

- How line segments are isolated
- The maximum amount of line to be smoked at one time
- The weather conditions in which smoke testing is conducted (i.e., no rain or snow, little wind and daylight only)

The results of positive smoke tests should be documented with carefully labeled photographs. Building inspections are sometimes conducted as part of a smoke testing program and, in some cases, may be the only way to find illegal connections. If properly connected to the sanitary sewer system, smoke should exit the vent stacks of the surrounding properties. If traces of the

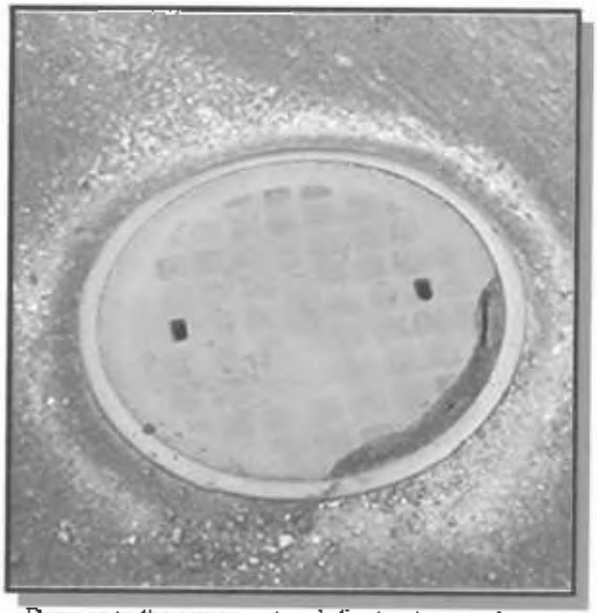
smoke or its odor enter the building, it is an indication that gases from the sewer system may also be entering. Building inspections can be labor intensive and require advanced preparation and communication with the public.

Dyed water testing may be used to establish the connection of a fixture or appurtenance to the sewer. It is often used to confirm smoke testing or to test fixtures that did not smoke. As is the case with smoke testing, it is not used on a routine basis but rather in areas that have displayed high wet weather flows. Dyed water testing can be used to identify structurally damaged manholes that might create potential I/I problems. This is accomplished by flooding the area close to the suspected manholes with dyed water and checking for entry of dyed water at the frame-chimney area, cone/corbel, and walls of the manhole.

2.4.3 Sewer System Inspection

Visual inspection of manholes and pipelines are the first line of defense in the identification of existing or potential problem areas. Visual inspections should take place on both a scheduled basis and as part of any preventive or corrective maintenance activity. Visual inspections provide additional information concerning the accuracy of system mapping, the presence and degree of I/I problems, and the physical state-of-repair of the system. By observing the manhole directly and the incoming and outgoing lines with a mirror, it is possible to determine structural condition, the presence of roots, condition of joints, depth of debris in the line, and depth of flow. The reviewer should examine the records of visual inspections to ensure that the following information is recorded:

- Manhole identification number and location
- Cracks or breaks in the manhole or pipe (inspection sheets and/or logs should record details on defects)
- Accumulations of grease, debris, or grit
- Wastewater flow characteristics (e.g., flowing freely or backed up)
- Inflow
- Infiltration (presence of clear water in or flowing through the manhole)
- Presence of corrosion
- Offsets or misalignments
- Condition of the frame
- Evidence of surcharge
- Atmospheric hazard measurements (especially hydrogen sulfide)
- If repair is necessary, a notation as to whether a work order has been issued



Damage to the sewer system infrastructure, such as this broken manhole cover allows stormwater into the sewer system (photo: Limno-Tech, Inc.)

Manholes should undergo routine inspection typically every one to five years. There should be a baseline for manhole inspections (e.g., once every two years) with problematic manholes being inspected more frequently. The reviewer should conduct visual observation at a small but representative number of manholes for the items listed above.

There are various pipeline inspection techniques, the most common include: lamping, camera inspection, sonar, and CCTV. These will be explained further in the following sections.

2.4.3.1 Sewer System Inspection Techniques

Sewer inspection is an important component of any maintenance program. There are a number of inspection techniques that may be employed to inspect a sewer system. The reviewer should determine if a inspection program includes frequency and schedule of inspections and procedures to record the results. Sewer system cleaning should always be considered before inspection is performed in order to provide adequate clearance and inspection results. Additionally, a reviewer should evaluate records maintained for inspection activities including if information is maintained on standardized logs and should include:

- Location and identification of line being inspected
- Pipe size and type
- Name of personnel performing inspection
- Distance inspected
- Cleanliness of the line
- Condition of the manhole with pipe defects identified by footage from the starting manhole
- Results of inspection, including estimates of I/I

Lamping involves lowering a still camera into a manhole. The camera is lined up with the centerline of the junction of the manhole frame and sewer. A picture is the taken down the pipe with a strobe-like flash. A disadvantage of this technique is that only the first 10-12 feet of the pipe can be inspected upstream and downstream of the access point. Additionally, it has limited use in small diameter sewers. The benefits of this technique include not requiring confined space entry and little equipment and set-up time is required.

Camera inspection is more comprehensive then lamping in that more of the sewer can be viewed. A still camera is mounted on a floatable raft and released into a pipe. The camera takes pictures with a strobe-like flash as it floats through the sewer pipe. This technique is often employed in larger lines where access points are far apart. Similarly to lamping, portions of the pipe may still be missed using this technique. Obviously, there also must be flow in the pipe for the raft to float. This technique also does not fully capture the invert of the pipe and its condition.

Sonar is a newer technology deployed similarly to CCTV cameras, described in more detail below. The sonar emits a pulse which bounces off the walls of the sewer. The time it takes for

this pulse to bounce back provides data providing an image of the interior of the pipe including its structural condition. A benefit of this technique is that it can be used in flooded or inaccessible sections of the sewer. The drawback is that the technique requires heavy and expensive equipment.

Sewer scanner and evaluation is an experimental technology where a 360 degree scanner produces a full digital picture of the interior of the pipe. This technique is similar to sonar in that a more complete image of a pipe can be made than with CCTV, but not all types of sewer defects may be identified as readily (i.e., infiltration, corrosion).

Closed Circuit Television (CCTV) inspections are a helpful tool for early detection of potential problems. This technique involves a closed-circuit camera with a light which is self-propelled or pulled down the pipe. As it moves it records the interior of the pipe. CCTV inspections may be done on a routine basis as part of the preventive maintenance program as well as part of an investigation into the cause of I/I. CCTV, however, eliminates the hazards associated with confined space entry. The output is displayed on a monitor and videotaped. A benefit of CCTV inspection is that a permanent visual record is captured for subsequent reviews.

2.5 Sewer System Rehabilitation

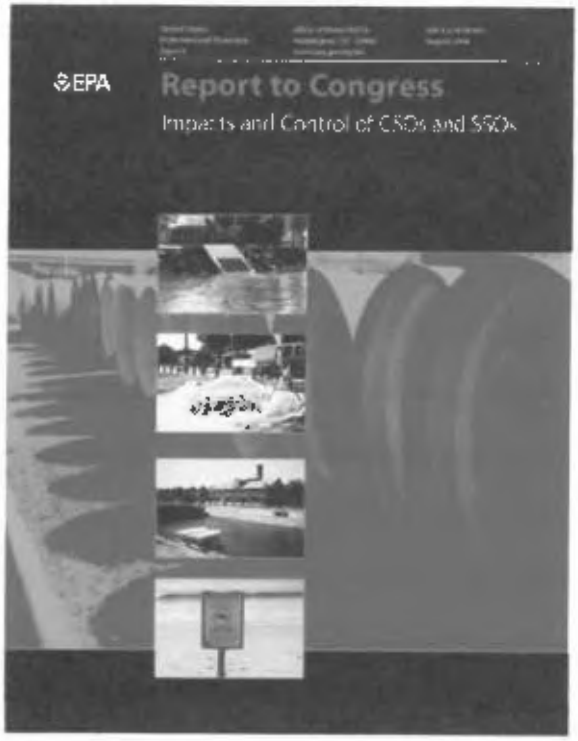
The collection system owner or operator should have a sewer rehabilitation program. The objective of sewer rehabilitation is to maintain the overall viability of a collection system. This is done in three ways: (1) ensuring its structural integrity; (2) limiting the loss of conveyance and wastewater treatment capacity due to excessive I/I; and (3) limiting the potential for groundwater contamination by controlling exfiltration from the pipe network. The rehabilitation program should build on information obtained as a result of all forms of maintenance and observations made as part of the capacity evaluation and asset inventory to assure the continued ability of the system to provide sales and service at the least cost. The reviewer should try to gain a sense of how rehabilitation is prioritorized. Priorities may be stated in the written program or may be determined through interviews with system personnel.

There are many rehabilitation methods. The choice of methods depends on pipe size, type, location, dimensional changes, sewer flow, material deposition, surface conditions, severity of I/I, and other physical factors. Non-structural repairs typically involve the sealing of leaking joints in otherwise sound pipe.

Structural repairs involve either the replacement of all or a portion of a sewer line, or the lining of the sewer. These repairs can be carried out by excavating usually for repairs limited to one or two pipe segments (these are known as point repairs) or by trenchless technologies (in which repair is carried out via existing manholes or a limited number of access excavations).

The rehabilitation program should identify the methods that have been used in the past, their success rating and methods to be used in the future. An reviewer who wants further guidance on methods of rehabilitation may consult:

- Technology Description from 2004 Report to Congress (EPA 2004)
- *Operation and Maintenance of Wastewater Collection Systems,* Volumes I and II (CSU Sacramento 1996 and 1998)
- *Existing Sewer Evaluation and Rehabilitation* (WEF 1994)



The reviewer should determine the owner's or operator's policies regarding service lateral rehabilitation since service laterals can constitute a serious source of I/I. Manholes should not be neglected in the rehabilitation program. Manhole covers can allow significant inflow to enter the system because they are often located in the path of surface runoff. Manholes themselves can also be a significant source of infiltration from cracks in the barrel of the manhole.

The owner or operator should be able to produce documentation on the location and methods used for sewer rehabilitation. The reviewer should compare the rehabilitation accomplished with that recommended by the capacity evaluation program. When examining the collection system rehabilitation program, the reviewer should be able to answer the following questions:

- Is rehabilitation taking place before it becomes emergency maintenance?
- Are recommendations made as a result of the previously described inspections?
- Does the rehabilitation program take into account the age and condition of the sewers?

Sanitary Sewer Overflow Response Plan





System Name: Forest Utilities WWTP

GMS ID: _____

Address: 6341 Deer Run

City/State/Zip: Fort Myers, Florida 33908

Phone Number: 239-481-5333

Fax: 239-481-0327

Email: forest@aol.com

FLORIDA RURAL WATER ASSOCIATION

2970 Wellington Circle • Tallahassee, FL 32309-7813
Phone: (850) 668-2746 ~ Fax: (850) 893-4581
Email: frwa@frwa.net

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Appendix A – Contacts

Appendix B – Spill/SSO Reporting Form

I. Purpose

This Sanitary Sewer Overflow Response Plan has been prepared in accordance with FDEP regulation 62-604.550. The purpose of this SSO Response Plan is to ensure proper SSO reporting and minimize the adverse effects that may be caused by a Sanitary Sewer Overflow.

This plan is effective beginning on May 5, 2016
Date: mm / dd / yy

This plan will be reviewed and/or updated annually to incorporate any changes in contact information; system components; and/or personnel.

II. Objectives

The objectives of this plan are listed below:

- To protect the public health and the environment
- To meet regulatory and permit requirements
- To develop and implement procedures to mitigate the effects of an SSO
- To protect collection system and wastewater treatment personnel
- To ensure the longevity of the collection system and wastewater treatment plant equipment
- To protect both public and private property
- To minimize regulatory enforcement and/or penalties, resulting from a spill/SSO
- To provide appropriate customer service

III. Procedures

A. Receipt of Information Regarding a Sanitary Sewer Overflow

Sanitary Sewer Overflow's may be recognized and reported by system personnel or by others. The System is responsible to act, in a timely manner, to all reports of a possible SSO. Reports may be received via telephone, email, or by other means.

1. Typically reports received from the public will be received at the utility offices. Personnel collecting information regarding a possible SSO, please obtain the following:
    a. Time and date call was received
    b. Specific location
    c. Description of problem
    d. Time possible overflow was noticed
    e. Reporter's name and phone number
    f. Observations of the reporter
    g. Relevant information that will enable system personnel to quickly locate, assess and stop the overflow
2. Appropriate system personnel will be notified when a possible spill is reported. System personnel must confirm the spill before it will be considered and SSO. Only after confirmation by system personnel will a spill be considered an SSO.
3. Within 24 hours of the confirmation of a Sanitary Sewer Overflow, FDEP will be notified according to FDEP Rule 62-604.550. The rule is provided below:

62-604.550 Abnormal Events.

(1) The provisions of Rule 62-604.550 are applicable to both new and existing domestic wastewater collection/transmission systems.

(2) The owner/operator of the collection/transmission system shall report to the Department all unauthorized releases or spills of wastewater to surface or ground waters from its collection/transmission system or any other abnormal events as described below:

*(a) Unauthorized releases or spills in excess of 1,000 gallons per incident, or other abnormal events where information indicates that public health or the environment will be endangered, shall be reported orally to the **STATE WARNING POINT TOLL FREE NUMBER (800) 320-0519** as soon as practical, but no later than 24 hours from the time that the owner/operator becomes aware of the circumstances. The owner/operator, to the extent known, shall provide the following information to the State Warning Point:*

1. Name, address, and telephone number of person reporting;

2. Name, address, and telephone number of owner/operator of the collection/transmission system or responsible person for the discharge;

3. Date and time of the discharge and status of discharge (ongoing or ceased);

4. *Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);*
5. *Estimated amount of the discharge;*
6. *Location or address of the discharge;*
7. *Source and cause o the discharge;*
8. *Whether the discharge was contained on-site, and cleanup actions taken to date;*
9. *Description of area affected by the discharge, including name of water body affected, if any; and*
10. *Other persons or agencies contacted.*

(b) *Unauthorized releases or spills of 1000 gallons per incident or less shall be reported orally to the Department within 24 hours from the time that the owner/operator of the collection/transmission system becomes aware of the circumstances.*

(c) *The oral notification shall be followed by a written submission, which shall be provided within five days of the time that the owner/operator becomes aware of the circumstances. The written submission shall contain: a description of the spill, release or abnormal event and its cause; the duration including exact dates and time, and if it has not been corrected the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence. The Department shall waive the written report if the oral report has been received within 24 hours from the time that the owner/operator of the collection/transmission system becomes aware of the circumstances, and the release, spill or abnormal event has been corrected and did not endanger health or the environment.* [1]

Rule Highlights

- Spills / Sanitary Sewer Overflows greater than 1,000 gallons must be reported to the **STATE WATCH OFFICE** formerly known as STATE WARNING POINT **(800-320-0519)** within 24 hours of learning of the spill/SSO.
- Spills / Sanitary Sewer Overflows that endanger public health or the environment must be reported to the **STATE WATCH OFFICE** formerly known as STATE WARNING POINT **(800-320-0519)** within 24 hours of learning of the spill/SSO.
- Spills / Sanitary Sewer Overflows less than 1,000 gallons must be verbally reported to the FDEP within 24 hours of learning of the spill/SSO.
    - Written report describing the spill/SSO must be provided to the FDEP within five days.

[1] http://www.dep.state.fl.us/legal/Rules/wastewater/62-604.pdf

- A written report is not required if the FDEP was notified within 24 hours and the spill/SSO has been corrected and did not endanger public health or the environment.

B. Dispatch of Sewer Maintenance Personnel to Site of Sewer Overflow

Confirmation of a Spills / Sanitary Sewer Overflows will activate an immediate response to isolate and correct the problem. Personnel and equipment shall be available to respond to any and all SSO locations.

1. Dispatching Personnel Instructions

   - When a spill/SSO is received by the system, the necessary response personnel and equipment shall be dispatched to isolate and correct the problem in a timely manner
   - Maintenance personnel will be dispatched by telephone or radio
   - Dispatching personnel must verify that all notified maintenance personnel have received the message

2. Maintenance Personnel Instructions

   - All dispatched maintenance personnel should proceed immediately to the site of the spill/SSO. Any delays and/or conflicts should be promptly reported to the supervisor
   - Upon arrival at the site of the spill/SSO, maintenance personnel will immediately report any and all findings to the Utility supervisor. These findings should include, damage to both public and private property

3. Utility Supervisor Instructions

   - The Utility Supervisor should contact response personnel to assess the spill/SSO, if findings have not been reported within one hour
   - The Utility Supervisor will dispatch additional personnel, supplies, and equipment as needed or requested by dispatched maintenance personnel

4. Initial Damage Assessment

- All dispatched personnel must use discretionary action when responding to a spill/SSO. Dispatched personnel must be aware that the System may be responsible and/or liable for further damage to private property
- Dispatched personnel should not enter private property without authorization from the Utility Supervisor
- In order to thoroughly document the affected area, the dispatched personnel will take appropriate photos and/or video. Any photos and/or video will be retained and filed with the spill/SSO report

5. Field Supervision and Inspection

- The Utility Supervisor will ensure that the guidelines outlined in this SSO Response Plan are properly implemented
- The Utility Supervisor is responsible for properly notifying FDEP, according to FDEP Rule 62-604.550, within the amount of time specified within the rule

6. Hazardous Material Response

- Upon arrival at a spill/SSO, should dispatched personnel confront a suspicious substance (oil sheen, foam, etc.) or odor (gasoline, etc.), the dispatched personnel should contact the Utility Supervisor prior to taking further action
- The Utility Supervisor will contact a HAZMAT team, should it be deemed necessary. Dispatch personnel will await the arrival of the HAZMAT team
- The Utility Supervisor will remain in contact with the HAZMAT team. Once the HAZMAT team determines it is safe, the system will continue appropriate response, in accordance with the SSO response plan

C. Spill/SSO Correction, Containment, and Clean-up

The objectives of the actions taken by system personnel are:

- To protect public health, the environment, and property from a spill/SSO
- To restore the surrounding area/property back to normal as quickly as possible
- To establish an appropriate perimeter to contain the spill/SSO, using equipment (traffic cones, barricades), existing infrastructure (fencing, etc.), and/or natural boundaries (berm, ditch, stream, etc.)
- To notify the appropriate regulatory agencies within permitted timeframe
- To protect surface water from contamination
- To minimize regulatory enforcement and/or penalties, resulting from a spill/SSO

1. Upon arrival at a spill/SSO, the dispatched system personnel will perform the following:

   - Determine the cause of the spill/SSO (collection line blockage, lift station malfunction, line break, etc.).
   - Report findings to Utility Supervisor and identify or request additional personnel and equipment to minimize the affects of the spill/SSO.
   - Should it be determined the cause of the spill/SSO is not the responsibility of the system, dispatched personnel will;
     - Take appropriate action to protect public health, property (public and private), and surface water bodies from immediate danger.

2. Containment of a spill/SSO will be of utmost priority and will include, but are not limited to, the following measures:

   - Determine the immediate destination of the spill/SSO (storm drain, water body, ditch, etc.)
   - Identify and request the necessary personnel and equipment to contain and minimize the affects of the spill/SSO
   - Take the appropriate, immediate action to contain the spill/SSO

3. Additional measures may be necessary to contain a prolonged spill/SSO. These measures will be determined and implemented by the Utility Supervisor.

4. Clean up of a spill/SSO will be prompt and thorough. The necessary measures will be taken to eliminate any identifiable evidence of the spill/SSO.

   - If possible, photos will be taken before and after clean up. Photos will be filed with the spill/SSO report
   - The affected area will be cleaned of any sewage and debris. All materials collected will be properly disposed of
   - The area will be secured to prevent public contact, until the affected area has been thoroughly cleaned
   - The spill/SSO site should be disinfected and deodorized, if appropriate
   - If spill/SSO has affected a surface water body, the FDEP will be contacted for specific instructions

D. Overflow Reporting

The Utility Supervisor will complete the required reports and submit them to the FDEP. All spills/SSO will be reported to FDEP, according to FDEP Rule 62-604.550. This information should include, but is not limited to, the following:

The italicized list below is taken from the FDEP website.

- *Name, address, and phone number of person reporting the spill*
- *Name, address, and phone number of the responsible party*
- *Date and time of the discharge; Status of the discharge (ongoing or stopped)*
- *Characteristics of the discharge (untreated, treated, industrial, or domestic wastewater)*
- *Estimated amount of the discharge*
- *Location or address of the discharge*
- *Source and cause of the discharge*
- *Whether the discharge was contained on-site, and any cleanup actions taken to date.*
- *Description of area affected by the discharge, including name of water body affected, if any.*
- *Other persons or agencies contacted*
- *Additional information*

For accurate reporting purposes, system personnel should gather the following information:

- Determine if the spill/SSO has affected any surface water bodies
- Estimate the start time of the of the spill/SSO:
  - Date/time reported and confirmed by system personnel
  - Visual observations
- Estimate the stop time of the spill/SSO:
  - Date/time the blockage or equipment malfunction has been corrected
  - Date/time system personnel arrived onsite, if spill/SSO stopped before system personnel arrived
- Visual Observations
  - Estimate the flow rate of the spill/SSO
  - Estimate the volume of the spill/SSO
  - Take photos for documentation
  - Assess damage to public and private property (System personnel will not enter private property to assess damage, unless authorized by the Utility Supervisor)

E. Customer Satisfaction

To ensure good public relations and customer satisfaction, the appropriate system personnel will follow up with the reporting party. This follow up will include either a personal visit or telephone call. The Utility Supervisor will determine the information to be disclosed to the reporting party.

IV. SORP Maintenance

This Sanitary Sewer Overflow Response Plan will reviewed annually. Amendments may include:

- Changes in procedure
- Changes in contact personnel
- Changes due to regulatory requirements

V. Appendices

Appendix A

CONTACTS

State Warning Point – 800-320-0519

"Spills which are of 1,000 gallons or greater, or which may threaten the environment or public heath are required to be immediately reported by a utility to the Florida Department of Environmental Protection (FDEP) through a **toll-free, 24-hour hotline** known as the State Warning Point."[2]

Contact / Affiliation	Phone	Email
Florida Rural Water Association	(850) 668-2746	FRWA@frwa.net
FDEP Inspector(s)		
System Owner/Operator		
Utilities Supervisor		
HAZMAT		

[2] *FDEP, 12/21/2010*<http://www.dep.state.fl.us/water/wastewater/wcc/spills.htm>.

Appendix B

SANITARY SEWER OVERFLOW REPORT FORM

1. General Information

Facility ID: _____

Authorized representative filing this form:

Name: _____

Title: _____

E-mail Address: _____

Type of filing report: *(check one)*

☐ Initial

☐ Final

Date of filing report: *(check one)*

☐ Initial ___/___/___

☐ Final ___/___/___

2. Reporting of Spill/SSO

-Less than 1,000 gallons-

Verbal report to FDEP

Date: _____

Contact: _____

-Greater than 1,000 gallons-

Contacted STATE WARNING POINT

Date: _____

Contact: _____

-Endangered public health-

Contacted STATE WARNING POINT

Date: _____

Contact: _____

Oral Report Provided to FDEP within 24 hours

FDEP Contact: _____
Phone Number: _____
E-mail Address: _____
FDEP Office: _____
Date of phone notification: ___/___/___

Spill/SSO Location and Description
Location:

City/Town/Village: _____

Address or Landmark: _____
_____
_____

Discharge Location: *(check one)*

- ☐ *Directly to receiving ground water*
- ☐ *Ground*
- ☐ *Receiving water via storm drain*
- ☐ *Building*
- ☐ *Other* _____

SEWER OVERFLOW RESPONSE PLAN (SORP)

Type of overflow *(check one)*

- ☐ *Gravity sewer manhole*
- ☐ *Pump station*
- ☐ *Bypass at treatment plant*
- ☐ *Other* _____

Time of Spill/SSO Incident

- When did the incident begin? Date: ____/____/____
- Was the overflow/bypass event ongoing at the time of report: *(check one)*

☐ Yes ☐ No

If yes, how long is the incident expected to continue? _____

_____

If no, when did event end? Date: ____/____/____

Time: _____

General Information about Overflow at this Location

Estimated volume of overflow released at time of report: _____

_____

Method of estimating volume: _____

_____

Estimated total volume of overflow released at end of incident: _____

_____

Were photos taken: *(check one)* ☐ Yes ☐ No

Corrective measures taken: *(check one)*

- ☐ *No action*
- ☐ *Removed blockage*
- ☐ *Repair pump station*
- ☐ *Other* _____

_____

_____

_____

Cause of overflow/bypass (*check ALL that apply*):

- ☐ *Rain*
- ☐ *High ground water*
- ☐ *Other excessive flow*
- ☐ *Sewer system blockage or collapse*
- ☐ *Pump /lift station failure*
- ☐ *Other* _____

_____

_____

_____

Additional comments: _____

FIVE DAY WRITTEN INCIDENT REPORT

Complete this notification form and use the space below to include any additional information regarding the overflow. Include any steps taken or planned to prevent a recurrence. Submit this form to the FDEP office within five days of becoming aware of the incident. _____

Forest Utilities, Inc.

Inflow/Infiltration Program

2019

In accordance with Forest Utilities' (FU) Waste Water Treatment Facility Operating Permit issued by the Florida Department of Environment Protection, (FU) has formally adopted the following program to prevent excessive inflow and infiltration (I&I) of storm and ground water into our sewer system. Through the implementation of standard industry sewer system monitoring practices this program is intended to minimize the following occurrences:

1) hydraulic overloading of the transmission system
2) hydraulic and inorganic overloading of the treatment facility
3) prevent sanitary sewer overflows
4) treatment facility upsets

These monitoring practices include but are not limited to, twice-weekly pumping station inspections and pump usage recording, visual inspection of manholes and invert flows, smoke testing and video inspection of sewer gravity mains and service laterals and sewer system inspection during significant rain events.

These monitoring practices are also performed at the collection systems of satellite communities connected to FU's central sewage system. These communities own and maintain the sewer collection/transmission systems located within their respective communities and transport sewage to FU's sewage collection/transmission system via pumping stations. The sewage is then pumped to FU's waste water treatment facility for treatment and disposal. Although FU does not own these systems they are a critical component of our sewer transmission system and treatment process and therefore require our personal to perform the same preliminary I&I monitoring as performed on the FU sewer system. These communities are bound by the requirements of the FU Sewer Service Agreement(s) and various regulatory agencies, to properly operate and maintain the sewer systems in a manner so as to function as they were originally intended and in a manner that prevents excessive I&I flows and sanitary sewer overflows.

Upon becoming aware of a satellite community sewer system I&I problem(s), FU will issue a letter of excessive I&I notification stating both the evidence of I&I and the requirement for timely repair. The community will be given a ten day response period in order to determine the appropriate corrective measures to be implemented. However, should the community fail to respond or respond to but not perform repairs in a timely manner or perform repairs that do not produce the results necessary to conform to, federal, state and local laws, codes, ordinances, rules and regulations and/or the proper biologic operation of FU's wastewater treatment plant. FU may issue a sewer service disconnect notice or take such other action to secure compliance as FU deems appropriate under the circumstances, including a requirement that the satellite system correct these excessive I&I issues which occur in such satellite systems The notice will also be provided to the Florida Department of Environmental Protection and the Lee County Health Department.

In an effort to aid in the implementation of this I&I program FU has made capital expenditures to acquire the necessary video and recording equipment, sewer main cleaning equipment and other miscellaneous purchases and will continue to make additional purchases in the future.

This program may be modified as necessary and is an integral part of our operating protocol.

Prepared:05/2010 revised: 01/2011

Appendix B

Forest Utilities

Lift Station O&M Manual

FOREST UTILITIES

LIFT STATION
O&M
MANUAL

Table of Contents

1. Section 1 – Bill of Materials
2. Section 2 – Data Sheets
3. Section 3 – Drawings
4. Section 4 – Manuals
5. Section 5 – Operator Manual
6. Section 6 – Warranty

LS – 1

- **CELL IMEI: 359225051128940**
- **S/N: 2693773**
- **MAC: 00:06:3D:09:6A:4C**
- **Mobile No: 239.994.6580**
- IP Address: 166.150.099.091

LS – 3

- **CELL IMEI: 359225051128221**
- **S/N: 2693769**
- **MAC: 00:06:3D:09:6A:3B**
- **Mobile No: 239.994.6603**
- IP Address: 166.150.099.092

LS – 4

- **CELL IMEI: 359225051128361**
- **S/N: 2693787**
- **MAC: 00:06:3D:09:6A:38**
- **Mobile No: 239.994.6611**
- IP Address: 166.150.099.093

LS – 25

- **CELL IMEI: 359225051128379**
- **S/N: 2693770**
- **MAC: 00:06:3D:09:6A:29**
- **Mobile No: 239.994.6963**
- IP Address: 166.150.099.094

RECOMMENDED SPARES BILL OF MATERIALS

LOCATION:	**The Forest**
JOB NAME:	**10863**
CUSTOMER:	**Forest Utilities**
PANEL:	**LS - 1, 3, 4, 25**

DATE: 7/6/2016

Number of Panels: 1 of 4

	QTY	ID	DESCRIPTION	MFG.	SUPPLIER	PART #	REFERENCE / NOTES
	5	MCP	Fuse, 1/16A, 5x20mm, fast-acting	Ferraz Shawmut	HD Supply	GGM1/16	
	5	MCP	Fuse, 1.5A, 5x20mm, fast-acting	Ferraz Shawmut	HD Supply	GGM1-1/2	
	1	MCP	SCADA Pack	Schneider Electric	BCI	TBUP334-EA55-AB00	Primary Item
	1	MCP	Touch Screen, 6", Gray Scale, E-Net, USB	C-More	Automation Direct	EA7-S6M	Primary Item
	1	MCP	Relay, SPDT 24vdc, w/Indicator	Omron	Newark	G2R-1-SND-DC24(s)	
	1	PP	Relay, 120vac, 2-Pole	Omron	AA Electrical	G2R-2SN-AC120(s)	
	5	PP	Fuse, 5x20mm, Fast-acting, 5A	Ferraz Shawmut	Anixter	GGM5	
	1	PP	Relay, Timer, M-unction, 120vac, 2-Pole	Manecraft	Newark	822TD10H-UNI	
	2	PP	Fuse, Class CC, 600V, 1A	SQ'D	Graybar	ATDR1	

BILL OF MATERIALS

LOCATION:	**The Forest**
JOB NAME:	**10663**
CUSTOMER:	**Forest Utilities**
PANEL:	**L5 - 1, 3, 4, 25**

DATE: 7/6/2016

Number of Panels: 1 of 4

	QTY	ID	DESCRIPTION	MFG.	SUPPLIER	PART #	REFERENCE / NOTES
	1	MCP	Encl., 30x24x10, N4X, Powder Wht., 3pt. Latch	Schaefers	Schaefers	SPN4SS-302410-477	
	1	MCP	Back Panel	Schaefers	Schaefers	SPP-3024	
	4	MCP	Fuse Holder, 5x20mm	SQ'D	HD Supply	NSYTRV42SF5	
	3	MCP	Fuse, 1/16A, 5x20mm, fast-acting	Ferraz Shawmut	HD Supply	GGM1/16	
	1	MCP	Fuse, 1.5A, 5x20mm, fast-acting	Ferraz Shawmut	HD Supply	GGM1-1/2	
	2	MCP	Supplimental Circuit Breaker, 0.5A	SQ'D	HD Supply	9080GCB05	
	4	MCP	Supplimental Circuit Breaker, 1A	SQ'D	HD Supply	9080GCB10	
	1	MCP	Supplimental Circuit Breaker, 2A	SQ'D	HD Supply	9080GCB20	
	1	MCP	Supplimental Circuit Breaker,3A	SQ'D	HD Supply	9080GCB30	
	61	MCP	Terminal Block	SQ'D	HD Supply	NSYTRV42	
	7	MCP	Terminal Block End Barrier	SQ'D	HD Supply	NSYTRAC22	
	3	MCP	Ground Terminal Block	SQ'D	HD Supply	NSYTRV42PE	
	7	MCP	2-Pole Jumper, Terminal Block	SQ'D	HD Supply	NSYTRAAL42	
	1	MCP	12 Lug Ground Bar Kit	SQ'D	HD Supply	PK12GTA	
	1	MCP	Door Switch, Enclosure	SQ'D	HD Supply	9007-MS01S0200	
	1	MCP	24vdc Power Supply	Puls	Go Electronics	ML30.100	
	1	MCP	Relay, SPDT 120vac, w/Indicator	Omron	Master Electronics	G2R-1-SN-AC120(s)	
	9	MCP	Relay Base, 1-Pole	Omron	Master Electronics	P2RF-05-E	
	2	MCP	Battery, 12vdc, 7Ah	Transtronic	Transtronic	BAT12V7AH	
	1	MCP	UPS, 24vdc	Transtronic	Transtronic	BVUPS24	
	1	MCP	Surge Suppressor, 120vac, 3A	Critec	Omega Power Systems	TDF3A-120V	
	3	MCP	Surge Suppressor, Analog, 30vdc	Erico	Omega Power Systems	UTB30SP	
	1	MCP	Cell RouterOrbit ECR 4G XLTE US Verizon	G-E	BCI	ECR4G51NNNNS1D2USUNNN	
	1	MCP	SCADA Pack	Schneider Electric	BCI	TBUP334-EA55-AB00	
	1	PC	ClearSCADA Server, 5k Point, Support Units	CMI Schneider	CMI Schneider	TBUCSRV-5000PT	
	1	PC	ClearSCADA Server, 5k Point, Support Units	CMI Schneider	CMI Schneider	TBUCLIC-TRS01USB	
	1	PC	ClearSCADA, Annual Serv & Support	CMI Schneider	CMI Schneider	TBUCSUP-UNIT	
	1	MCP	Touch Screen, 6", Gray Scale, E-Net, USB	C-More	Automation Direct	EA7-S6M	
	1	MCP	Antenna, 800-2200 MHz, Stud Mnt., Wht,SMA	Mobile Mark, Inc.	Tessco	319920	
	8	MCP	Relay, SPDT 24vdc, w/Indicator	Omron	Newark	G2R-1-SND-DC24(s)	
	1	MCP	Unmanaged Switch, 5-Port, 10/100T	Moxa	BCI	EDS-205	
	3	PP	Relay, 120vac, 2-Pole	Omron	AA Electrical	G2R-2SN-AC120(s)	
	3	PP	Base, Relay, 2-Pole	Omron	AA Electrical	P2RF-08-E	
	1	PP	Fuse, 5x20mm, Fast-acting, 5A	Ferraz Shawmut	Anixter	GGM5	
	2	PP	Relay, Timer, M-unction, 120vac, 2-Pole	Manecraft	Newark	822TD10H-UNI	
	1	PP	Fuse Holder, 5x20mm, 1-Pole	SQ'D	Graybar	NSYTRV42SF5	
	1	PP	Fuse Holder, 600V, 2-Pole	SQ'D	Graybar	DFCC2V	
	2	PP	Fuse, Class CC, 600V, 1A	SQ'D	Graybar	ATDR1	

Time Delay Relays – Application Data

Definition:
Time Delay is defined as the controlled period between the functioning of two events. A Time Delay relay is a combination of an electromechanical output relay and a control circuit. The control circuit is comprised of solid state components and timing circuits that control operation of the relay and timing range. Typical time delay functions include On-Delay, Repeat cycle (starting off), Interval, Off-Delay, Retriggerable One Shot, Repeat cycle (starting on), Pulse Generator, One Shot, On/Off Delay, and Memory Latch. Each function is explained in the table below. Time delay relays have a broad choice of timing ranges from less than one second to many days. There are many choices of timing adjustments from calibrated external knobs, DIP switches, thumbwheel switches, or recessed potentiometer. The output contacts on the electromechanical output relay are direct wired to the output terminals. The contact load ratings are specified for each specific type of time delay relay.

Understanding the differences between all the functions available in time delay relays can sometimes be a daunting task. When designing circuits using time delay relays questions such as:

"What initiates a time delay relay?"

"Does the timing start with the application or release of voltage?"

"When does the output relay come on?"

must be asked.

Time delay relays are simply control relays with a time delay built in. Their purpose is to control an event based on time. The difference between relays and time delay relays is when the output contacts open & close: on a control relay, it happens when voltage is applied and removed from the coil; on time delay relays, the contacts will open or close before or after a pre-selected, timed interval.

Typically, time delay relays are initiated or triggered by one of two methods:
- application of input voltage (On Delay, Interval On, Flasher, Repeat Cycle, Delayed Interval & Interval/Flasher).
- opening or closing of a trigger signal (Off Delay, Single Shot & Watchdog).

These trigger signals can be one of two designs:
- a control switch (dry contact), i.e., limit switch, push button, float switch, etc.
- voltage (commonly known as a power trigger).

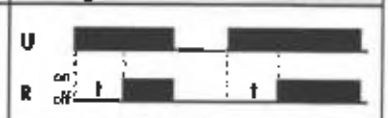
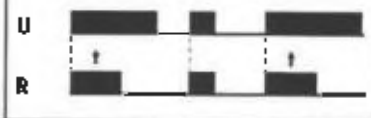
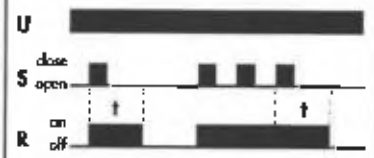
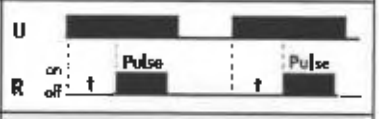
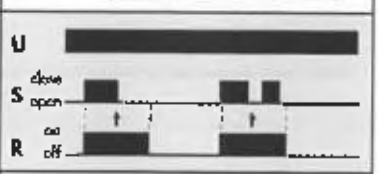
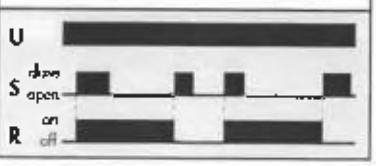
To help understand, some definitions are important:
Input Voltage: Control voltage applied to the input terminals (see wiring diagrams below). Depending on the function, input voltage will either initiate the unit or make it ready to initiate when a trigger signal is applied.

Trigger Signal: On certain timing functions, a trigger signal is used to initiate the unit after input voltage has been applied. As noted above, this trigger signal can either be a control switch (dry contact switch) or a power trigger (voltage).

Output (Load): Every time delay relay has an internal relay (usually mechanical) with contacts that open & close to control the load. They are represented by the dotted lines in the wiring diagrams. Note that the user must provide the voltage to power the load being switched by the output contacts of the time delay relay.

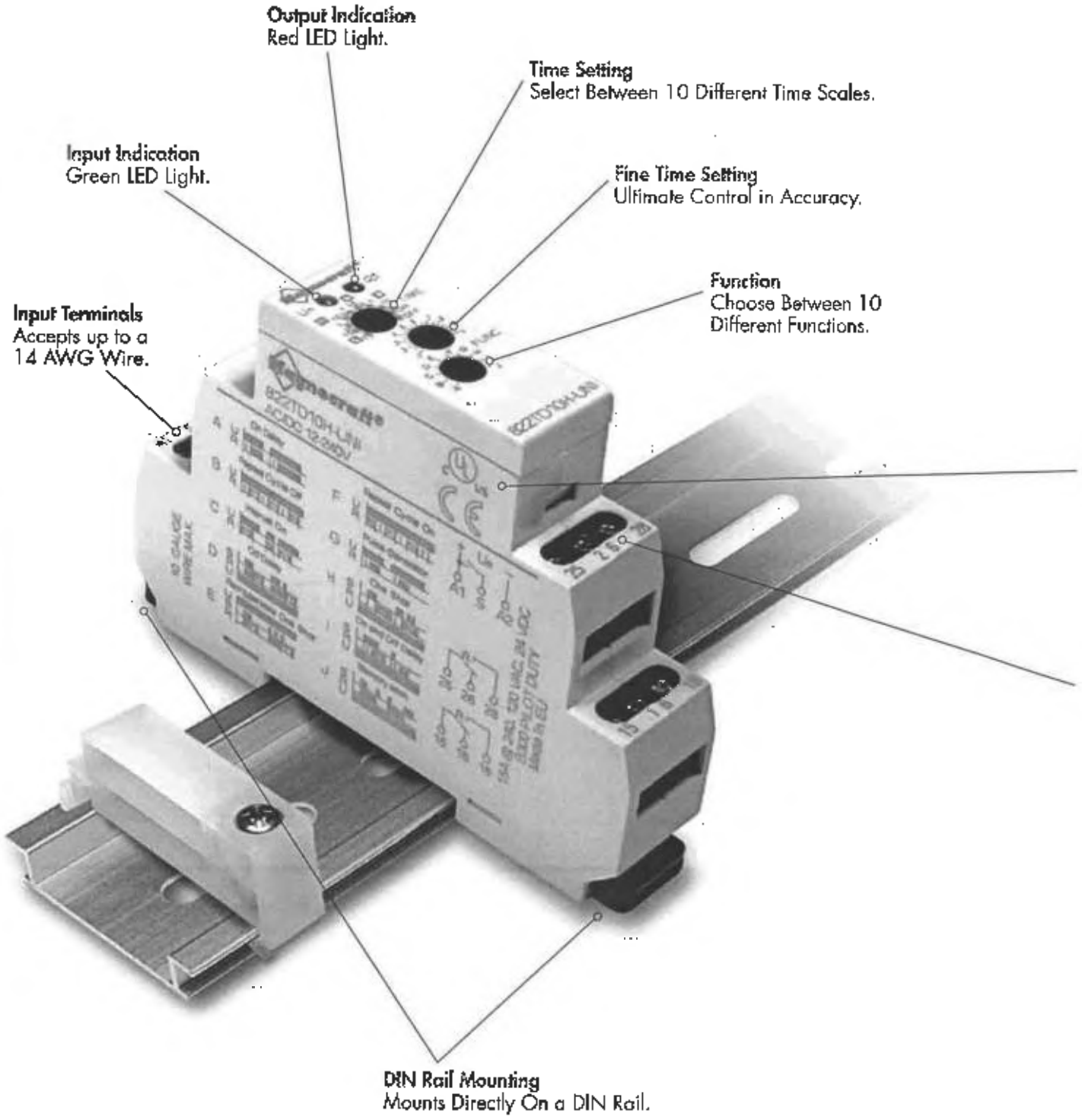
The following tables contain both written and visual descriptions on how the common timing functions operate. A Timing Chart shows the relationship between Input Voltage, Trigger Signal (if present) and Output Contacts.

FUNCTION DEFINITION TABLE

Function	Operation	Timing Chart
A. **ON DELAY** Power On	When the input voltage **U** is applied, timing delay **t** begins. Relay contacts **R** change state after time delay is complete. Contacts **R** return to their shelf state when input voltage **U** is removed. Trigger switch is not used in this function.	
B. **REPEAT CYCLE** Starting Off	When input voltage **U** is applied, time delay **t** begins. When time delay **t** is complete, relay contacts **R** change state for time delay **t**. This cycle will repeat until input voltage **U** is removed. Trigger switch is not used in this function.	
C. **INTERVAL** Power On	When input voltage **U** is applied, relay contacts **R** change state immediately and timing cycle begins. When time delay is complete, contacts return to shelf state. When input voltage **U** is removed, contacts will also return to their shelf state. Trigger switch is not used in this function.	
D. **OFF DELAY** S Break	Input voltage **U** must be applied continuously. When trigger switch **S** is closed, relay contacts **R** change state. When trigger switch **S** is opened, delay **t** begins. When delay **t** is complete, contacts **R** return to their shelf state. If trigger switch **S** is closed before time delay **t** is complete, then time is reset. When trigger switch **S** is opened, the delay begins again, and relay contacts **R** remain in their energized state. If input voltage **U** is removed, relay contacts **R** return to their shelf state.	
E. **RETRIGGERABLE ONE SHOT**	Upon application of input voltage **U**, the relay is ready to accept trigger signal **S**. Upon application of the trigger signal **S**, the relay contacts **R** transfer and the preset time **t** begins. At the end of the preset time **t**, the relay contacts **R** return to their normal condition unless the trigger switch **S** is opened and closed prior to time out **t** (before preset time elapses). Continuous cycling of the trigger switch **S** at a rate faster than the preset time will cause the relay contacts **R** to remain closed. If input voltage **U** is removed, relay contacts **R** return to their shelf state.	
F. **REPEAT CYCLE** Starting On	When input voltage **U** is applied, relay contacts **R** change state immediately and time delay **t** begins. When time delay **t** is complete, contacts return to their shelf state for time delay **t**. This cycle will repeat until input voltage **U** is removed. Trigger switch is not used in this function.	
G. **PULSE GENERATOR**	Upon application of input voltage **U**, a single output pulse of 0.5 seconds is delivered to relay after time delay **t**. Power must be removed and reapplied to repeat pulse. Trigger switch is not used in this function.	
H. **ONE SHOT**	Upon application of input voltage **U**, the relay is ready to accept trigger signal **S**. Upon application of the trigger signal **S**, the relay contacts **R** transfer and the preset time **t** begins. During time-out, the trigger signal **S** is ignored. The relay resets by applying the trigger switch **S** when the relay is not energized.	
I. **ON/OFF DELAY** S Make/Break	Input voltage **U** must be applied continuously. When trigger switch **S** is closed, time delay **t** begins. When time delay **t** is complete, relay contacts **R** change state and remain transferred until trigger switch **S** is opened. If input voltage **U** is removed, relay contacts **R** return to their shelf state.	
J. **MEMORY LATCH** S Make	Input voltage **U** must be applied continuously. Output changes state with every trigger switch **S** closure. If input voltage **U** is removed, relay contacts **R** return to their shelf state.	

U = Input Voltage **S** = Trigger Switch **R** = Relay Contacts **t** = Time Delay

Advantages of the 820 Series Time Delay Relays



The new 820 Series Time Delay Relays are DIN rail mountable products offering 10 different timing functions, 2 status LEDs, ultra-wide timing range (0.1 sec to 10 days) and a universal voltage input (12-240 VAC/VDC) all in one modular package.

The 821 is available as a 15 amp SPDT timer while its counterpart 822 is available as a DPDT timer also capable of switching up to 15 amps per pole.

Solid State Circuitry
Used for Time and function Control.

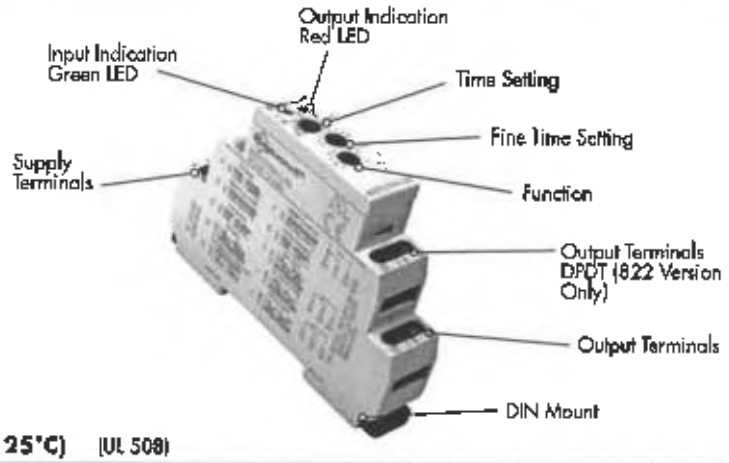
Output Terminals
Accepts up to a 14 AWG Wire.

- **Offers a "one stop solution" for your power management system.**
- **Available in both SPDT and DPDT contact configuration.**
- **The two LED status indicators indicate status at a glance.**
- **The Green LED is on when power is applied to the input terminals. The Red LED blinks during time-out, and is ON when the output is energized.**
- **Color and appearance designed for high visibility in all environments.**
- **Only 17.5 mm wide making it ideal for tight spaces.**
- **Engineering availability allows for customized relay solutions.**



Optional Panel Adapter
(16-788C1)
See Section 3 p.18

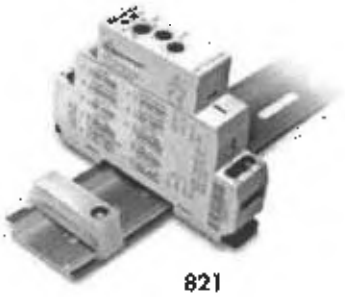
820 Series Time Delay Relays/SPDT, DPDT 15 Amp Rating



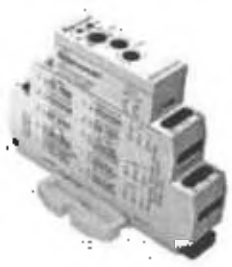
General Specifications (@ 25°C) (UL 508)

Output Characteristics			Units	821TD10H-UNI	822TD10H-UNI
Number and type of Contacts				SPDT	DPDT
Contact Material				Silver Alloy	Silver Alloy
Current rating	@ 240 VAC, 24 VDC		A	15	15
Switching voltage			V	240 AC, 50/60 Hz	240 AC, 50/60 Hz
			V	24 DC	24 DC
			HP	1/2 @ 120VAC	1/2 @ 120VAC
			HP	1 @ 240 VAC	1 @ 240 VAC
			Pilot Duty	B300	B300
Minimum Switching Requirement			mA	100	100
Indication	LED		Blinks = Timing On = Energized	Red	Red
Input Characteristics					
Voltage Range			VAC / VDC	12...240	12...240
Operating Range	% of Nominal			85% to 110%	85% to 110%
Maximum consumption		AC	VA	3	3
		DC	W	1.7	1.7
Indication	LED			Green	Green
Timing Characteristics					
Functions Available	*(See page 5/3)*			A,B,C,D,E,F,G,H,J	A,B,C,D,E,F,G,H,J
Time Scales				10	10
Time Ranges Available			sec	0.1....1 1....10	0.1....1 1....10
			min	0.1....1 1....10	0.1....1 1....10
			hr	0.1....1 1....10	0.1....1 1....10
			day	0.1....1 1....10	0.1....1 1....10
Tolerance	Mechanical Setting		%	5	5
Repeatability	Constant Voltage and Temperature		%	0.2	0.2
Reset Time	Maximum		ms	150	150
Trigger Pulse Length	Minimum		ms	50	50
Performance Characteristics					
Electrical Life	Operations @ Rated Current (Resistive)			100,000	100,000
Mechanical Life	Unpowered			10,000,000	10,000,000
Dielectric strength	Input to Contacts		V	2500 AC	2500 AC
	Between Open Contacts		V	1000 AC	1000 AC
Terminal Wire Capacity			AWG (mm2)	14 (2.1)	14 (2.1)
Terminal Torque (maximum)			in lb (Nm)	7.1 (0.8)	7.1 (0.8)
Environment					
Product certifications	Standard version			UL, CE	UL, CE
Ambient air temperature	Storage		°C	-30...+70	-30...+70
around the device	Operation		°C	-20...+55	-20...+55
Degree of protection				IP 20	IP 20
Weight			grams	65	65

SECTION 5



821



822

Optional Panel Adapter
[16-788C1]
See Section 3 p.18

Standard Part Numbers

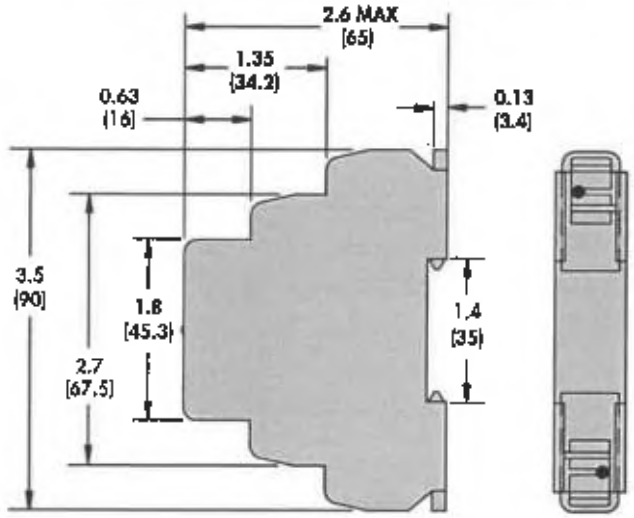
BOLD-FACED PART NUMBERS ARE NORMALLY STOCKED

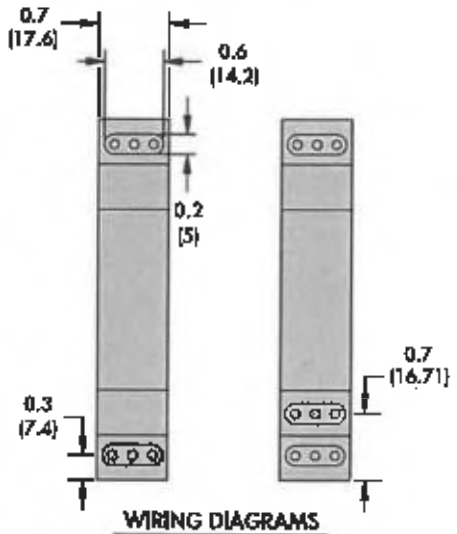
Part Number	Input Voltage	Timing Range	Functions Available	Contact Configuration	Rated Load Current
821TD10H-UNI	12...240 VAC/VDC	0.1s...10d	A,B,C,D,E,F,G,H,I,J	SPDT	15 Amps
822TD10H-UNI	12...240 VAC/VDC	0.1s...10d	A,B,C,D,E,F,G,H,I,J	DPDT	15 Amps

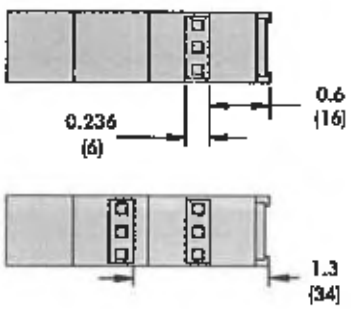
FUNCTION DEFINITIONS
See Section 5 p.3

Part Number Builder

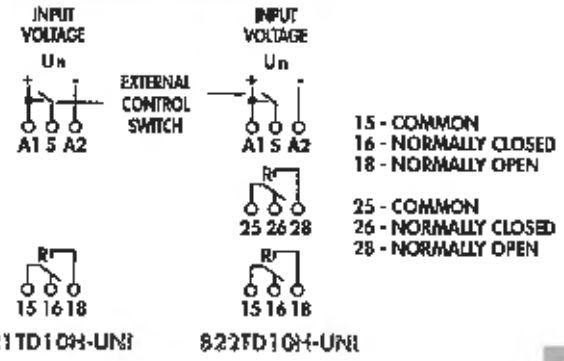
Series	Relay Style	Number of Functions	-	Input Voltage
821 = SPDT	TD - Time Delay	10H = 10 Functions		UNI = 12...240 VAC/VDC
822 = DPDT				







WIRING DIAGRAMS



821TD10H-UNI 822TD10H-UNI

Product data sheet
Characteristics

9007MS01S0200
9007MS limit switch - top push plunger - 6' bottom cable



Main

Range of product	9007
Series name	Miniature potted
Product or component type	Limit switch
Device short name	9007MS/ML
Sensor design	Miniature
Body type	Fixed
Head type	Plunger head
Material	Metal
Body material	Cast zinc
Number of poles	1

Complementary

Fixing mode	By the body
Movement of operating head	Linear
Type of operator	Spring return plunger stainless steel (-)
Type of approach	Vertical approach 1 direction
Switch actuation	On end
Contacts type and composition	NC-NO
Switch function	SPDT
Contact form	Form C
Contacts material	Silver contacts
Contacts operation	Snap action
Positive opening	Without
Electrical connection	Pre-wired cable bottom
Type of cable	SJTO cable (AWG: 18), 6 ft, yellow
Terminals description ISO n°1	(Green-yellow)Gnd (Black)Com (White)NO (Red)NC
Wire insulation material	PVC
Maximum force for tripping	80 ozf
[Ie] rated operational current	5 A at 28 V DC 3 A at 240 V AC, A300 conforming to NEMA rating designation 6 A at 120 V AC, A300 conforming to NEMA rating designation
[Ithe] conventional enclosed thermal current	10 A
[Ui] rated insulation voltage	300 V degree of pollution 3 conforming to CSA C22.2 No 14 300 V degree of pollution 3 conforming to UL 508
Electrical durability	100000 cycles
Mechanical durability	10000000 cycles
Marking	CE CSA UL
Sale per Indivisible quantity	1
Height	1.75 in
Width	1.56 in
Depth	0.62 in
Product weight	1.2 lb(US)

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein.
This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications.
It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof.
Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Environment

Shock resistance	35 gn (duration = 9 ms) conforming to IEC 60068-2-27
Vibration resistance	10 gn (f = 75...1200 Hz) conforming to IEC 60068-2-6
NEMA degree of protection	NEMA 6P conforming to Nema type 250 NEMA 6 conforming to Nema type 250 NEMA 4 conforming to Nema type 250 NEMA 2 conforming to Nema type 250 NEMA 1 conforming to Nema type 250
IP degree of protection	IP67 conforming to IEC 60529
Ambient air temperature for operation	-40...220 °F
Ambient air temperature for storage	-40...220 °F
Protective treatment	Epoxy powder coat
Product certifications	CE CSA UL
Standards	LR 25490 Class 32 11 03 E78403

Offer Sustainability

Sustainable offer status	Green Premium product
RoHS	Compliant - since 1150 - chneider Electric declaration of conformity
Product environmental profile	**Available** ownload Product Environmental
Product end of life instructions	Need no specific recycling operations

Thermal-Magnetic Circuit Protectors
Protectores de circuitos termomagnéticos
Protections de circuits thermomagnétiques

Class Clase Classe	Type Tipo Type	Series Serie Série
9080	GCB	C



INTRODUCTION

The Class 9080 Type GCB Series C thermal-magnetic circuit protector is a trip-free, track-mountable device with current ratings from 0.1 to 15 amperes. The following pages describe the product specifications and give instructions for mounting and removal.

TECHNICAL DATA

Tables 1 through 5 list the physical and electrical characteristics of the circuit protectors.

Table 1: General Characteristics

Weight	2.2 oz. (62.4 g)
Types of terminals	Box lug, screw terminals, UL and CSA field-approved
Recommended tightening torque	8 to 10 lb-in (0.8 - 1.1 N•m)
Approvals	CSA certified (File LR 25490)
	CE
	NOM
	UL component recognized (File E152841) 0.05–8 amps @ 250 V AC 65 V DC 9 – 15 amps @125 V AC 65 V DC

Table 2: Electrical Characteristics

Maximum voltage rating	250 V AC 65 V DC
Maximum interrupting capacity	200 A
Dielectric strength	1500 V AC
Insulation resistance	100 MΩ

1. Not exceeding 10,000% of rated current.

INTRODUCCION

El protector de circuitos termomagnético clase 9080 tipo GCB serie C es un dispositivo de disparo libre que se monta en un riel con valores nominales de corriente de 0,1 a 15 A. Las siguientes páginas contienen las especificaciones del producto así como las instrucciones para su montaje y desmontaje.

DATOS TECNICOS

Las tablas 1 a 5 presentan las características físicas y eléctricas de los protectores de circuitos.

Tabla 1: Características generales

Peso	62,4 g (2,2 oz.)
Tipos de terminales	Zapata tipo caja, terminales tipo tornillo, aprobadas por UL y CSA para uso en campo.
Par de apriete recomendado	0,9 a 1,1 N•m (8 a 10 lb-pulg)
Aprobaciones	Certificados por CSA (archivo LR 25490)
	CE
	NOM
	Componente reconocido por UL (archivo E152841) 0,05 – 8 A a 250 V ~ (ca) 65 V — (cd) 9 – 15 A a 125 V~ (ca) 65 V — (cd)

Tabla 2: Características eléctricas

Valor nominal máximo de tensión	250 V~ (ca) 65 V — (cd)
Valor nominal máximo de interrupción	200 A
Resistencia dieléctrica	1500 V~(ca)
Resistencia de aislamiento	100 MΩ

1. Sin exceder 10 000% de la corriente nominal.

INTRODUCTION

La protection de circuits thermomagnétiques, classe 9080, type GCB série C, est un dispositif à déclenchement libre, qui se monte sur rail, avec des valeurs nominales de courant allant de 0,1 à 15 A. Les pages suivantes décrivent les caractéristiques du produit et donnent les directives de montage et démontage.

CARACTÉRISTIQUES TECHNIQUES

Les tableaux 1 à 5 indiquent les caractéristiques physiques et électriques des protections de circuits.

Tableau 1 : Caractéristiques générales

Poids	62,4 g (2,2 onces)
Types de bornes	Borne carré, bornes à vis, homologuées par UL et CSA pour usage sur place
Couple de serrage recommandé	0,9 à 1,1 N•m (8 à 10 lb-po)
Approbations	Homologué CSA (fichier LR 25490)
	CE
	NOM
	Composant reconnu par UL (fichier E152841) 0,05 à 8 A à 250 VCA 65 VCC 9 à 15 A à 125 VCA 65 VCC

Tableau 2 :Caractéristiques électriques

Tension nominale maximale	250 VCA 65 VCC
Capacité maximale d'interruption	200 A
Rigidité diélectrique	1 500 VCA
Résistance d'isolement	100 MΩ

1. Ne dépassant pas 10 000% du courant nominal.

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Table / Tabla / Tableau 3 : Current Versus Resistance / Corriente/resistencia / Courant par rapport à la résistance

Standard Current (A) / Corriente estándar (A) / Courant standard (A)	Internal Resistance (Ω) / Resistencia interna (Ω) / Résistance interne (Ω)
0.10 (0,10)	133
0.50 (0,50)	6.6 (6,6)
0.80 (0,80)	2.55 (2,55)
1.00 (1,00)	1.97 (1,97)
1.20 (1,20)	1.27 (1,27)
1.50 (1,50)	0.88 (0,26)
2.00 (2,00)	0.49 (0,49)
2.50 (2,50)	0.313 (0,313)
3.00 (3,00)	0.205 (0,205)
4.00 (4,00)	0.104 (0,104)
5.00 (5,00)	0.082 (0,082)
7.00 (7,00)	0.034 (0,034)
10.00 (10,00)	< 0.02 (0,02)
15.00 (15,00)	< 0.02 (0,02)

Table / Tabla / Tableau 4 : Tripping Times at 70 °F (21 °C) / Tiempos de disparo a 21°C (70°F) / Temps de déclenchement à 21 °C (70 °F)

Rated Current / Corriente nominal / Courant nominal	Tripping Time (seconds) / Tiempo de disparo (en segundos) / Temps de déclenchement (secondes)
100%	No trip[1] / Sin disparo[1] / Sans déclenchement[1]
200%	7 - 60
300%	2 - 15
400%	0.9 - 7.5 (0,9 - 7,5)
500%	0.5 - 5.0 (0,5 - 5,0)
600%	0.2 - 3.7 (0,2 - 3,7)
1000%	0.003 - 1.5 (0,003 - 1,5)
≥ 2000%	.01 maximum (0,01 máximo / 0,01 maximum)

1. When several breakers are channel-mounted adjacent to each other, the "no trip" current will be 80% of rated current at 70 °F. / Cuando se montan varios interruptores automáticos en canal, adyacentes uno con el otro, la corriente "sin disparo" será el 80% de la corriente nominal a 21°C (70°F). / Lorsque plusieurs disjoncteurs sont montés sur rail de façon contiguë, le courant « sans déclenchement » est de 80 % du courant nominal à 21 °C (70 °F).

Table / Tabla / Tableau 5 : Current Rating Factors / Factores del valor nominal de corriente / Facteurs de courant nominal

Temperature / Temperatura / Température		Factor / Factor / Facteur
°F	°C	
100	37.8 (37,8)	1.1 (1,1)
120	48.9 (48,9)	1.2 (1,2)
140	60	1.3 (1,3)
160	71.1 (71,1)	1.4 (1,4)
180	82.2 (82,2)	1.5 (1,5)
200	93.3 (93,3)	1.6 (1,6)

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For each elevated ambient temperature, you can find the proper current rating of the circuit protector by multiplying the actual full load current with the appropriate factor listed in Table 5. Select the closest higher amp rating.

MOUNTING AND REMOVAL

To attach the circuit protector assembly to the mounting track, hook either leg of the adaptor beneath one side of track and snap adaptor onto the other side of the track (see Figure 1).

Para cada grado de elevación de temperatura podrá encontrar la corriente nominal adecuada del protector de circuitos, multiplicando la corriente de plena carga real por el factor apropiado que se indica en la tabla 5. Seleccione el valor nominal en amperes superior más cercano.

MONTAJE Y DESMONTAJE

Para instalar el ensamble del protector de circuitos en el riel de montaje, enganche cualquiera de las bases del adaptador debajo de un lado del riel y encaje el adaptador en el otro lado del riel (vea la figura 1).

Pour chaque élévation de température ambiante, il est possible de trouver le courant nominal approprié du dispositif de protection de circuits, en multipliant le courant de pleine charge réel par le facteur approprié indiqué au tableau 5. Sélectionner l'intensité nominale supérieure la plus proche.

MONTAGE ET DÉMONTAGE

Pour fixer l'assemblage de protection de circuits au rail de montage, accrocher n'importe quelle base de l'adaptateur sous un côté du rail et engager l'adaptateur sur l'autre côté (voir la figure 1).

⚠ DANGER / PELIGRO / DANGER

HAZARDOUS VOLTAGE

Turn off all power supplying this equipment before working on it.

Electric shock will result in death or serious injury.

TENSION PELIGROSA

Desenergice el equipo antes de realizarle servicio.

Una descarga elétrica podrá causar la muerte o lesiones serias.

TENSION DANGEREUSE

Coupez l'alimentation avant de travailler sur cet appareil.

Une électrocution entrainera la mort ou des blessures graves.

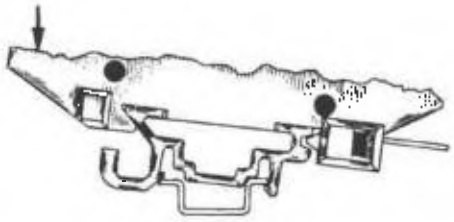


Figure / Figura / Figure 1 : Mounted Circuit Protector / Protector de circuitos montado / Montage de la protection de circuits

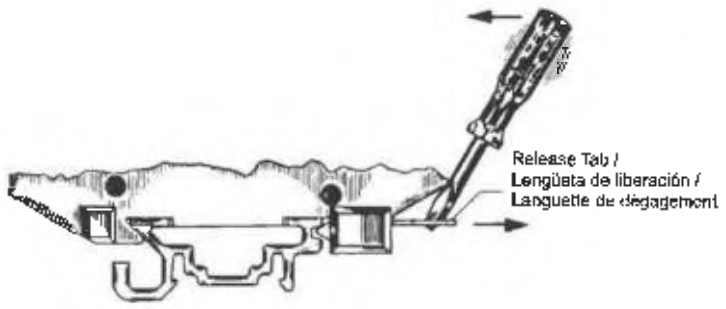


Figure / Figura / Figure 2 : Removing the Circuit Protector / Desmontaje del protector de circuitos / Démontage de la protection de circuits

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To remove the circuit protector from the adaptor, insert a screwdriver blade into the release-tab slot and pry the tab outward (see Figure 2).

To remove the adaptor from the mounting track, remove the circuit protector as described above, then insert a screwdriver blade behind the adaptor's release arm and pry the arm outward (see Figure 3).

Para desmontar el protector de circuitos del adaptador, inserte la punta de un desarmador en la ranura de la lengüeta de liberación y haga palanca para sacar la lengüeta hacia afuera (vea la figura 2).

Para desmontar el adaptador del riel de montaje, retire el protector de circuitos como se describe a continuación, luego inserte la punta de un desarmador detrás del brazo de liberación del adaptador y haga palanca para sacar el brazo hacia afuera (vea la figura 3).

Pour démonter la protection de circuits de l'adaptateur, insérer la lame d'un tournevis dans la fente de la languette de dégagement et forcer sur la languette vers l'extérieur (voir la figure 2).

Pour démonter l'adaptateur du rail de montage, retirer la protection de circuits comme décrit ci-dessus, puis insérer la lame d'un tournevis derrière le bras de dégagement de l'adaptateur pour le sortir vers l'extérieur (voir la figure 3).

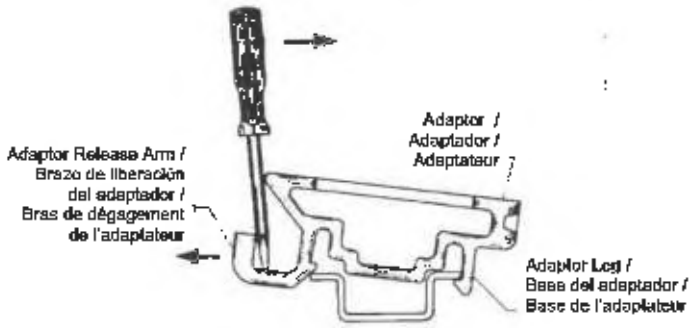


Figure / Figura / Figure 3 : Removing the Adaptor / Desmontaje del adaptador / Démontage de l'adaptateur

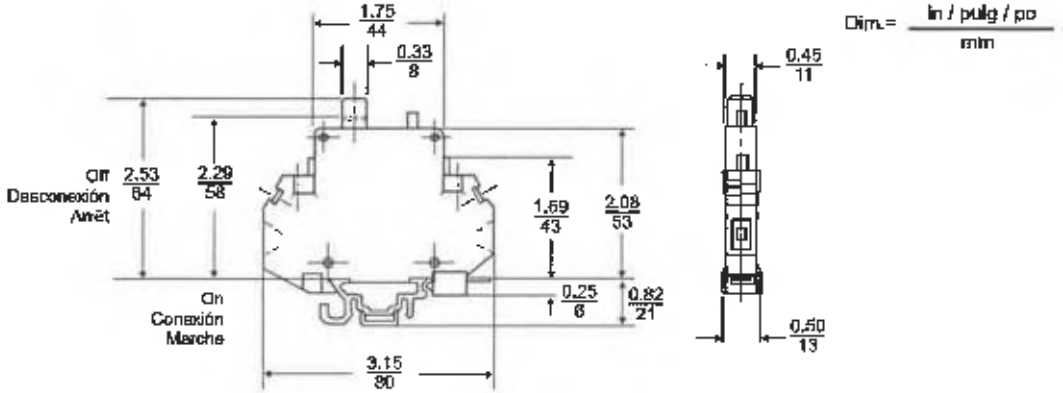


Figure / Figura / Figure 4 : Circuit Protector Dimensions / Dimensiones del protector de circuitos / Dimensions du dispositif de protection de circuits

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ATDR

TIME DELAY/CLASS CC



THE BEST PROTECTION FOR TODAY'S SMALL MOTORS.

Amp-trap 2000® ATDR small-dimension fuses can provide IEC Type 2 "no damage" protection to your facility's increasingly sensitive branch circuit components and small motors – minimizing the risk of fault-related damage. ATDR Class CC fuses deliver the best time delay characteristics in their class with excellent cycling ability for small motor loads.

A

Features/Benefits

- **Time delay** for motor starting inrush currents without nuisance opening
- **Highly current limiting** for low peak let-thru current
- **Improved cycling ability** for frequent motor starts/stops without nuisance fuse opening
- **Rejection-style design** prevents replacement errors (when used with recommended fuse blocks)
- **High-visibility orange label** ensures instant recognition, simplifies replacement
- **Metal-embossed date and catalog number** for traceability and lasting identification
- **Fiberglass body** provides dimensional stability in harsh industrial settings
- **High-grade silica filler** ensures fast arc quenching and optimum current limitation

HIGHLIGHTS:

- Time Delay
- Best Choice for Small Motor Protection
- Highly Current-Limiting
- AC & DC Rated

APPLICATIONS:

- Small Motors
- Contactors
- Lighting, Heating & General Loads
- Branch Circuit Protector

Ratings

- **AC:** 1/4 to 30A 600VAC, 200kA I.R.
- **DC:** 1/4 to 30A 300VDC, 100kA I.R.

Approvals

- UL Listed to Standard 248-4 File 2137
- CSA Certified to Standard C22.2 No. 248.4
- DC Listed to UL Standard 248

Ferraz Shawmut

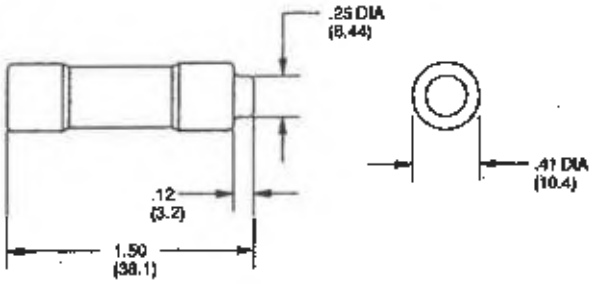
TIME DELAY/CLASS CC FUSES

ATDR

Standard Fuse Ampere Ratings, Catalog Numbers

AMPERE RATING	CATALOG NUMBER	AMPERE RATING	CATALOG NUMBER	AMPERE RATING	CATALOG NUMBER	AMPERE RATING	CATALOG NUMBER	AMPERE RATING	CATALOG NUMBER
1/4	ATDR1/4	1-1/2	ATDR1-1/2	3	ATDR3	6	ATDR6	12	ATDR12
1/2	ATDR1/2	1-6/10	ATDR1-6/10	3-2/10	ATDR3-2/10	6-1/4	ATDR6-1/4	15	ATDR15
8/10	ATDR8/10	1-8/10	ATDR1-8/10	3-1/2	ATDR3-1/2	7	ATDR7	17-1/2	ATDR17-1/2
1	ATDR1	2	ATDR2	4	ATDR4	7-1/2	ATDR7-1/2	20	ATDR20
1-1/8	ATDR1-1/8	2-1/4	ATDR2-1/4	4-1/2	ATDR4-1/2	8	ATDR8	25	ATDR25
1-1/4	ATDR1-1/4	2-1/2	ATDR2-1/2	5	ATDR5	9	ATDR9	30	ATDR30
1-4/10	ATDR1-4/10	2-8/10	ATDR2-8/10	5-6/10	ATDR5-6/10	10	ATDR10		

Dimensions



Small Motor Fuse Protection, 600 Volts AC or Less

MOTOR FULL LOAD AMPERES	ATDR RATING*	
	MINIMUM DUTY	NORMAL DUTY
.71 - .89	1-1/4	1-6/10
.90 - 1.19	1-6/10	2
1.20 - 1.34	2	2-1/2
1.35 - 1.79	2-1/2	3
1.80 - 2.25	3	4
2.26 - 2.69	4	5
2.70 - 2.90	4	6
2.91 - 3.20	5	6
3.21 - 3.75	5	7
3.76 - 4.50	6	8
4.51 - 5.34	8	10
5.35 - 5.69	10	12
5.70 - 6.70	12	12
6.71 - 7.79	12	15
7.80 - 8.88	15	17-1/2
8.89 - 11.1	17-1/2	20
11.2 - 13.3	20	25
13.4 - 15.2	25	30

* The National Electrical Code allows time-delay Class CC fuses to be sized at up to 400% (maximum) of motor FLA, if needed.

Recommended Fuse Blocks for Class CC Fuses

Number of Poles	CATALOG NUMBER			
	ULTRASAFE™ Indicating Fuse Holder	Screw Connector w/ Double Quick Connects	Pressure Plate Connector w/ Double Quick Connects	Copper Box Connector
ADDER		30320R	30320R	30350R
1	USCC1I	30321R	30321R	30351R
2	USCC2I	30322R	30322R	30352R
3	USCC3I	30323R	30323R	30353R

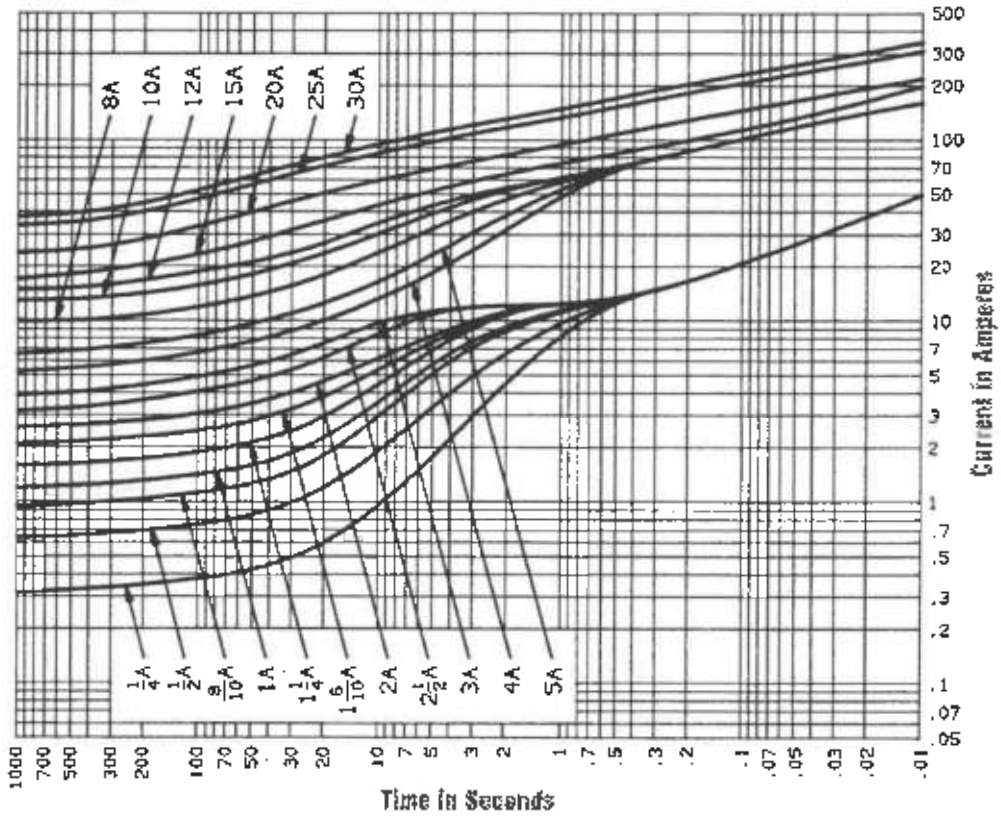
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TIME DELAY/CLASS CC FUSES

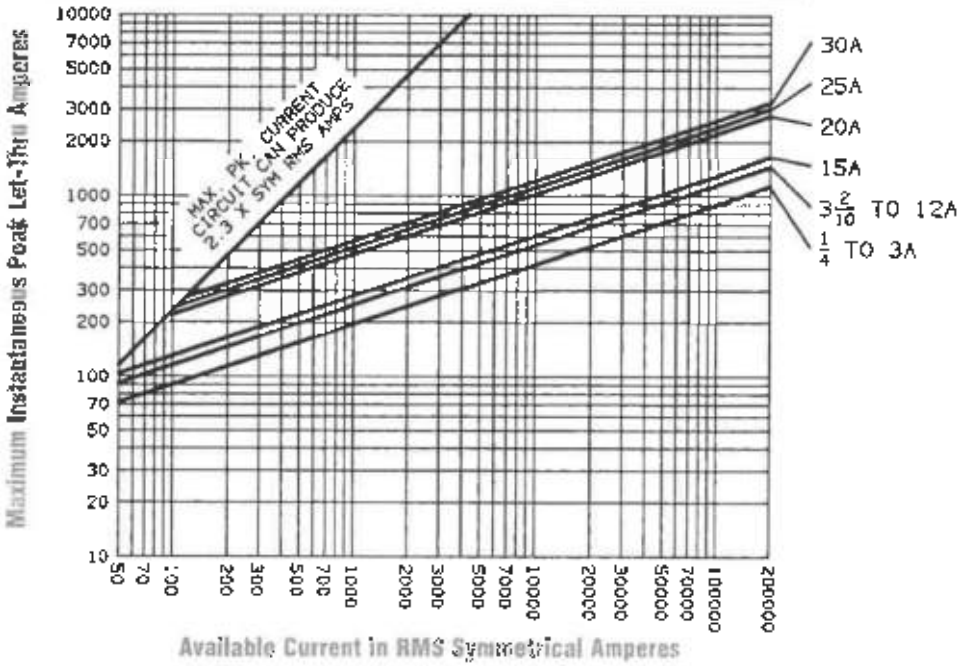
A

ATDR1/4 to 30

Melting Time – Current Data, 600V Fuses



Peak Let-Thru Current Data – ATDR1/4 to 30, 600 Volts AC



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Current Detectors
Toshiba PLCs
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EPROM Emulator
Optivisor
Humidity-Temp logger
Tower-Lighting Alarm Monitor
Floobydust
Information

BAT12V7AH
New
Model: NP712
Brand: Transtronics

Product Link:
BAT12V7AH

USD$23.95

Add to Cart

BAT12V7AH 12V 7AH gel cell Yuasa NP7-12



Click to enlarge

- Nominal voltage 12Vdc
- Dimensions - Width 65 mm [2.56"], Depth 151mm[5.945"], Height 97.5mm[3.84"]
- Connectors - Faston Tab - width 4.75mm[.187"]
- Weight 2.65 kg
- float voltage 13.8Vdc
- Recommended discharge cutoff 10Vdc
- Expected float service life in standby - 5 years Temperature range -20°C [-4°F]to 60°C[140°F]

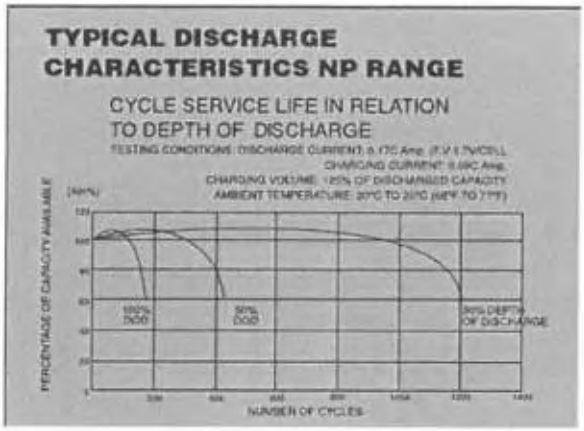
See our battery application manual .

*[] denotes legacy units

Full Data sheet at link below

Batteries are NC/NR

We don't sell stale batteries.



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Battery Voltage UPS - BVUPS

From Transwiki

Contents

- 1 Battery Voltage UPS
  - 1.1 Specifications
  - 1.2 Installation Notes
    - 1.2.1 -NO version only!
  - 1.3 Wiring diagram
  - 1.4 Best Practice Maintenance
  - 1.5 Step Rate module

Battery Voltage UPS

Specifications

Maximum ratings	
Input voltage	30 Vdc
Load current	10 amperes at 14 Vdc
Contact Ratings (battery and power fail)	Conservatively rated for 10 amps resistive at 240 Vac or 28 Vdc
Dielectric strength	1000 Vac, 60 Hz for one second
Physical	
Ambient Operating Temperature	0 C to 60 C
Octal Case Size	2.75 X 1.75 X 2.375 inches (excluding octal pins)
Electrical	
Protection	Diode protected for reverse and over voltage conditions
Power consumption	500 milliwatts MAX 24 mA @ 13.6 Vdc 17 mA @ 10.0 Vdc
Supplied voltage	10-14 (20-28) VDC (your equipment must be able to operate in these ranges. Most 12 volt equipment is designed to work from 9 to 15 V). We can supply Din Rail power-supplies capable of adjusting to these voltages. (https://secure.transtronics.com/Din_Rail_Power_Supply.html)
Drop out threshold	10 V +/-200 mV (20V +/-500 mV)
Drop out delay	10 seconds of continuous low voltage
Initial charge rate	1.5 A (Can be programmed to higher values with external charge rate module)
Power fail minimum current	400 mA (Special -10 125mA versions available)

Installation Notes

- BVUPS ordering information (https://secure.transtronics.com/DC_UPS_System.html)

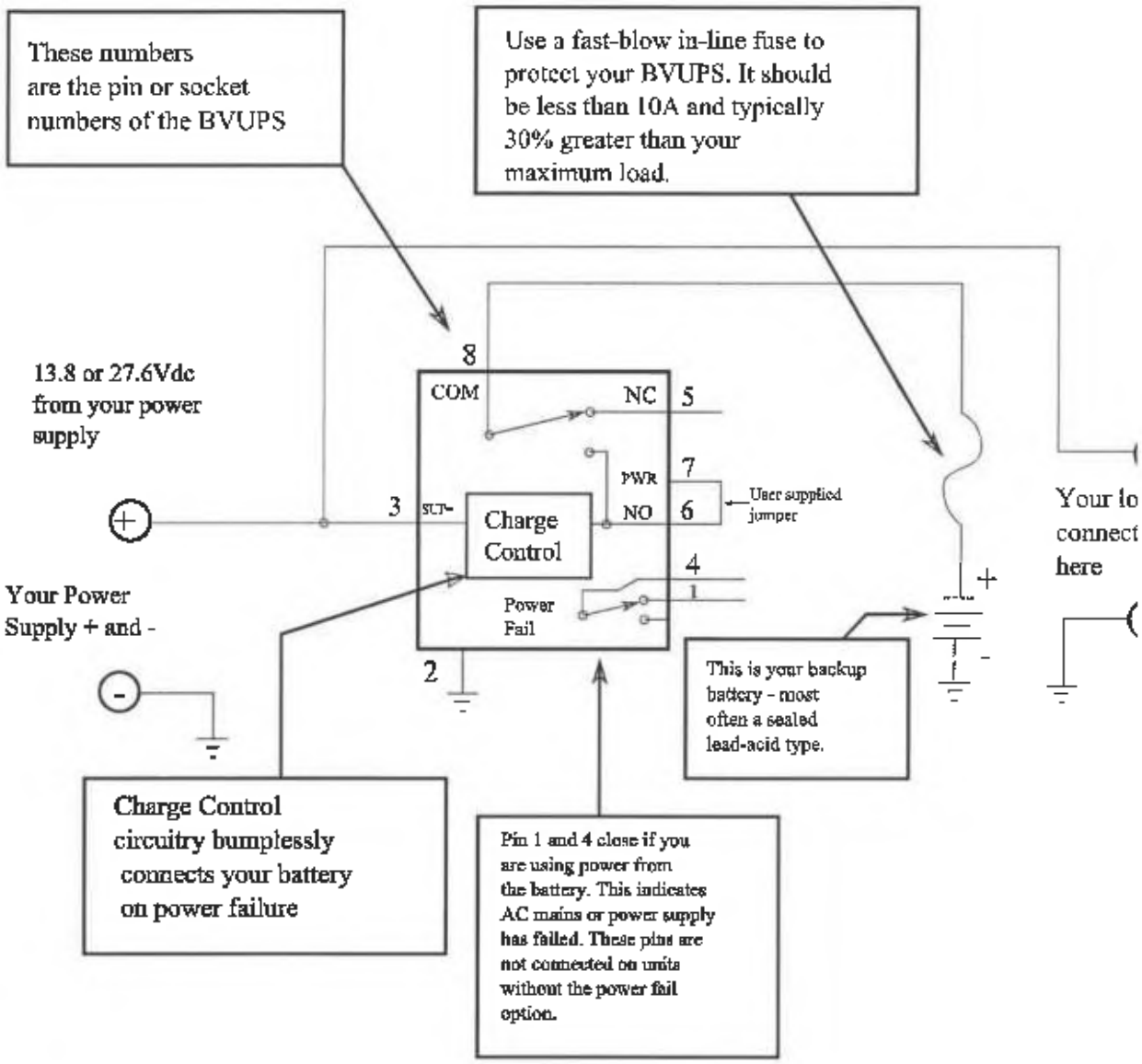
- Be sure to jumper pins 6 and 7
- The regulated power-supply you specify must be able to adjust to 13.8 or 27.6Vdc - AND must be adjusted accordingly.
- Power fail problems are often due to minimum load requirements. Measure your load - manufacturers specifications on loads are often padded worst case.
- Power fail operation(pins 1 and 4): During normal powered operation the contacts will be **OPEN**. When the unit goes on battery the contacts **CLOSE** and when the batteries run down and disconnect the contacts remain **Closed** . Make sure you understand that during "normal" operation the NC contacts will be open!
- A version (-NO suffix) is available with the power fail contacts reversed. The following refers to the -NO version only!:

-NO version only!

During normal powered operation the contacts will be closed. When the unit goes on battery the contacts open and when the batteries run down and disconnect the contacts remain open (NO (Normally Open) means that under no power the contacts are open). Make sure you understand that during "normal" operation the NO contacts will be closed! There is not an -NC version as that is the stock version.

For more information on lead acid battery applications see Sealed Lead Acid Battery Applications hand book

Wiring diagram



Best Practice Maintenance

Lead acid batteries used with the BVUPS are on float most of the time and should last about 4 years before losing appreciable capacity. Thus, we recommend the following steps for best practice.

- Put a In service date on your battery when you install it.
- Every 3 months and a day after any prolonged power outage (you may want a different scheduled depending on the importance of your application).
  - Put a meter across the power supply - check for 13.8Vdc (or 27.6Vdc) Adjust or replace as needed.
  - Put a meter across pins 3 and 8 - It should be less than 0.1V (100mv)(or 0.2V for 24V systems) of the voltage on the power supply. (This test is only valid if there has been no outage in the last 12 hours)
  - Pull the power - monitor the battery voltage for about 1 min. It should drop to about 12V(24V) and be steady, not dropping rapidly. Turn the power back on!
  - Check the battery date - Replace if older than 4 years. - See replacement Battery (https://secure.transtronics.com/BATT12V7AH.htm)

Step Rate module

For very large banks of batteries (over 50Ah) There is the STEP-RATE-MODULE (https://secure.transtronics.com/STEP-RATE-MODULE.htm) to provide higher charge rates for system with more than 50AH It provides two rates; An increased initial charge rate - it then Transitions to float rate at 13.1 or 26.9V with an increased float current.

Orange wire connects to pin 3 and the Blue wire to Pin 6 of the octal socket

Retrieved from "https://wiki.xtronics.com/index.php?title=Battery_Voltage_UPS_-_BVUPS&oldid=7424"

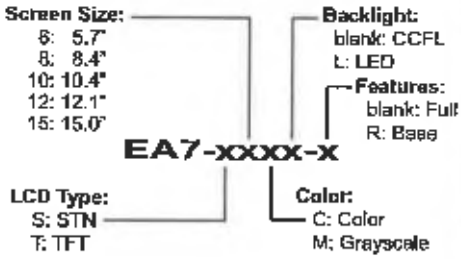
- This page was last modified on 28 April 2016, at 17:21.

Cellular Antenna
BOM #
Part #: 319920

Mobile Mark, Inc. **Broadband Screw Base Mount**	Mobile Mark, Inc. **Low Profile Wideband**	Mobile Mark, Inc. **Low Profile Wideband RF195**	PCTEL Maxrad **Mobile Low Profile Dual Band 902**	PCTEL Maxrad **Mobile Low Profile Wideband**
				
This rugged Broadband antenna is built from ABS UV resistant plastic for use in industrial applications. Gain is 3dBi peak. Can be installed on fiberglass or a plastic housings up to 1/4" thick. No ground plane is required. N Female Permanent Screw Base Mount.	The LMW Series stands out from the other Mobile Mark Surface Mount Antenna Series in that it is extremely broadbanded and covers worldwide cellular bands from 800-960 MHz and 1700-2200 MHz, including UMTS and AWS. It has excellent performance characteristics and performs well across the entire band.	The LMW Series stands out from the other Mobile Mark Surface Mount Antenna Series in that it is extremely broadbanded and covers worldwide cellular bands from 800-960 MHz and 1700-2200 MHz, including UMTS and AWS. It has excellent performance characteristics and performs well across the entire band.	The MLPVDB series has superior pattern coverage for mobile and fixed applications. The design provides broadband performance with minimum loss and no tuning. Efficient radiator design with rugged solid brass construction. Ground plane is required.	Low Profile Vertical PCS antennas provide superior pattern coverage. Patent pending design provides wideband performance (800 MHz) and reliability. Ground plane is required. Available in black or white.
750-2700 3 dBi / 5 dBi **10**	800-2200 Unity **20**	800-2200 Unity 20	902-928/2400-2500 3 dBi 150	1700-2700 2 150
3"H x 0 3/4" dia. ABS Plastic	3.5"D x 1.5"H ASA Plastic	3.5"D x 1.5"H ASA Plastic	2.4" Plastic Radome	1.6" Plastic Radome
Permanent Screw Base Mount N/A N/A	Stud mount RG58 15'	Stud mount RF195 15'	Order Motorola style mount separately N/A N/A	Order Motorola style mount separately N/A N/A
2 Years	2 Years	2 Years	2 Years	2 Years
349910 ea — 750-2700 | Black | N(F)-Installed |	**319920** ea — 800-2200 | White | SMA(M)-Installed | No	**389294** ea — 800-2200 | White | SMA(M)-Installed | No	**60717** — 902-928/2400-2500 | Black | No Connector Supplied | No	**51486** — 1700-2700 | Black | No Connector Supplied | No **62326** — 1700-2700 | White/ Chrome | No Connector Supplied | No
$69.90 0.445 lb. 0.20 kg.	$93.90 0.78 lb. 0.35 kg.	$109.20 0.77 lb. 0.35 kg.	$53.90 0.37 lb. 0.17 kg.	$45.65 0.2 lb. 0.09 kg.

C-more Operator Panels Overview

Touch Panel Part Number Key:



Getting started

Installing the software and configuring the C-more panel is simple. You will need the following to successfully connect and configure a project for the panel:

- ***C-more* touch panel - 6", 8", 10", 12" or 15" model**
- ***C-more* Programming Software, p/n EA-PGMSW**
- ***C-more* programming cable, USB or Ethernet**
- **24 VDC switching power supply (min. 1.5A, switching) or the optional *C-more* AC Power Adapter**
- **Personal Computer - to run *C-more* programming software**
- **PLC communications cable (serial or Ethernet) to connect the *C-more* Touch Panel to your controller**

Part Number	Description	Price
EA7-S6M-R	6-inch *C-more* grayscale STN touch panel (5.7 inch viewable screen), 16 shades of gray, 320 x 240 pixel QVGA screen resolution, 333 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable backlight, 50,000 hour half-life. *Base Model: Built-in USB, no Ethernet or Compact Flash support.	<-->
EA7-T6CL-R	6-inch *C-more* color TFT touch panel (5.7 inch viewable screen), 64K colors, 320 x 240 pixel QVGA screen resolution, 333 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable LED backlight, 50,000 hour half-life. Built-in USB, no Ethernet or Compact Flash support.	<-->
EA7-S6M	6-inch *C-more* grayscale STN touch panel (5.7 inch viewable screen), 16 shades of gray, 320 x 240 pixel QVGA screen resolution, 333 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable backlight, 50,000 hour half-life. Built-in Ethernet and USB; supports Compact Flash.	<-->
EA7-T6CL	6-inch *C-more* color TFT touch panel (5.7 inch viewable screen), 64K colors, 320 x 240 pixel QVGA screen resolution, 333 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), non-replaceable LED backlight, 50,000 hour half-life. Built-in Ethernet and USB; supports Compact Flash.	<-->
EA7-T8C	8-inch *C-more* color TFT touch panel (8.4 inch viewable screen), 64K colors, 640 x 480 pixel VGA screen resolution, 400 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), user-replaceable backlight, 50,000 hour half-life. Built-in Ethernet and USB; supports Compact Flash.	<-->
EA7-T10C	10-inch *C-more* color TFT touch panel (10.4 inch viewable screen), 64K colors, 640 x 480 pixel VGA screen resolution, 400 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), user replaceable backlight, 50,000 hour half-life. Built-in Ethernet and USB; supports Compact Flash.	<-->
EA7-T12C	12-inch *C-more* color TFT touch panel (12.1 inch viewable screen), 64K colors, 800 x 600 pixel SVGA screen resolution, 400 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), user replaceable backlight, 50,000 hour half-life. Built-in Ethernet and USB; supports CompactFlash.	<-->
EA7-T15C	15-inch *C-more* color TFT touch panel (15.0 inch viewable screen), 64K colors, 1024 x 768 XGA screen resolution, 400 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP65 (when mounted correctly; for indoor use only), user replaceable backlight, 50,000 hour half-life. Built-in Ethernet and USB; supports CompactFlash.	<-->
EA-PGMSW	*C-more* touch panel Windows-based configuration software. Requires Windows 2000 (Service Pack 4), XP Home or Professional (Service Pack 2) or Vista, includes software installation guide and CD-ROM. Requires USB 1.1 or Ethernet connection to touch panel. Cables sold separately.	<-->
USB-CBL-AB3	Standard 3-ft. (0.9m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any *C-more* touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<-->
USB-CBL-AB6	Standard 6-ft. (1.8m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any *C-more* touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<-->
USB-CBL-AB10	Standard 10-ft (3 meter) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any *C-more* touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<-->
USB-CBL-AB15	Standard 15-ft. (4.6m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any *C-more* touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<-->

C-more Selection Guide & Specifications

Specification \ Model	6" STN grayscale w/ base features	6" TFT color w/ base features	6" STN grayscale w/ full features	6" TFT color w/ full features
Part Number	EA7-S6M-R	EA7-T6CL-R	EA7-S6M	EA7-T6CL
				
Price	←→	←→	←→	←→
Display Actual Size and Type	5.7" STN grayscale	5.7" TFT color	5.7" STN grayscale	5.7" TFT color
Color Scale	15 shades of gray	65,536 colors	15 shades of gray	65,536 colors
Display Viewing Area	4.54" x 3.4" (115.2 mm x 86.4 mm)			
Screen Pixels	320 x 240 (QVGA)			
Display Brightness	150 cd/m² (NITS)	270 cd/m² (NITS)	150 cd/m² (NITS)	270 cd/m² (NITS)
LCD Panel Dot Pitch	0.36 mm x 0.36 mm			
Backlight Average Lifetime*	Approximately 50,000 hours			
Backlight User Replaceable	No			
Touch Panel Type	Analog Resistive (10-bit resolution, 1024 x 1024 touch area)			
CPU Type	32-Bit RISC CPU (333 MHz)			
Battery	Replaceable battery – ADC Part # D2-BAT-1 (Manufacturer Part # CR2354)			
System Memory	SDRAM 32 MBytes			
System Flash Memory	FLASH 32 MBytes			
Backup Memory (SRAM)	Control data backup memory (SRAM) 256 KBytes			
Logging Data Memory	USB Pen Drive p/n SDCZ4-2048-A10 (Optional)		CompactFlash Memory Card p/n EA-CF-CARD, industrial grade, high speed (Optional) or USB Pen Drive p/n SDCZ4-2048-A10 (Optional)	
Number of Screens	Up to 9999 with ver. 2.40 and later – limited by project memory (10 MBytes)			
Realtime Clock	Built into panel (PLC clock is still accessible if available)			
Calendar – Month/Day/Year	Yes - battery backup			
Screen Saver	Yes, backlight turns off after a 30–1500 minute adjustable time, or can be disabled			
Serial PLC Interface	Serial PLC Port: RS-232/422/485 15-Pin D-sub (female)			
USB Port – Type B	Download/Program – USB Port – type B (ver. 1.2)			
USB Port – Type A	Port for USB device options – type A (ver. 1.2)			
Ethernet Port	not available		Ethernet 10/100 Base-T	
Audio Line Out	not available		Audio Line Out, 1 Volt rms, stereo – requires amplifier and speaker(s)	
CF Card – Slot #1	not available		Optional: CompactFlash Memory Card p/n EA-CF-CARD, industrial grade, high speed. CF slot #1 located on top side of touch panel.	
Expansion Assembly (p/n EA-EXP-OPT)	not available		Optional: Use the CF Card Interface Module p/n EA-CF-IF in the right slot of the Expansion Assembly for installing CF card - Slot #2. The left slot of the Expansion Assembly is for future options.	
Supply Power	24 VDC, -15%, +20% (20.4–28.8 VDC oper. range) (Use AC Power Adapter, p/n EA-AC, to power panel from a 100-240 VAC, 50/60 Hz. power source.)			
Power Consumption	9W @ 24 VDC	9 W @ 24 VDC	10 W @ 24 VDC	11 W @ 24 VDC
Recommended Input Fuse	3.0 A IDC slow blow			
Operating Temperature	0 to 50 °C (32 to 122 °F); Maximum surrounding air temperature rating: 50 °C (122 °F)			
Storage Temperature	–20 to +60°C (–4 to +140°F)			
Humidity	10–85% RH, non-condensing			
Noise Immunity	Noise voltage: 1,000 Vp-p, Pulse width: 1 µs, Rise time: 1 ns			
Withstand Voltage	1,000 VDC for 1 minute, between DC power supply input terminal and safety ground			
Insulation Resistance	Over 20 MΩ between DC power supply input terminal and safety ground			
Vibration	IEC61131-2 compliant, 10–57 Hz 0.075 mm amplitude, 57–150 Hz 1.0 G; 10 sweep cycles per axis on each of 3 mutually perpendicular axes			
Shock	15 G peak, 11 ms duration, 2 shocks per axis, on 3 mutually perpendicular axes			
Enclosure	IP65 Meets UL Type 4X when mounted correctly. For indoor use only.			
Environment	For use in Pollution Degree 2 Environment			
Agency Approvals	UL, cUL, CE; UL file 157382			
Dimensions	6.140" x 8.047" x 1.697" (156.0 mm x 204.4 mm x 43.1 mm)			
Weight	0.46 lb. (650 g)	1.43 lb. (650 g)	1.50 lb. (680 g)	1.48 lb. (670 g)

** NOTE: The backlight average lifetime is defined as the average usage time it takes before the brightness becomes 50% of the initial brightness. The lifetime of the backlight depends on the ambient temperature. The lifetime will decrease under low or high temperature usage.*

C-more 6" STN Grayscale Touch Panel - Full Model

Part No. EA7-S6M

6-inch C-more grayscale STN touch panel (5.7 inch viewable screen), 15 shades of gray, 320 x 240 pixel QVGA screen resolution, 333 MHz CPU, 24 VDC (20.4-28.8 VDC operating range), NEMA 4/4X, IP-65 (when mounted correctly; for indoor use only), non-replaceable backlight, 50,000 hour half-life. Built-in Ethernet and USB; supports CompactFlash.



Features

- 5.7" diagonal color STN (Super Twisted Nematic) LCD display with 15 shades of gray
- 320 x 240 pixel resolution
- 150 NITS display brightness
- 50,000 hour average backlight lifetime
- Analog resistive (1024 X 1024) touch screen allowing unlimited touch areas
- USB port B (program/download) and USB port A (USB device options)
- Ethernet 10/100 Base-T port (program/download & PLC comm)
- Remote Internet Access
- Serial PLC interface (RS-232/422/485)
- CompactFlash card slot, built-in
- Expansion assembly (optional) for CompactFlash devices (use with optional CF Card Interface Module)
- 24 VDC powered, 110 VAC power adapter (optional)
- Audio Line Out, stereo - requires amplifier and speaker(s)
- 10 MByte project memory
- Data logging
- 0 to 50°C (32 to 122°F) operating temperature range
- NEMA 4/4X, IP65 compliant when mounted correctly, indoor use only
- Slim design saves panel space
- UL, cUL & CE agency approvals
- 2-year warranty from date of purchase

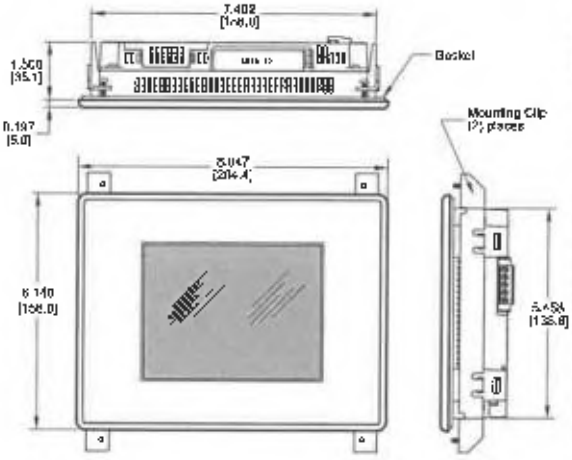
Function	Available	Associated Features
Ethernet	Yes	FTP - Email - Web Server
USB	Yes	Data Logging
Compact Flash	Yes	Data Logging/Project
Expansion Assembly	Yes	CF Module & future modules
Audio Out	Yes	Speaker/Amplifier Connection
Ethernet	Yes	Remote access over Internet

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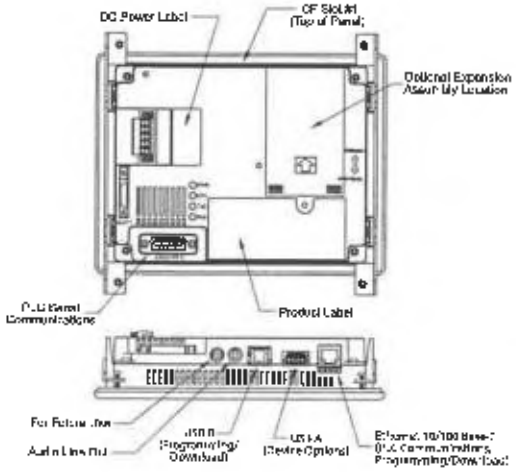
PLC Drivers	
Serial	Avail.
Productivity3000	Yes
Automation Direct CLICK	Yes
Direct LOGIC DL-Series	Yes
DirectNET	Yes
Modbus (Koyo Extension)	Yes
Allen-Bradley DF1 Full & Half Duplex	Yes
Allen-Bradley PLC5 DF1	Yes
Allen-Bradley DH-485	Yes
Allen-Bradley DF1 Full & Half Duplex - Tag Based (ControlLogix™ and CompactLogix™)	Yes
Modbus RTU	Yes
Modbus ASCII	Yes
GE SNPX (90/30, 90/70, Micro 90, VersaMax/Micro)	Yes
Siemens NET S7-200 PPI (S7-200 CPU)	Yes
Omron CS1, CJ1, CJ2	Yes
Mitsubishi FX	Yes
Mitsubishi Q02 (H)CPU, Q06HCPU, Q12HCPU, Q25HCPU	Yes
Mitsubishi Q, QnA Serial	Yes
Siemens S7-200 CPU, S7-300 CPU	Yes
Ethernet	
Productivity3000	Yes
Direct LOGIC Ethernet	Yes
Modbus TCP/IP	Yes
Ethernet Modbus TCP/IP	Yes
Allen-Bradley EtherNet/IP™ Server - Generic CIP Messaging*	Yes
Allen-Bradley EtherNet/IP Client - Tag Based (ControlLogix™ and CompactLogix™)	Yes
Allen-Bradley EtherNet/IP Client - Micrologix 1100 & 1400 (via native Ethernet port), MicroLogix 1000, ... 00, 1200, 1400, 1500 & SLC 5/05, 04, CS1 via AB Ethernet Adapter	Yes
Omron FINS	Yes
Mitsubishi Q, QnA Ethernet	Yes
Siemens (S7-200 CPU, S7-300 CPU)	Yes

Dimensions

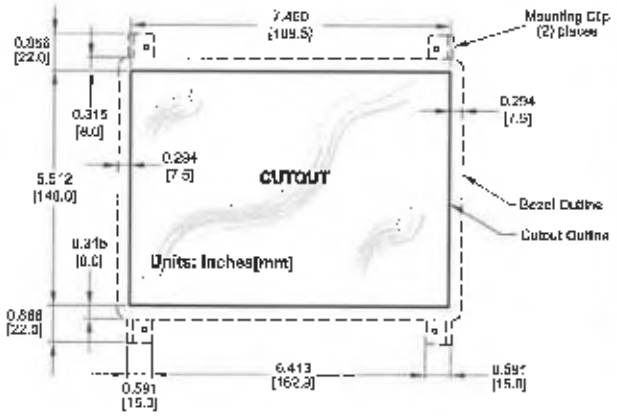
inches / [mm]



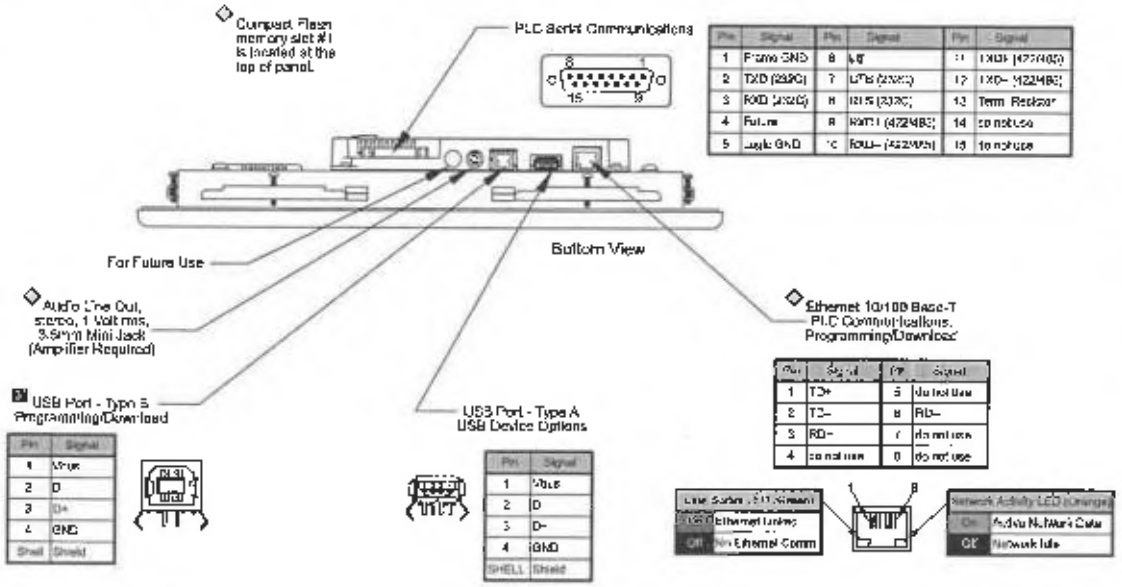
Ports & Memory Expansion



Mounting Cutout



C-more Communication Ports



Pin	Signal	Pin	Signal	Pin	Signal
1	Frame GND	8	CTS (232C)	15	TXD+ (422/485)
2	TXD (232C)	7	RTS (232C)	12	TXD- (422/485)
3	RXD (232C)	6	GND (232C)	13	Term. Resistor
4	Future	5	RXD+ (422/485)	14	do not use
5	Logic GND	10	RXD- (422/485)	15	do not use

Pin	Signal	Pin	Signal
1	TD+	5	do not use
2	TD-	6	RD-
3	RD+	7	do not use
4	do not use	8	do not use

Pin	Signal
1	Vbus
2	D-
3	D+
4	GND
SHELL	Shield

Pin	Signal
1	Vbus
2	D-
3	D+
4	GND
Shell	Shield

◇ Note: Device is not available on Base Feature touch panels, part numbers EA7-S6M-R and EA7-T6CL-R.

Note: Use USB Programming Cable, such as p/n USB-CBL-AB15.

Ethernet Port

The Ethernet port has several uses:

- Download program to panel
- Communicate to PLCs/PCs
- Send e-mail
- Access FTP server
- Act as a Web server
- Remote Internet Access

The Ethernet port has an RJ-45 8-wire modular connector with green and orange LEDs.

- The orange LED indicates the Ethernet communication status. It illuminates when there is data activity on the network.
- The green LED indicates link status and illuminates when a link is established.

Ethernet connections:

- Productivity3000
- *Direct*LOGIC Ethernet
- Modbus TCP/IP
- Allen-Bradley EtherNet/IP Server - Generic I/O Messaging (ControlLogix®, CompactLogix™, and FlexLogix™)
- Allen-Bradley EtherNet/IP Client - Tag Based (ControlLogix, CompactLogix, and FlexLogix™)
- Allen-Bradley EtherNet/IP Client - MicroLogix 1100 & SLC 5/05, both via native Ethernet port
- Allen-Bradley MicroLogix 1000, 1100, 1200, 1500, SLC 5-03/04/05, all via ENI Adapter
- Entivity Modbus TCP/IP
- Omron Ethernet FINS
- Siemens Ethernet ISO over TCP

Note: The base panels (-R part numbers) do not include an Ethernet port, and do not have these capabilities.

USB Port B

Program C-more via the USB programming port. It's fast and easy, with no baud rate settings, parity, or stop bits to worry about. We stock standard USB cables for your convenience. USB Port B can be used to upload or download projects to and from a PC.

USB Port A

The Universal Serial Bus (USB) Port A is a standard feature for all models and can be used to connect various USB HID (Human Input Device) devices to the panel, such as:

- USB pen drives, (SDCZ4-2048-A10)
- USB keyboards
- USB barcode scanners
- USB card scanners

C-more can log data to the USB pen drive as well as load projects to the panel from the pen drive. You can also back up project files and panel firmware.

Sound Interface (Audio Line Out)

When attached to an amplifier and speaker(s), C-more can play warning sounds or pre-recorded messages such as: "conveyor is jammed". C-more supports WAV type files. The output is stereo.

Serial Port

The serial port is an RS-232, RS-422 or RS-485 female 15-pin D-sub connector. Use this port for serial connections to PLCs. The port supports the following PLC protocols:

All AutomationDirect.com PLCs:
- Productivity3000
- *Direct*LOGIC K-sequence
- *Direct*NET
- Modbus (Koyo Addressing)
- CLICK

Allen Bradley:
- DF1 Full & Half Duplex
- DF1 Full & Half Duplex - Tag Based
- PLC5 DF1
- DH485

Modbus RTU
Entivity Modbus RTU
GE SNPX (90/30, 90/70, Micro 90, VersaMax Micro)
Omron:
- Host Link (C200 Adapter, CS00)
- FINS (CJ1, CS1)

Mitsubishi:
- Melsec FX
- Q/QnA

Siemens PPI (S7-200 CPU)

C-more Communication Protocols & Cables

Compatibility Table

PLC Family	Model		Protocols
Allen-Bradley	MicroLogix 1000V	1000/1200/1400/1500, SLC 5-/01/02/03, PLC5	DH485/ABC/AIC+
	MicroLogix 1000, 1100, 1200 and 1500		DF1 Half Duplex; DF1 Full Duplex
	SLC 5-/03/04/05		
	ControlLogix™, CompactLogix™, FlexLogix™		
	PLC-5		DF1 Full Duplex
	ControlLogix, CompactLogix, FlexLogix - Tag Based		DF1 Half Duplex; DF1 Full Duplex
	ControlLogix, CompactLogix, FlexLogix - Generic I/O Messaging		EtherNet/IP Server
	ControlLogix, CompactLogix, FlexLogix - Tag Based		EtherNet/IP® Client
	MicroLogix 1100 & SLC 5/05, built-via native Ethernet port		
	MicroLogix 1000, 1100, 1200, 1400,1500 & SLC 5-03/04/05, all via ENI Adapter		
Modbus TCP/IP	Modbus TCP/IP® devices		Modbus TCP/IP
GE	90/30, 90/70, Micro 90, VersaMax Micro		SNPX
Mitsubishi	FX Series		FX Direct
	Q02, Q02H, Q06H, Q12H, Q25H		Q CPU
	Q, QnA Serial		QnA Serial
	Q, Qna Ethernet		QnA Ethernet
Omron	C200 Adapter, C500		Host Link
	CJ1/CS1 Serial, CJ1/CS1 Ethernet		FINS
Modicon	984 CPU, Quantum 113 CPU, A&E Modicon Micro Series 110 CPU: 311-xx, 411-xx, 512-xx, 612-xx		Modbus RTU
Siemens	S7-200 CPU, RS-485 Serial		PPI
	S7-200 CPU, S7-300 CPU; Ethernet		Ethernet ISO over TCP
Productivity3000	Productivity3000 Serial (P3-550)		AutomationDirect P3000 Serial
	Productivity3000 Ethernet (P3-550)		AutomationDirect P3000 Ethernet
CLICK	all		AutomationDirect Modbus (CLICK)
DirectLOGIC	DL05/DL06	all	K-Sequence
			DirectNET
			Modbus (Koyo addressing)
		H0-ECOM/H0-ECOM100	DirectLOGIC Ethernet
	DL405	all	K-Sequence
	D1 205	D2-230	K-Sequence
		D2-240	K-Sequence
			DirectNET
		D2-250/D2-250-1/D2-260	K-Sequence
			DirectNET
			Modbus (Koyo addressing)
		D2-240/D2-250-1/D2-260 Using DCM	DirectNET
			Modbus (Koyo addressing)
		H2-ECOM/H2-ECOM100	DirectLOGIC Ethernet
	DL305	D3-330/330P (Requires the use of a Data Communications Unit)	DirectNET
		D3-340	DirectNET
		D3-350	K-Sequence
			DirectNET
			Modbus (Koyo addressing)
		D3-350 DCM	DirectNET
			Modbus (Koyo addressing)
	DL405	D4-430	K-Sequence
			DirectNET
		D4-440	K-Sequence
			DirectNET
		D4-450	K-Sequence
			DirectNET
			Modbus (Koyo addressing)
		All with DCM	DirectNET
			Modbus (Koyo addressing)
		H4-ECOM/H4-ECOM100	DirectLOGIC Ethernet
	H2-WinPLC (Think & Do) Live V5.2 or later and Studio any version		Think & Do Modbus RTU (serial port)
	H2-WinPLC (Think & Do) Live V5.5.1 or later and Studio V7.2.1 or later		Think & Do Modbus TCP/IP (Ethernet port)

Cable Description	Cable Part Number	Price
Productivity3000 Automation Direct CLICK, DirectLOGIC PLC RJ-12 port, DL05, DL06, DL105, DL205, D3-350, D4-450 & H2-WinPLC (RS-232C)	EA-2CBL	<-->
DirectLOGIC (VGA Style) 15-pin port, DL06, D2-250 (250-1), D2-260 (RS-232C)	EA-2CBL-1	<-->
DirectLOGIC PLC RJ-11 port, D3-340 (RS-232C)	EA-3CBL	<-->
DirectLOGIC D4 405 PLC 15-pin D-sub port, DL405 (RS-232C)	EA-4CBL-1	<-->
DirectLOGIC PLC 25-pin D-sub port, DL405, D3-350, D1 305 DCU and all DCMs (RS-232C)	EA-4CBL-2	<-->
Allen-Bradley MicroLogix 1000, 1100, 1200, 1400 & 1500 (RS-232C)	EA-MLOGIX-CBL	<-->
Allen-Bradley SLC 5-03/04/05 ControlLogix, CompactLogix, FlexLogix, DF1 port (RS-232C)	EA-SLC-232-CBL	<-->
Allen-Bradley PLC-5 DF1 port (RS-232C)	EA-PLC5-232-CBL	<-->
Allen-Bradley SLC 500 DH485 port (RS-485A)	EA-DH485-CBL	<-->
GE 90/30, 90/70, Micro 90, VersaMax Micro 15-pin D-sub port (RS-422A)	EA-90-30-CBL	<-->
MITSUBISHI FX Series 25-pin port (RS-422A)	EA-MITSU-CBL	<-->
MITSUBISHI FX Series Main unit (HDM) (RS-422A)	EA-MITSU-CBL-1	<-->
OMRON Host Link C-200 Adapter, C500 (RS-232C)	EA-OMRON-CBL	<-->



NOTE: EZTouch serial PLC communication cables are compatible with C-more touch panels.

EA-2CBL



EA-2CBL-1



C-more Computer Programming Connections

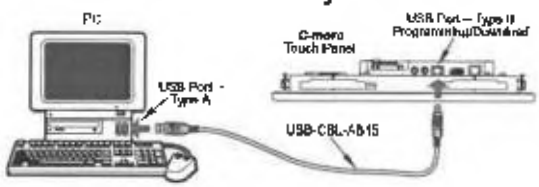
Using the C-more Programming Software for project development, the touch panel can be connected to a PC (personal computer) in one of several ways:

- Connect a USB Programming Cable such as (USB-CBL-AB15) from a USB port type A on the PC to the USB type B programming port on the C-more touch panel. The USB connection is for direct connection only and does not support USB hubs.
- Connect the ***C-more*** touch panel to a PC via an Ethernet hub or switch, and CAT5 Ethernet cables (full feature panels only). Multiple panels can be programmed in this configuration.
- Use an Ethernet crossover cable directly between the ***C-more*** touch panel's Ethernet port and the PC Ethernet port (full feature panels only).

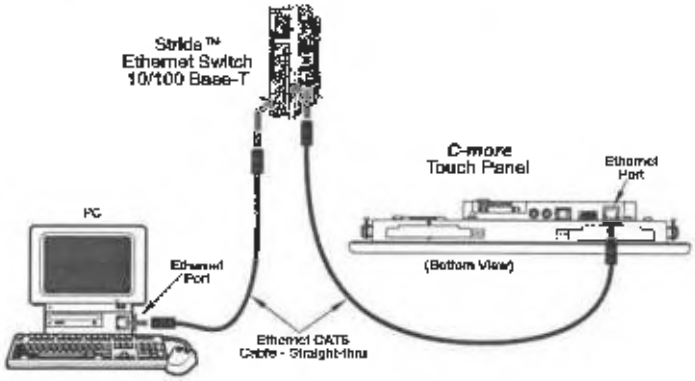
Following are the minimum system requirements for running C-more Programming Software (p/n EA-PGMSW) on a PC:

- Personal Computer with a 333 MHz or higher processor (CPU) clock speed recommended; Intel® Pentium/Celeron family, or AMD® K6/Athlon/Duron family, or compatible processor recommended
- Keyboard and Mouse or compatible pointing device
- Super VGA color video adapter and monitor with at least 800 x 600 pixels resolution (1024 x 768 pixels recommended) 64K color minimum
- 300 MB free hard-disk space
- 128 MB free RAM (512 MB recommended); 512 MB free RAM (1 GB recommended) for Vista
- CD-ROM or DVD drive for installing software from the CD
- USB port or Ethernet 10/100 Mbps port for project transfer from software to touch panel (Ethernet port not available on -R models)
- Operating System - Windows® Vista, Windows® XP Home / Professional Edition or Windows® 2000 with Service Pack 4.

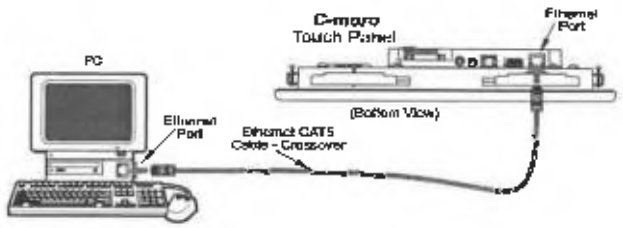
USB Connectivity



Ethernet Connectivity via a Hub or Switch



Ethernet Direct Connection



USB Programming Cable



Part No. USB-CBL-AB15

<-->

Other lengths available see USB-CBL-AB3, USB-CBL-AB6, USB-CBL-AB10 on page 8-27

Stride™ Ethernet Switch



Part No. SE-SW5U

<-->

Ethernet Configuration Kit



Part No. RT-CNFGKIT

<-->

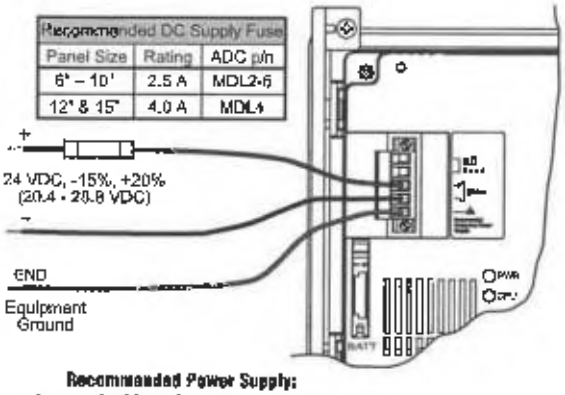
The Ethernet Configuration Kit includes a five-port 10/100 Base-T Ethernet switch, four straight-through cables, and one crossover cable. (The cables are at least five feet in length.) The kit provides a great convenience for configuring systems, demonstration systems or basic control projects using Ethernet.

C-more Power Connection Wiring

Providing Power to the Touch Panel

- Connect a dedicated 24 VDC switching power supply rated for a minimum of 1.5 Amps to the DC connector on the rear of the ***C-more*** touch panel. Connect the ground terminal to a proper equipment ground.
- or, install a ***C-more*** AC Power Adapter (EA-AC) to the rear of the touch panel and connect an AC voltage source of 100-240 VAC, 50/60Hertz, to its AC connector.
- then, turn on the power source and check the LED status indicators on the rear of the ***C-more*** touch panel for proper operation.

DC Wiring

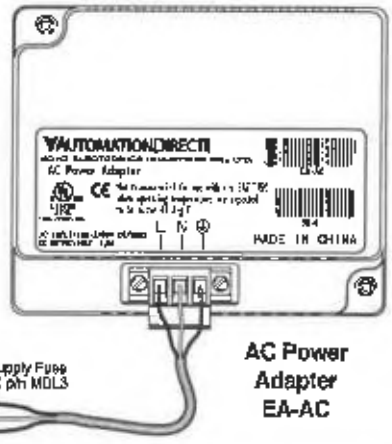


Recommended DC Supply Fuse		
Panel Size	Rating	ADC p/n
6" – 10"	2.5 A	MDL2-6
12" & 15"	4.0 A	MDL4

Recommended Power Supply:
AutomationDirect Part No. PS24-0500

Tightening Torque	
Power supply cable torque	71 - 85 oz-in (0.5 - 0.6 Nm)
Power connector mounting torque	71 - 85 oz-in (0.5 - 0.6 Nm)
Mounting flange screw torque	57 - 71 oz-in (0.4 - 0.5 Nm)

AC Wiring

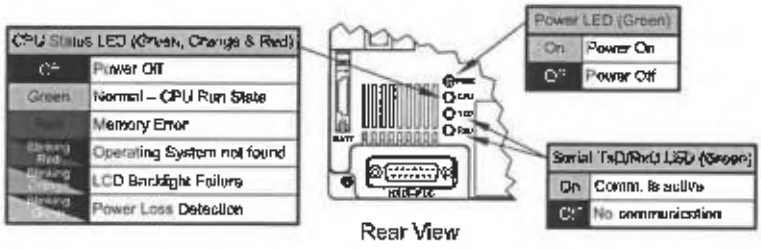


Recommended AC Supply Fuse
3.0 A, time delay, ADC p/n MDL3
100 - 240 VAC
50/60 Hz

AC Power Adapter EA-AC

NOTE: The AC/DC Power Adapter is not recommended for use with the EA7-T15C touch panel when operating temperatures are expected to exceed 40 °C (104 °F).

C-more LED Status Indicators



WARNING: To minimize the risk of potential safety problems, you should follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and it is your responsibility to determine which codes should be followed, and to verify that the equipment, installation, and operation are in compliance with the latest revision of these codes.

Equipment damage or serious injury to personnel can result from the failure to follow all applicable codes and standards. We do not guarantee the products described in this publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation, or operation.

If you have any questions concerning the installation or operation of this equipment, or if you need additional information, please call us at 1-800-633-0405 or //0-844-4200.

This publication is based on information that was available at the time it was printed.

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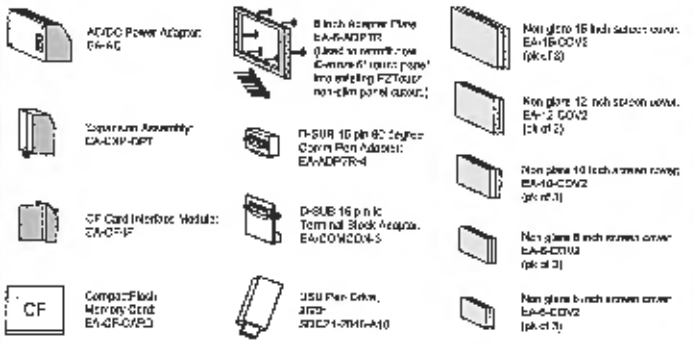
C-more Accessories

Accessories

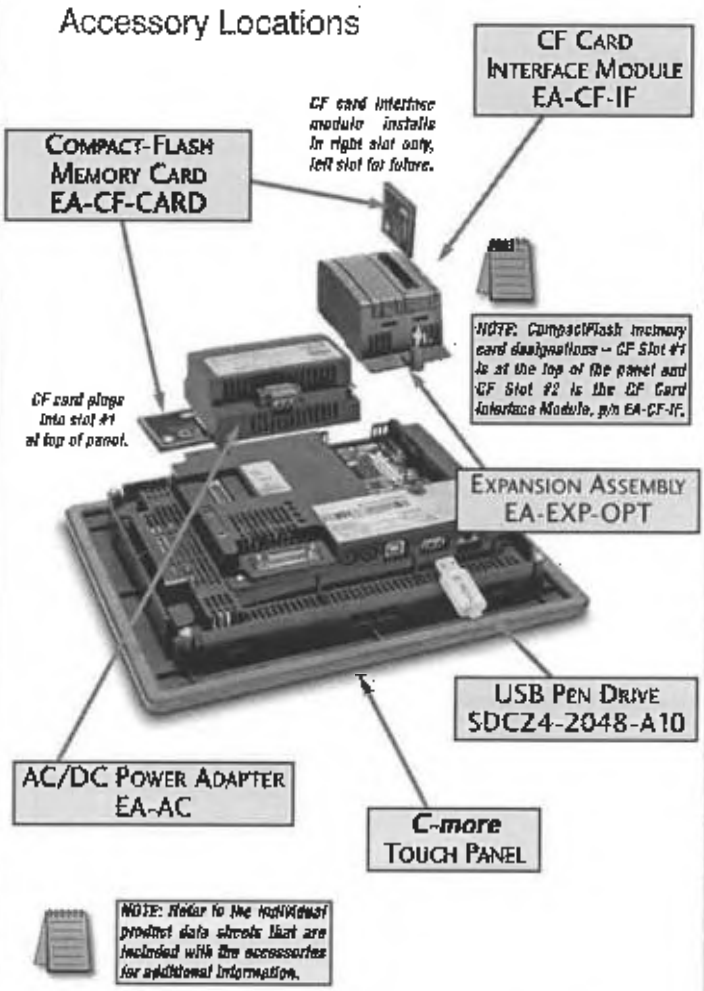
The C-more touch panels can be enhanced with the accessories below:

Part Number	Description	Price
EA-AC	The AC/DC Power Adaptor, EA-AC, is for C-more touch panels only, and is powered from a 100-240 VAC, 50/60 Hertz power source. The adapter provides 24 VDC at 1.5 A. Power Fail features help protect data being logged to CompactFlash during power failures. The C-more panel must have firmware ver. 1.21 Build 6.78E or higher for proper operation.	⟷
EA-EXP-OPT	C-more I/O Module Expansion Assembly used to hold secondary CompactFlash Adapter (EA-CF-IF) and future option modules	⟷
EA-CF-IF	CompactFlash Card Adaptor Module, used when adding secondary CompactFlash option to Expansion Assembly. Compatible with EA-CF-CARD CompactFlash memory card accessory.	⟷
EA-CF-CARD	512 MB CompactFlash Memory Option, Industrial grade high speed memory for non-volatile storage.	⟷
EA-6-ADPTR	6-inch mounting adapter plate, REQUIRED to mount a 6 inch C-more touch panel into enclosures with legacy wide-bezel F2 touch cutouts. Converts a 8.932 inch x 6.229 inch cutout to 7.522 inch x 5.625 inch cutout.	⟷
EA-ADPTR-4	D-SUB 15-pin 90 degree PLC serial communication port adapter allows a PLC communication cable to be plugged in at a 90 degree angle to reduce panel depth requirements)	⟷
EA-COMCON-3	D-SUB 15-pin to 6-terminal PLC serial communication port adapter to allow wire terminal connections for RS-422/485 PLC communication cable.	⟷
EA-6-COV2	Non Glare 6 inch Screen Cover, protective overlay used to protect the touch screen while helping to reduce the glare from external light sources. (pk of 3)	⟷
EA-8-COV2	Non Glare 8 inch Screen Cover, protective overlay used to protect the touch screen while helping to reduce the glare from external light sources. (pk of 3)	⟷
EA-10-COV2	Non Glare 10-inch Screen Cover, protective overlay used to protect the touch screen while helping to reduce the glare from external light sources. (pk of 3)	⟷
EA-12-COV2	Non Glare 12-inch Screen Cover, protective overlay used to protect the touch screen while helping to reduce the glare from external light sources. (pk of 3)	⟷
EA-15-COV2	Non Glare 15-inch Screen Cover, protective overlay used to protect the touch screen while helping to reduce the glare from external light sources. (pk of 3)	⟷
SDCZ4-2048-A10	USB Pen Drive, 2GB, SanDisk Cruzer micro Pen Drive. Compatible with Windows 98SE, ME, 2000, XP and Mac OS 9.1+, OS X 10.1.2+. Certified Windows XP and Mac OS X Recognition not for use with the C-more Operator Touch Panels.	⟷

Accessories at a glance:



Accessory Locations



C-more Accessories

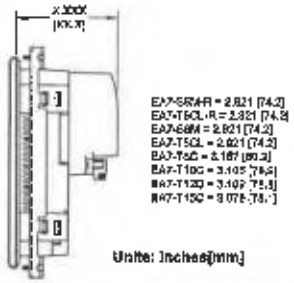
AC/DC Power Adapter

The AC/DC Power Adapter provides dedicated DC power to the panel if using 110 VAC as a power source. The AC/DC Power Adapter provides some features that a normal DC power supply cannot provide. The adapter provides a power loss signal to the touch panel that can be used to track power outages. This signal also allows the touch panel by way of a timed sequence to stop writing data to CompactFlash memory devices providing a controlled shutdown for increased data logging reliability.

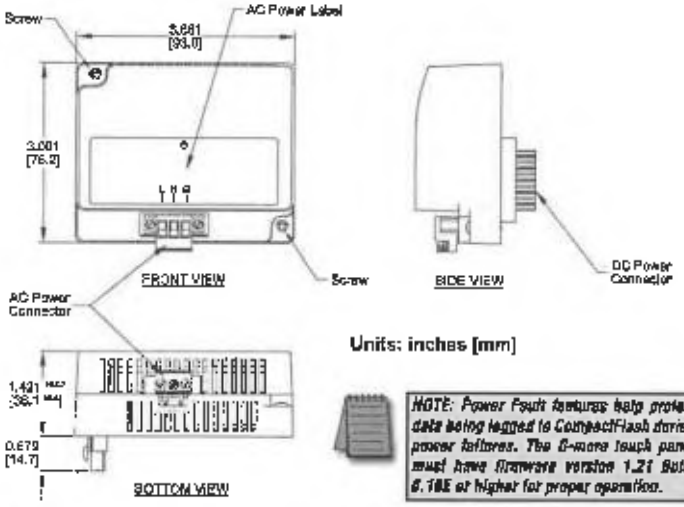
Part No. EA-AC <—>



Overall Panel Depth w/ EA-AC Installed



Dimensions



Units: inches [mm]

NOTE: Power Fault features help protect data being logged to CompactFlash during power failures. The C-more touch panel must have firmware version 1.21 Build 6.18E or higher for proper operation.

NOTE: The AC/DC Power Adapter is not recommended for use with the EA7-T15C touch panel when operating temperatures are expected to exceed 40 °C [104 °F].

AC/DC Power Adapter Specifications			
Part Number	EA-AC	***Static Electricity Discharge Resistance***	Compliant with IEC61000-4-2, Contact: 4 kV, Air: 8 kV
Input Voltage & Frequency	100-240 VAC, 50/60 Hertz	***Agency Approvals***	UL508, cUL, CE, EMC EN61132-2
Voltage Range	85-264 VAC w/ Under Voltage and Over Voltage Shutdown	***Environment***	For use in pollution degree 2 environment
Permissible Momentary Power Failure	Within 40 ms	***Grounding***	Ground resistance: less than 100 ohm
Input Power	58 VA or less	***Dimensions - Inches [mm]***	3.00" (H) x 3.65" (W) x 1.42" (D) [76.2 mm x 93.0 mm x 36.1 mm] (Excluding DC Power Connector.)
Operating Temperature Range	0 °C to 50 °C [32 to 122 °F] Maximum surrounding temperature rating, 50 °C (For the EA7-T15C touch panel, maximum temperature is 40° C. [104 °F] when using the AC/DC Power Adapter.)	***Weight***	6.13 oz. [175 g]
Storage Temperature Range	-20 to 60 °C [-4 to 140 °F]	***Cooling Method***	Natural convection when installed on vertically mounted touch panel.
Operating & Storage Humidity	10-85% RH (non-condensing)	***Included Parts***	AC Power Connector, Data Sheet Insert
Noise Immunity	1000 VAC p-p (Pulse width 1 µs, rise time: 1 ns), with proper ground connection on AC terminal block.	***Removable AC Power Connector***	5-AC-CON or DECA Switchlab MC101-508-036 Secure with (2) captive M2.5 screws, torque to 7.0 oz-in [0.5 Nm]
Hi-Pot	1000 VAC, 1 minute, with proper ground connection on AC terminal block.	***Output Voltage and Ripple***	21.6 - 26.4 VDC, Ripple < 100 mV p-p
Insulation Resistance	500 VDC, 10 M ohm or above, with proper ground connection on AC terminal block.	***Output Current***	Maximum 1.5 A
Vibration	Compliant with IEC61131-2	***Inrush Current***	For 100 VAC: 15 A, 3 ms or less For 240 VAC: 20 A, 3 ms or less
Shock	Pulse shape: Sine half wave, Peak acceleration: 147 m/s² [15 G], X, Y, Z: 3 directions, 2 times each	***Power Fail Detection Voltage***	58 VAC ±5%
Thermal Protection	140 °C [284 °F], with autorecovery	***Mounting to Touch Panel***	Secure with (2) spring loaded captive M3-20 screws, torque to 5.0 in-lb [0.55 Nm]
Short Circuit Protection	85 VAC: 2.6 A, 100 VAC: 2.6 A, 264 VAC: 3.9 A		

C-more Accessories

Expansion Assembly

The C-more Expansion Assembly allows installation of the optional CF Card Interface Module (shown below) for CF card use and also provides a slot for future option modules. Although the full featured models have a built-in CompactFlash slot, some users may require additional CF memory for data logging.

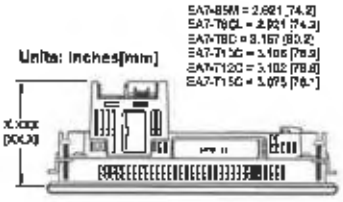
The optional Expansion Assembly can be installed on the rear of all but the 6-inch base models. This attachable assembly currently allows installation of an additional CompactFlash card with the use of the CF Card Interface Module. More options will be available in the future.

Part No. EA-EXP-OPT



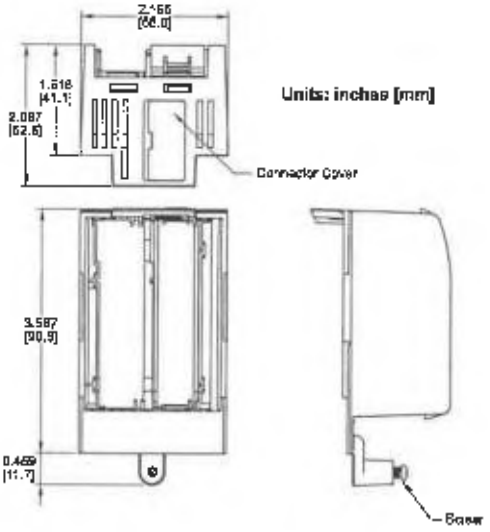
<—>

Overall Panel Depth w/ EA-EXP-OPT Installed





Dimensions



CF Card Interface Module

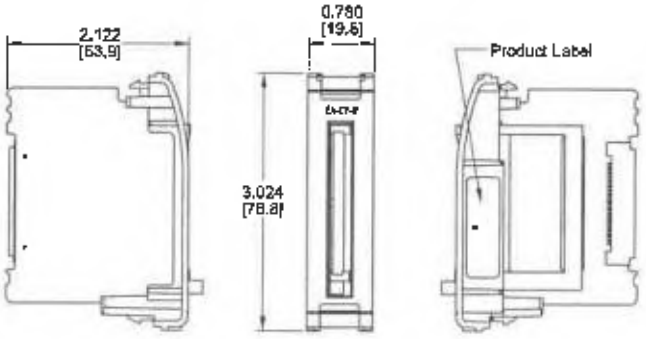
The C-more CF Card Interface Module is used with the Expansion Assembly to allow use of standard CompactFlash cards, such as the CompactFlash Memory (EA-CF-CARD). The CF card can be used for data logging or as project backup.

Part No. EA-CF-IF



<—>

Dimensions



Units: inches [mm]

C-more Accessories

512 MB CompactFlash Memory Card

EA-CF-CARD is a 512 MB high speed industrial grade CompactFlash memory card for non-volatile storage. Its 85 °C operating temperature makes it perfect for data logging in industrial applications (recommended for *C-more* touch panels). This is a standard "off the shelf" CompactFlash.

Part No.
EA-CF-CARD



<--->

Specifications/Features:

- CompactFlash™ Compatibility
- W/E Endurance 100,000 cycles
- Data transfer rate: 16 MB/second
- Operating Temp: -13 to 185°F (-25 to 85°C)
- Operating Humidity 85% max, non-condensing
- Storage Temp: -13 to 194 °F (-25 to 90°C)
- Storage Humidity 95% max, non-condensing

USB Pen Drive

Part No.
SDCZ4-2048-A10

The SanDisk Cruzer Micro is an extremely small 2GB USB Flash Drive (UFD) that connects to a USB port. Users can easily store their logging data, project data, key documents and images on a Cruzer Micro and transfer them to another computer with a USB port.



<--->

Specifications/Features:

- Dimensions: 7.9 mm x 18.95 mm x 52.2 mm (H x W x L)
- Stylish, metal casing
- Hi-Speed USB 2.0 certified (backwards compatible with all USB 1.1 ports)
- Compatible with Windows 2000, XP, Vista and Mac OS 9.1.x+, OS X v10.1.2+
- Certified Windows XP, Vista and Mac OS X

* For Windows only

C-more Accessories

6" Adapter Plate

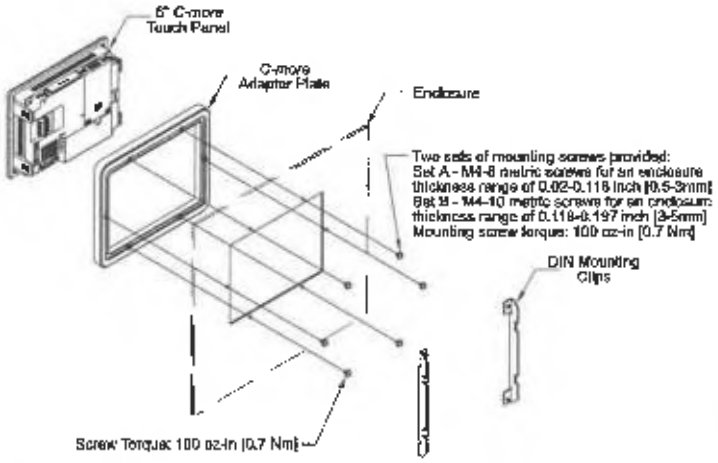
The adapter plate simplifies the retrofit of a new C-more 6" touch panel into an existing cabinet cutout for an EZTouch (units sold by AutomationDirect) 6" wide bezel touch panel, such as our part number EZ-S6C-K, EZ-S6C-F, EZ-S6M-R or EZ-S6M-F.

A NEMA 4/4X gasket is included. Please note that all sizes of the C-more touch panels have the same cutout as similarly sized EZTouch thin bezel (slim) touch panels, allowing quick replacement.

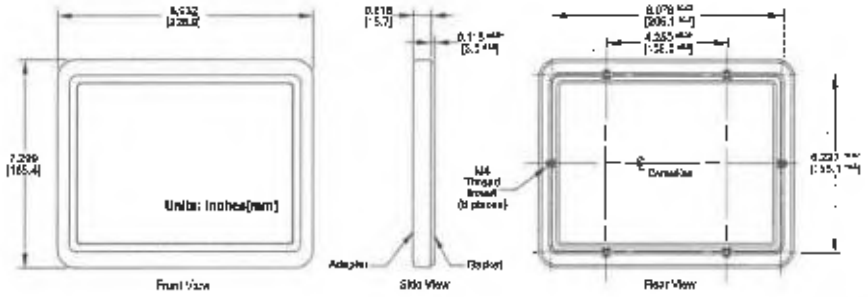
Part No. EA-6-ADPTR



Mounting Details

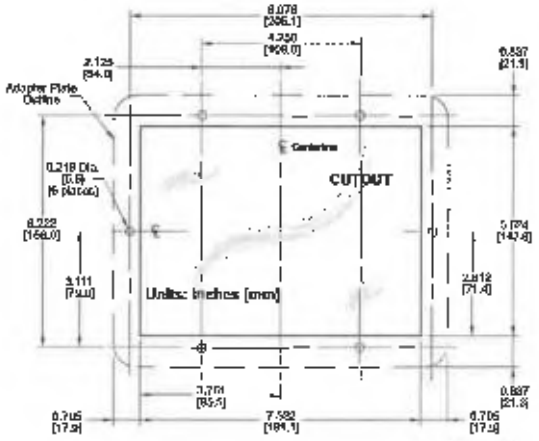


Dimensions





Cutout Dimensions



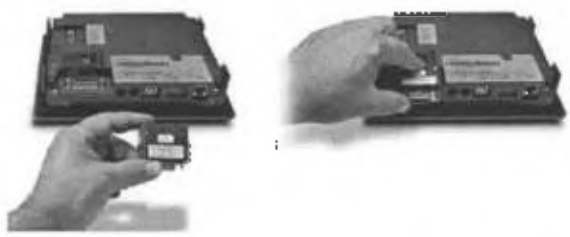
C-more Accessories

D-SUB 15-pin 90-degree Communication Port Adapter

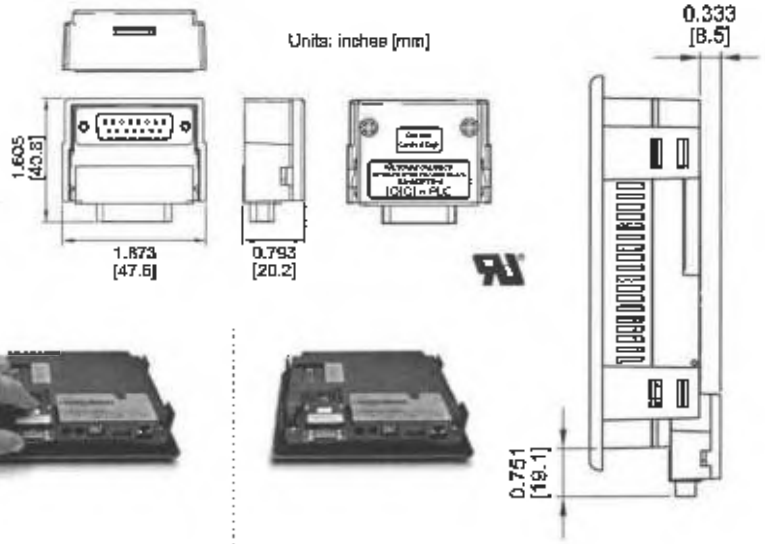
The EA-ADPTR-4 adapter plugs into the 15-pin serial port on the rear of the panel to allow a PLC communication cable to be plugged in at a 90 degree angle to reduce panel depth requirements. 15-pin straight through pin-out. UL Recognized.

Part No.
EA-ADPTR-4





Dimensions



D-SUB 15-pin to Terminal Block Adapter

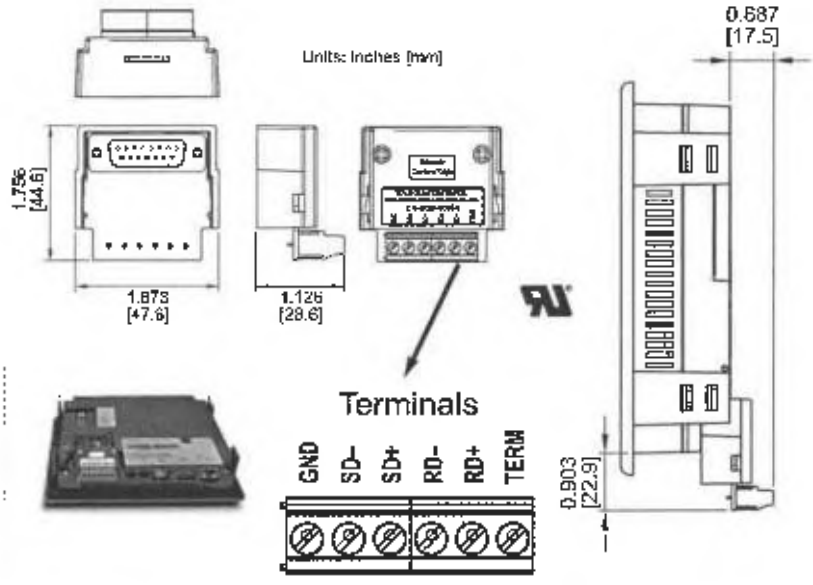
The EA-COMCON-3 adapter plugs into the 15-pin serial port on the rear of the panel to allow wire terminal connections for an RS-422/RS-485/DH-485 PLC communication cable. UL Recognized.

Part No.
EA-COMCON-3





Dimensions



C-more Accessories

Non-glare Screen Covers (in packages of 3)

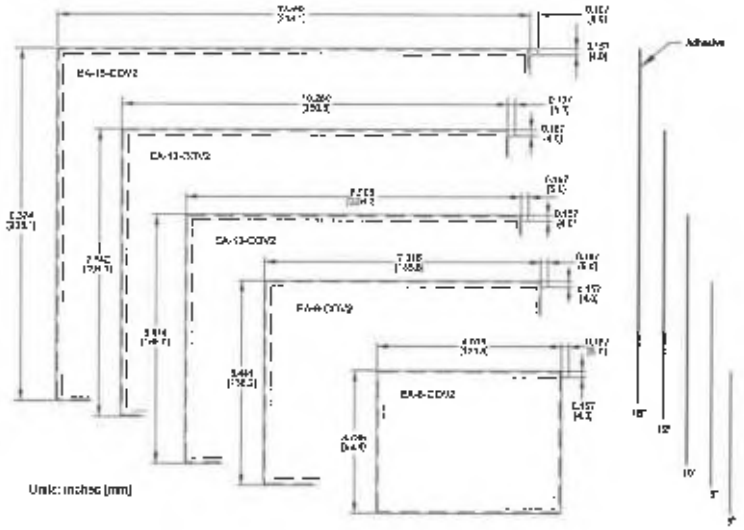
The non-glare screen covers are protective overlays used to protect the touch screen while helping to reduce the glare from external light sources.

Part Nos. EA-6-COV2, EA-8-COV2, EA-10-COV2, EA-12-COV2 and EA-15-COV2

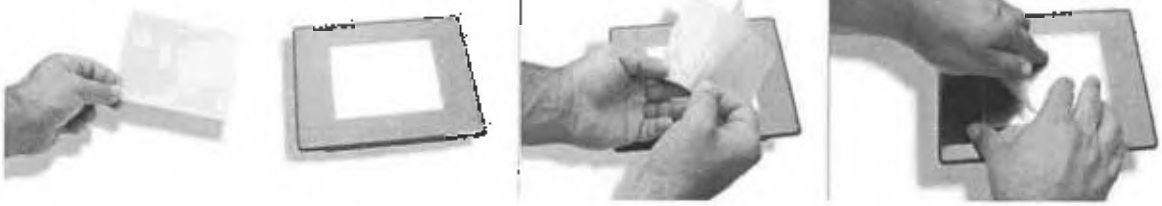


EA-6-COV2 <--->
EA-8-COV2 <--->
EA-10-COV2 <--->
EA-12-COV2 <--->
EA-15-COV2 <--->

Dimensions



Installation



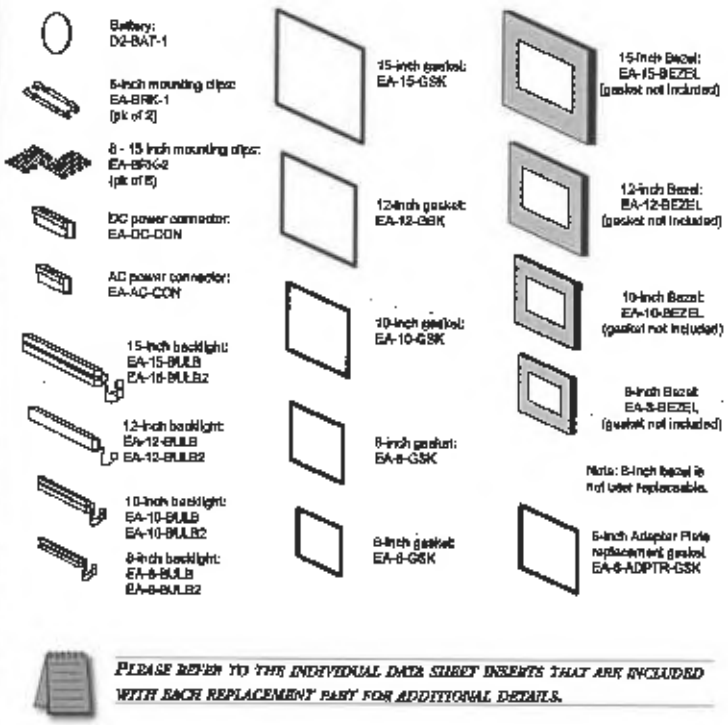
NOTE: The Protective Cover ships with a thin protective sheet on the face of the cover that needs to be carefully removed. If your panel is not clear, the protective sheet may not have been removed.

C-more Replacement Parts

The optional replacement parts can be used to replace damaged, worn or lost C-more components.

Part Number	Description	Price
EA-15-BULB* EA-15-BULB2*	15" Panel Backlight Bulb Replacement	⟺
EA-12-BULB* EA-12-BULB2*	12" Panel Backlight Bulb Replacement	⟺
EA-10-BULB* EA-10-BULB2*	10" Panel Backlight Bulb Replacement	⟺
EA-8-BULB* EA-8-BULB2*	8" Panel Backlight Bulb Replacement	⟺
EA-DC-CON	DC Panel Power Connector Replacement	⟺
EA-AC-CON	AC Power Adapter Connector Replacement	⟺
D2-BAT-1	Replacement Battery	⟺
EA-BRK-1	6" Panel Mounting Clip Replacements (2 per pk.)	⟺
EA-BRK-2	8"-15" Panel Mounting Clip Replacements (8 per pk.)	⟺
EA-15-BEZEL	15" Panel Bezel Replacement	⟺
EA-12-BEZEL	12" Panel Bezel Replacement	⟺
EA-10-BEZEL	10" Panel Bezel Replacement	⟺
EA-8-BEZEL	8" Panel Bezel Replacement	⟺
EA-15-GSK	15" Panel Gasket Replacement	⟺
EA-12-GSK	12" Panel Gasket Replacement	⟺
EA-10-GSK	10" Panel Gasket Replacement	⟺
EA-8-GSK	8" Panel Gasket Replacement	⟺
EA-6-GSK	6" Panel Gasket Replacement	⟺
EA-6-ADPTR-GSK	6" Adapter Plate Gasket Replacement	⟺

Replacement parts at a glance:



PLEASE REFER TO THE INDIVIDUAL DATA SHEET INSERTS THAT ARE INCLUDED WITH EACH REPLACEMENT PART FOR ADDITIONAL DETAILS.

C-more Replacement Bulbs		
C-more Model	Bulb Model	*C-more* Serial Number
EA7-T8C	EA-8-BULB	EA2-T8C+10Z15B020 and older
	EA-8-BULB2	EA7-T8C+10Z15B021 and newer
EA7-T10C	EA-10-BULB	EA7-T10C+10Z11B080 and older
	EA-10-BULB2	EA7-T10C+10Z11B081 and newer
EA7-T12C	EA-12-BULB	EA7-T12C+10Z29B019 and older
	EA-12-BULB2	EA7-T12C+10Z29B020 and newer
EA7-T15C	EA-15-BULB	EA7-T15C+10Z22B120 and older
	EA-15-BULB2	EA7-T15C+10Z22B121 and newer

Serial Number = [Part Number]+[YYMDDFNNN]

Date Code = YYMF

YY: Year (05–99 — e.g. 05 = 2005)
M: Month (1–9, X, Y, Z — e.g. X = Oct.)
DD: Day (1–31)
F: Manufacturing Site (0–9, A–Z)
NNN: Sequence number for the date listed (000–999)

Part No.
EA-8-BULB, EA-8-BULB2,
EA-10-BULB, EA-10-BULB2,
EA-12-BULB, EA-12-BULB2,
EA-15-BULB, & EA-15-BULB2
see table



Backlight assembly, customer replaceable, for C-more 8", 10", 12" and 15" touch panels. The 8", 10" and 15" touch panels use two bulbs per panel and the 12" touch panels use one bulb per panel. The bulbs are packaged two per box for the 8", 10" and 15" touch panels and one per box for the 12" touch panels.

C-more Replacement Parts

MAINTENANCE AND ACCESSORY INSTRUCTION SHEETS CAN BE VIEWED AND DOWNLOADED ONLINE AT: HTTP://WWW.AUTOMATIONDIRECT.COM/STATIC/MANUALS/EAUSERM/EAUSERM.HTML

DC Power Connector Part No. EA-DC-CON



Replacement 5-terminal DC power connector for C-more touch panels.

AC Power Connector Part No. EA-AC-CON



Replacement 3-terminal AC power connector for C-more touch panel AC Power Adapters.

Replacement Battery Part No. D2-BAT-1



Backup Battery (supplied with new panels)

C-more panels use battery backed RAM to store retentive values for internal tags. This battery will last for up to two years, and is easy to replace. You can even set up an alarm condition, and let C-more remind you when the battery needs replacing. The C-more panels come with the D2-BAT-1 already installed.

NOTE: The D2-BAT-1 is the same battery used in our DL06, D2-250(-1), D2-260 and D3-350 PLC products.

6" Panel Mounting Clips Part No. EA-BRK-1



Spare panel mounting clips for 6-inch C-more touch panels. Package of 2 clips with 4 screws.

8"-15" Panel Mounting Clips Part No. EA-BRK-2



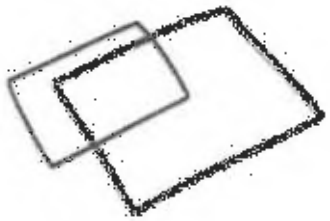
Spare panel mounting clips for the 8-inch through 15-inch C-more touch panels. Package of 8 clips with 8 screws.

Part No. EA-8-BEZEL, EA-10-BEZEL, EA-12-BEZEL and EA-15-BEZEL



NEMA 4/4X bezel, customer replaceable, for C-more 8", 10", 12" and 15" touch panels. Gasket not included.

Part No. EA-6-GSK, EA-8-GSK, EA-10-GSK, EA-12-GSK and EA-15-GSK



Replacement NEMA 4/4X touch panel gaskets for C-more 6", 8", 10", 12" and 15" touch panels.

Part No. EA-6-ADPTR-GSK



6-inch replacement NEMA 4/4X gasket for the C-more touch panel adapter plate.

CAUTION - The battery used in this device may present a risk of fire or chemical burn if mistreated. Do not recharge, disassemble, heat above 100 °C (212 °F) or incinerate. Replace battery with AutomationDirect part number D2-BAT-1 or CR2354 only. Use of another battery may present a risk of fire or explosion. Dispose of used battery properly. Keep away from children.

Perchlorate Material, special disposal handling may apply.

Product data sheet
Characteristics

DFCC2
TeSyS fuse-disconnector 2P 30A - fuse class CC



Main

Range of product	TeSye fuse-disconnector
Product or component type	Fuse-disconnector
Device short name	DFCC
Poles description	2P

Complementary

Mounting support	Rail
Mounting position	Vertical +/- 23°
Control type	Toggle
[Ie] rated operational current	30 A for power circuit
[Uimp] rated impulse withstand voltage	6 kV
Fire resistance	960 °C conforming to IEC 60695-2-1
Short-circuit withstand	200 kA 600 V conforming to UL 512
Fuse type	CC
[Ui] rated insulation voltage	600 V for power circuit AC
Connections - terminals	2 flexible cable(s) 1.5...6 mm² with cable end on screw clamp terminals for power circuit 1 flexible cable(s) 1.5...10 mm² with cable end on screw clamp terminals for power circuit 2 flexible cable(s) 1.5...6 mm² without cable end on screw clamp terminals for power circuit 1 flexible cable(s) 1.5...10 mm² without cable end on screw clamp terminals for power circuit 2 solid cable(s) 1.5...6 mm² on screw clamp terminals for power circuit 1 solid cable(s) 1.5...16 mm² on screw clamp terminals for power circuit
Tightening torque	2.2 N.m power circuit on screw clamp terminals
Quantity per set	Set of 12

Environment

Standards	IEC 60947-3 UL 512 CSA C22.2 No 39
Product certifications	UL
IP degree of protection	IP20 conforming to IEC 60529
Protective treatment	TH
Ambient air temperature for storage	-40...80 °C
Ambient air temperature for operation	-20...60 °C with derating
Height	88.5 mm
Width	35 mm
Depth	64 mm
Product weight	0.122 kg

Contractual warranty

Period	18 months

Information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein.
This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications.
It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof.
Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

EDS-205/208 Series

5 and 8-port entry-level unmanaged Ethernet switches



- 10/100BaseT(X) (RJ45 connector), 100BaseFX (multi-mode, SC/ST connectors)
- IEEE802.3/802.3u/802.3x support
- Broadcast storm protection
- DIN-rail mounting ability
- -10 to 60°C operating temperature range

Introduction

The EDS-205/208 series of industrial Ethernet switches are entry-level industrial 5 and 8-port Ethernet switches that support IEEE 802.3/802.3u/802.3x with 10/100M, full/half-duplex, MDI/MDIX auto-sensing RJ45 ports. The EDS-205/208 switches are rated to operate at temperatures ranging from -10 to 60°C, and are rugged enough for any harsh industrial environment. The switches can be easily installed on a DIN-rail as well as in distribution boxes. The DIN-rail mounting capability, wide operating temperature, and the IP30 housing with LED indicators make the plug-and-play EDS-205/208 switches easy to use and reliable.

Specifications

Technology

Standards:
IEEE 802.3 for 10BaseT
IEEE 802.3u for 100BaseT(X) and 100BaseFX
IEEE 802.3x for Flow Control
Processing Type: Store and Forward
Flow Control: IEEE 802.3x flow control, back pressure flow control

Switch Properties

MAC Table Size: 1 K
Packet Buffer Size: 512 kbit

Interface

Fiber Ports: 100BaseFX ports (SC/ST connector, multi-mode)
RJ45 Ports: 10/100BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection
LED Indicators: Power, 10/100M (TP port), 100M (fiber port)

Optical Fiber

	100BaseFX	
	Multi-mode	Single-mode
Wavelength	1300 nm	1310 nm
Max. TX	-10 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm
Link Budget	12 dB	29 dB
Typical Distance	5 km [a] < km, [b]	40 km [c]
Saturation	-6 dBm	-3 dBm

a. 50/125 μm, 800 MHz*km fiber optic cable
b. 62.5/125 μm, 500 MHz*km fiber optic cable
c. 9/125 μm single-mode fiber optic cable

Power Requirements

Input Voltage:
EDS-205: 24 VDC (12 to 48 VDC), 18 to 30 VAC (47 to 68 Hz), single input
EDS-208 Series: 24 VDC (12 to 48 VDC), 18 to 30 VAC (47 to 68 Hz), single input
Input Current:
EDS-205: 0.12 A @ 24 V
EDS-208: 0.14 A @ 24 V
EDS-208-M: 0.23 A @ 24 V
Overload Current Protection: 1.1 A
Connection: 1 removable 3-contact terminal block
Reverse Polarity Protection: Present

Physical Characteristics

Housing: Plastic, IP30 protection
Dimensions:
EDS-205: 24.9 x 100 x 86.5 mm (0.98 x 3.94 x 3.41 in)
EDS-208 Series: 40 x 100 x 86.5 mm (1.57 x 3.94 x 3.41 in)
Weight:
EDS-205: 135 g
EDS-208 Series: 170 g
Installation: DIN-rail mounting

Environmental Limits

Operating Temperature: -10 to 60°C (14 to 140°F)
Storage Temperature: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity: 5 to 95% (non-condensing)

Standards and Certifications

Safety:
EDS-205: UL 508, EN 60950-1
EDS-208 Series: UL 508
EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A
EMS:
EN 61000-4-2 (ESD) Level 2, EN 61000-4-3 (RS) Level 3,
EN 61000-4-4 (EFT) Level 3, EN 61000-4-5 (Surge) Level 3,
EN 61000-4-6 (CS) Level 3,
EN 61000-4-8, EN 61000-4-11
Shock: IEC 60068-2-27
Freefall: IEC 60068-2-32
Vibration: IEC 60068-2-6
Note: Please check Moxa's website for the most up-to-date certification status.

MTBF (mean time between failures)

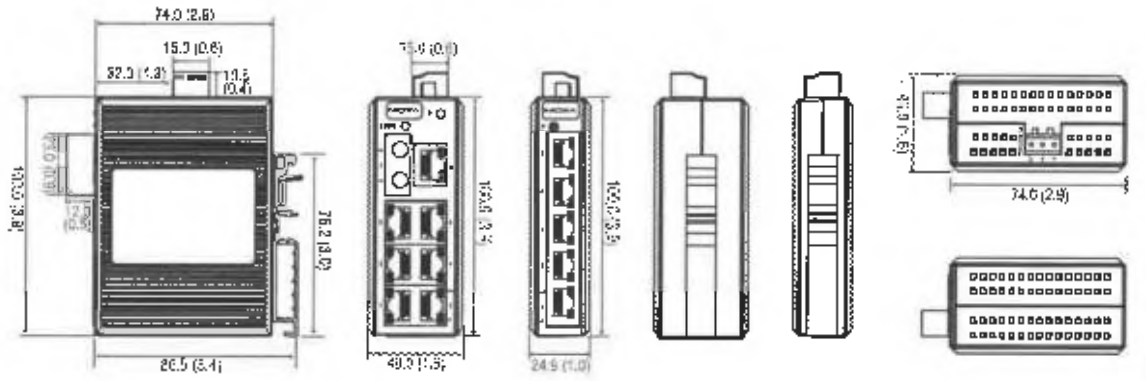
Time:
EDS-205: 3,915,945 hrs
EDS-208 Series: 7,492,000 hrs
Database: Telcordia (Bellcore), GB

Warranty

Warranty Period: 5 years
Details: See www.moxa.com/warranty

Dimensions

Unit: mm (inch)



Side View | Front View | Rear View | Top & Bottom View

Ordering Information

Available Models	Port Interface			Housing Material	Power Range
Standard Temperature (-10 to 60°C)	10/100BaseT(X)	100BaseFX			
		Multi-mode, SC Connector	Multi-mode, ST Connector		
EDS-205	5	–	–	Plastic	12 to 48 VDC
EDS-208	8	–	–	Plastic	12 to 45 VDC
EDS-208-M-SC	7	1	–	Plastic	12 to 45 VDC
EDS-208-M-ST	7	–	1	Plastic	12 to 45 VDC

Optional Accessories (can be purchased separately)

DR-4524/75-24/120-24: 45/75/120 W DIN-rail 24 VDC power supplies
MDR-40-24/60-24: 40/60 W DIN-rail 24 VDC power supplies, -20 to 70°C operating temperature
RK-4U: 4U-high 19" rack mounting kit

Package Checklist

- EDS-205 or EDS-208 switch
- Hardware Installation guide (printed)
- Warranty card

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Ferraz Shawmut

ELECTRONIC/GLASS FUSES



GGC / GGC-V

Glass Body
Fast Acting
1/4" x 1-1/4"
1-1/2" Axial Leads Optional

1/100A through 10A, 250VAC, UL Listed and CSA Certified
12A and 15A, 125VAC, UL Listed and CSA Certified
20A through 30A, 32VAC

Standard Fuse Ampere Ratings

CATALOG NUMBER	AXIAL LEAD CAT. NO	AMPERE RATING	VOLTS	I.R.
GGC1/100	GGC-V1/100	1/100A	250V	1
GGC1/32	GGC-V1/32	1/32A	250V	1
GGC1/16	GGC-V1/16	1/16A	250V	1
GGC1/10	GGC-V1/10	1/10A	250V	2
GGC1/8	GGC-V1/8	1/8A	250V	2
GGC15/100	GGC-V15/100	15/100A	250V	2
GGC175/1000	GGC-V175/1000	175/1000A	250V	2
GGC3/16	GGC-V3/16	3/16A	250V	2
GGC2/10	GGC-V2/10	2/10A	250V	2
GGC1/4	GGC-V1/4	1/4A	250V	2
GGC3/10	GGC-V3/10	3/10A	250V	2
GGC3/8	GGC-V3/8	3/8A	250V	2
GGC4/10	GGC-V4/10	4/10A	250V	2
GGC1/2	GGC-V1/2	1/2A	250V	2
GGC6/10	GGC-V6/10	6/10A	250V	2
GGC3/4	GGC-V3/4	3/4A	250V	2
GGC8/10	GGC-V8/10	8/10A	250V	2
GGC1	GGC-V1	1A	250V	2
GGC1-1/4	GGC-V1-1/4	1-1/4A	250V	2
GGC1-1/2	GGC-V1-1/2	1-1/2A	250V	2
GGC1-3/4	GGC-V1-3/4	1-3/4A	250V	2
GGC1-6/10	GGC-V1-6/10	1-6/10A	250V	2
GGC2	GGC-V2	2A	250V	2
GGC2-1/4	GGC-V2-1/4	2-1/4A	250V	2
GGC2-1/2	GGC-V2-1/2	2-1/2A	250V	2
GGC3	GGC-V3	3A	250V	2
GGC3-2/10	GGC-V3-2/10	3-2/10A	250V	3
GGC4	GGC-V4	4A	250V	2
GGC5	GGC-V5	5A	250V	2
GGC6	GGC-V6	6A	250V	2
GGC6-3/10	GGC-V6-3/10	6-3/10A	250V	2
GGC7	GGC-V7	7A	250V	2
GGC7-1/2	N/A	7-1/2A	250V	2
GGC8	GGC-V8	8A	250V	2
GGC10	GGC-V10	10A	250V	2
GGC12	GGC-V12	12A	125V	4
GGC15	GGC-V15	15A	125V	4
GGC20	GGC-V20	20A	32V	5
GGC25	GGC-V25	25A	32V	5
GGC30	GGC-V30	30A	32V	5

1. 250VAC @ 35A I.R./125VAC @ 10kA I.R.
2. 250VAC @ 200A I.R./125VAC @ 10kA I.R.
3. 250VAC @ 10kA I.R.
4. 125VAC @ 10kA I.R.
5. 32VAC @ 1000A I.R.



GGM / GGM-V

Glass Body
Fast Acting
5mm x 20mm
1-1/2" Axial Leads Optional

1/16A through 3A, 250VAC, UL Listed and CSA Certified
4A through 8A, 125VAC, UL Listed and CSA Certified
10A and 15A, 250VAC, UL Recognized

Standard Fuse Ampere Ratings

CATALOG NUMBER	AXIAL LEAD CAT. NO	AMPERE RATING	VOLTS	I.R.
GGM1/16	GGM-V1/16	1/16A	250V	2
GGM1/10	GGM-V1/10	1/10A	250V	3
GGM1/8	GGM-V1/8	1/8A	250V	3
GGM2/10	GGM-V2/10	2/10A	250V	3
GGM1/4	GGM-V1/4	1/4A	250V	3
GGM3/10	GGM-V3/10	3/10A	250V	3
GGM4/10	GGM-V4/10	4/10A	250V	1
GGM1/2	GGM-V1/2	1/2A	250V	3
GGM6/10	GGM-V6/10	6/10A	250V	1
GGM7/10	GGM-V7/10	7/10A	250V	3
GGM3/4	GGM-V3/4	3/4A	250V	3
GGM8/10	GGM-V8/10	8/10A	250V	1
GGM1	GGM-V1	1A	250V	3
GGM1-2/10	N/A	1-2/10A	250V	2
GGM1-1/4	GGM-V1-1/4	1-1/4A	250V	3
GGM1-1/2	GGM-V1-1/2	1-1/2A	250V	3
GGM1-6/10	GGM-V1-6/10	1-6/10A	250V	2
GGM2	GGM-V2	2A	250V	3
GGM2-1/2	GGM-V2-1/2	2-1/2A	250V	3
GGM3	GGM-V3	3A	250V	3
GGM4	GGM-V4	4A	125V	1
GGM5	GGM-V5	5A	125V	4
GGM6	GGM-V6	6A	125V	4
GGM7	GGM-V7	7A	125V	4
GGM8	GGM-V8	8A	125V	4
GGM10	GGM-V10	10A	250V	5
GGM15	GGM-V15	15A	250V	5

1. 250VAC @ 35A I.R./125VAC @ 10kA I.R.
2. 250VAC @ 100A I.R./125VAC @ 10kA I.R.
3. 250VAC @ 200A I.R./125VAC @ 10kA I.R.
4. 125VAC @ 10kA I.R.
5. 250VAC @ 100A I.R.

PULS does it again:
practical, versatile and reliable like
the SilverLine – yet small like no other.

PULS

CE

cULus LISTED

CB Scheme



Data Sheet

MiniLine ML30.100
with DC 24-28V / 30W

- Mounted and connected in record time, no tools required
- World-wide approvals (UL, EN, CSA, CB Scheme) for industry and office/ home
- Tiny: WxHxD = 45 x 75 x 91mm
- NEC Class 2 Power Supply and Hazardous Location Class I Div. 2 (UL 1604)
- Output voltage adjustable to DC 28V
- 100-240V Wide Range Input (AC 85...264V permitted)
- PULS Overload Design™ (no switch off at overload but up to 1.5 times nominal current)

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Mini is more.

◆ Technical Data ML30.100

Spring Clamps

◆ Input

Input voltage	AC100-240V (Wide Range), 47...63Hz Admiss. limits: AC 85...264V (DC 85...375V)
Input current	<0.6A (@ AC 100V, 30W P_{out}) <0.35A (@ AC 196V, 30W P_{out})
External Fusing	Not required, unit provides internal fuse (T3AH, not accessible)
Transient immunity	Transient resistance acc. to VDE 0160 / W2 (750V / 1.3ms), over entire load range
Hold-up time (see diagram below)	>190ms bei AC 230V, 24V / 1.3A >107ms @ AC 196V, 24V / 1.3A >19ms @ AC 100V, 24V / 1.3A

◆ Efficiency, Reliability

Efficiency	typ. 87.5% (AC 230V, 24V / 1.3A) (see also diagram below)
Losses	typ. 4.5W (AC 230V, 24V / 1.3A)
MTBF (Reliability)	ca. 650.000h acc. to Siemensnorm SN 29500 (24V/1.3A, AC 230V, T_{amb} = +40°C)

Prior to shipment, *every* unit undergoes the following tests in order to isolate any defective units which might suffer an early failure:
- Run-in / burn-in (Full load, T_{amb} = +60°C, on/off cycle)
- Functional test (100%)

◆ Construction, Mechanics, Installation

Robust plastic housing (US Patent No. 0442, 9235), fine ventilation grid on three housing sides to keep out small parts (e.g. screws), IP20

Dimensions and weight	
• B x H x T	45mm x 75mm x 91mm (+ DIN Rail) Depth incl. terminals: 98mm (+ DIN Rail)
• Weight	230g
Mounting orientation	, or (cf. 'Output')
Ventilation/Cooling	Normal convection, no fan required
• Free space f. cooling	recom'd.: 25mm on sides with ventilation grid

Easy snap-on mounting onto the DIN-Rail (TS35/7,5 or TS35/15).
Unit sits safely and firmly on the rail; no tools required even to remove

Connection	by Spring Clamp terminals; uniformly firm hold, vibration-resistant and maintenance-free: 2 terminals per output
Connector size range	
• flexible cable	0.3-2.5mm² (28-12 AWG)
• solid cable	0.3-4mm² (28-12 AWG) Ferrules admissible
• Wire strip length	6mm (0.24in) recommended

◆ Output

Output voltage	DC 24-28V, adj. by front panel potentiometer
• preset	24.5V ±0.5%
Voltage regulation	stat. 0.5% V_{out}, dyn. ±2% V_{out} overall
Ripple/Noise	<50mV$_{pp}$ (20MHz bandw., 50 Ω-measurem.)
Overvoltage prot. (OVP)	<40V
Output noise suppression	EMI values below EN 61000-6-3, even when using long (>2m), unscreened output cables
Rated continuous loading	up to 1.3A (convection cooling) depending on built-in orientation, V_{in} and T_{amb}; for details see derating diagram below
Overload behaviour	**PULS Overload Design™:** No switch-off at overload/short-circuit, instead: up to 1.5 · I_{rated}. So you need no oversizing to start awkward loads.
Protection	Unit is protected against (also permanent) short-circuit, overload and open-circuit
Derating	depending on built-in orientation; see diagram below
Parallel operation	Yes
Power back immunity	35V
Operation indicator	Green LED (DC ON)

◆ Environmental Data, EMC, Safety

Ambient temperature range (measured 25mm below unit)	
• storage, transport	-25°C ... +85°C
• operation	-10°C ... +70°C (for derating see diagram below)
Humidity	max. 95% (without condensation)
Electromagnetic emissions (EME)	EN 61000-6-3 (includes EN 61000-6-4) Class B (EN 55011, EN 55022) incl. output noise suppression
Electromagnetic Immunity (EMI)	EN 61000-6-2 (includes EN 61000-6-1)
Safe low voltage: Prot. class/degree:	SELV (EN60950, VDE0100/T.410), PELV (EN50178) Class I (EN60950) / IP20 (EN60529)

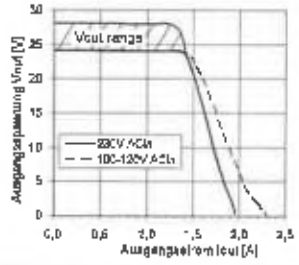
The PSU complies with all major **safety approvals** for EU (EN 60 950, EN 60204-1, EN 50178), USA (UL 60950, E137006, UL508 LISTED, E198865), Canada (CAN/CSA-C22.2 No 60950 [CUR], CAN/CSA-C22.2 No. 14 [CUL]), CB Scheme (IEC 60950). NEC Class 2 Power Supply and Hazardous Location Class I Div. 2 (UL 1604)

Design details – for your advantage:
- All terminals are easy to reach as mounted on the front panel.
- Input and output are strictly apart from each other (input below, output above) and so cannot be mixed up
- **Mounting *and* connection do not require any screwdriver**

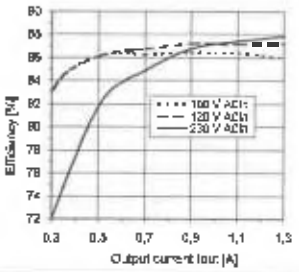
→ Easy, quick, durable and reliable installation

◆ Diagrams

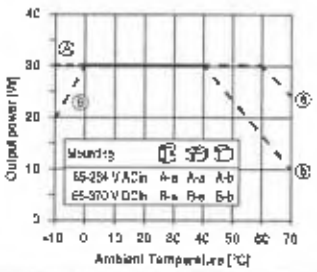
Output characteristic V_{out}/I_{out} (min.)



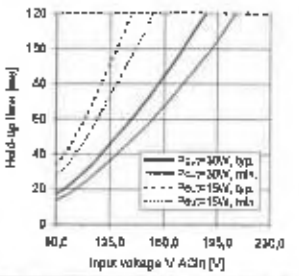
Efficiency (@ V_{out} = 24V, typ.)



Derating of output power



Hold-up time with ACin (@ V_{out} = 24V, typ. + min.)



Unless otherwise stated, specifications are valid for AC 230V input voltage, +25°C ambient temperature and 5 min. run-in time. They are subject to change without prior notice.

Product data sheet
Characteristics

NSYTRAC22
NSYTR end cover for screw single-level terminal block 1x1 - 2.5 to 10mm²



Main

Commercial Status	Commercialised
Range	Linergy
Product name	TR
Product or component type	Cover plate
Device short name	TRA
Accessory / separate part category	Insulation accessory
Product compatibility	TRV screw terminal - blade disconnect terminal block . TRV screw terminal - protective earth terminal block TRV screw terminal - passthrough terminal block
Thickness	2.2 mm

Complementary

Cable cross section	10 mm² 2.5 mm² 4 mm² 6 mm²
Number of connections	2
Number of measurement input	1 2
Quantity per set	Set of 50
Product weight	2.4 g
Colour	Grey

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Product data sheet
Characteristics

NSYTRV42
Linergy passthrough terminal block - 4mm² 32A single-level 1x1 screw - grey



Main

Commercial Status	Commercialised
Range	Linergy
Product name	TR
Product or component type	Terminal block
Device short name	TRV
Terminal block type	Passthrough
Terminal block level	1
Mounting mode	Clip-on
Nominal cross section	4 mm²
Length	47.7 mm
Colour	Grey
Quantity per set	Set of 50

Complementary

Width	6.2 mm
Height	47.5 mm
Connections - terminals	1 x screw terminal: downstream 1 x screw terminal: upstream
Number of connections	2
Connection position	Sideways
Number of measurement input	2
Cable cross section	0.14...6 mm², solid 0.14...6 mm², flexible without
Tightening torque	0.6...0.8 N.m
Wire stripping length	9 mm
Tool type	Disconnection: screwdriver Connection: screwdriver
[Ue] rated operational voltage	690 V conforming to ATEX Exe II Ex II 2 GD 600 V CSA 600 V UL 1000 V conforming to EN/IEC 60947-7-1
[Ie] rated operational current	30 A conforming to ATEX Exe II Ex II 2 GD 30 A CSA 30 A UL 32 A conforming to EN/IEC 60947-7-1
Material	Polyamide 6/6 (insulating case)
Dielectric loss	0.01 at 1 MHz conforming to VDE 0303-T4 0.01 at 1 MHz conforming to IEC 60250
Dielectric constant	3.7 at 1 MHz
Resistivity	10000 MΩ.m conforming to VDE 0303-T30 10000 MΩ.m conforming to IEC 60093
Surface resistance	1000 GΩ conforming to VDE 0303-T30 1000 GΩ conforming to IEC 60093
Creep resistance	500 CTI (> 400 kB) conforming to VDE 0303-T30 500 CTI (> 400 kB) conforming to IEC 60093
Flame retardance	V0, thickness0.8 mm conforming to UL 94
Product weight	9.4 g

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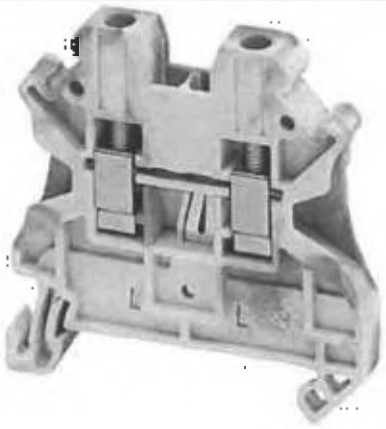
Range compatibility	TeSys Pragma Kaedra Spacial Prisma - Pack Prisma - PH Prisma - P Prisma - G
Product compatibility	Spacial enclosures

Environment

Product certifications	ATEX CSA DNV GL GOST LR UL VDE IEC-Ex
Dielectric strength	1000 V conforming to IEC 60243-1
Ambient air temperature for operation	-40...130 °C conforming to VDE 0304-T21 -40...130 °C conforming to IEC 60216-1

Product data sheet
Characteristics

NSYTRV42PE
Linergy earth terminal block - 4mm² single-level 1x1 screw - green-yellow



Main

Commercial Status	Commercialised
Range	Linergy
Product name	TR
Product or component type	Terminal block
Device short name	TRV
Terminal block type	Protective earth
Terminal block level	1
Mounting mode	Clip-on
Nominal cross section	4 mm²
Length	47.7 mm
Colour	Green-yellow
Quantity per set	Set of 50

Complementary

Width	6.2 mm
Height	47.5 mm
Connections - terminals	1 x screw terminal: downstream 1 x screw terminal: upstream
Number of connections	2
Connection position	Sideways
Number of measurement input	2
Cable cross section	0.14...6 mm², solid 0.14...6 mm², flexible without
Tightening torque	0.6...0.8 N.m
Wire stripping length	9 mm
Tool type	Disconnection: screwdriver Connection: screwdriver
Material	Polyamide 6/6 (insulating case)
Dielectric loss	0.01 at 1 MHz conforming to VDE 0303-T4 0.01 at 1 MHz conforming to IEC 60250
Dielectric constant	3.7 at 1 MHz
Resistivity	10000 MΩ.m conforming to VDE 0303-T30 10000 MΩ.m conforming to IEC 60093
Surface resistance	1000 GΩ conforming to VDE 0303-T30 1000 GΩ conforming to IEC 60093
Creep resistance	500 CTI (> 400 kB) conforming to VDE 0303-T30 500 CTI (> 400 kB) conforming to IEC 60093
Flame retardance	V0, thickness0.8 mm conforming to UL 94
Product weight	13.38 g
Range compatibility	TeSys Pragma Kaedra Spacial Prisma - Pack Prisma - PH Prisma - P Prisma - G
Product compatibility	Spacial enclosures

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Environment

Product certifications	ATEX CSA DNV GL GOST LR UL VDE IEC-Ex
Dielectric strength	1000 V conforming to IEC 60243-1
Ambient air temperature for operation	-40...130 °C conforming to VDE 0304-T21 -40...130 °C conforming to IEC 60216-1

Product data sheet
Characteristics

NSYTRV42SF5
Linergy fused disc. terminal block - 4mm² 6.3A single-level 1x1 screw - black



Main

Range	Linergy
Product name	Linergy TR
Product or component type	Terminal block
Device short name	TRV
Terminal block type	Fused disconnect
Terminal block level	1
Mounting mode	Clip-on
Nominal cross section	4 mm²
Length	72.5 mm
Colour	Black
Quantity per set	Set of 50

Complementary

Fuse size	5 x 20 mm
Width	8.2 mm
Height	56.5 mm
Connections - terminals	1 x screw terminal : downstream 1 x screw terminal : upstream
Number of connections	2
Connection position	Sideways
Number of measurement input	0
Cable cross section	0.2...4 mm², solid 0.2...4 mm², flexible without
Tightening torque	0.5...0.8 N.m
Wire stripping length	8 mm
Tool type	Disconnection : screwdriver Connection : screwdriver
[Ue] rated operational voltage	600 V CSA 600 V cURus 500 V conforming to EN/IEC 60947-7-1
[Ie] rated operational current	6.3 A CSA 12 A cURus 6.3 A conforming to EN/IEC 60947-7-1
Material	Polyamide 6/6 (insulating case)
Dielectric loss	0.01 at 1 MHz conforming to VDE 0303-T4 0.01 at 1 MHz conforming to IEC 60250
Dielectric constant	3.7 at 1 MHz
Resistivity	10000 MΩ.m conforming to VDE 0303-T30 10000 MΩ.m conforming to IEC 60093
Surface resistance	1000 GΩ conforming to VDE 0303-T30 1000 GΩ conforming to IEC 60093
Creep resistance	500 CTI (> 400 kB) conforming to VDE 0303-T30 500 CTI (> 400 kB) conforming to IEC 60093
Flame retardance	V0, thickness0.8 mm conforming to UL 94
Product weight	18.3 g

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Range compatibility	TeSys Pragma Kaedra Spacial Prisma - Pack Prisma - PH Prisma - P Prisma - G
Product compatibility	Spacial enclosures

Environment

Product certifications	CSA CURus EAC
Dielectric strength	1000 V conforming to IEC 60243-1
Ambient air temperature for operation	-40...130 °C conforming to VDE 0304-T21 -40...130 °C conforming to IEC 60216-1

Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (data code: YYWW)	Compliant - since 1052 - choisir Electric declaration of conformity
REACh	Reference not containing SVHC above the threshold
Product environmental profile	Available choisir Product Environmental
Product end of life instructions	Need no specific recycling operations

OMRON

Power PCB Relay — G2R

- Creepage distance of 8.0 mm (0.31 in) min. between coil and contact
- Dual-winding latching type available
- Plug-in and quick-connect terminals available
- High sensitivity (360 mW) and high capacity (16 A) types available
- Highly stable magnetic circuit for latching endurance and excellent resistance to vibration and shock
- Safety-oriented design assuring high surge resistance: 10,000 V min. between coil and contacts





Ordering Information

To Order: Select the part number and add the desired coil voltage rating (e.g., G2R-14-*DC12*).

■ NON-LATCHING

1-Pole – PCB types

Type	Contact material	Contact form	Construction	Part number
General purpose	AgCdO	SPDT	Semi-sealed	**G2R-1**
			Sealed	**G2R-14**
		SPST-NO	Semi-sealed	**G2R-1A**
			Sealed	**G2R-1A4**
High capacity		SPDT	Semi-sealed	**G2R-1-E**
		SPST-NO		**G2R-1A-E**
High sensitivity		SPDT		**G2R-1-H**
			Sealed	**G2R-14-H**
		SPST-NO	Semi-sealed	**G2R-1A-H**
			Sealed	**G2R-1A4-H**

1-Pole – Plug-in/Quick-connect types

Type	Contact material	Contact form	Terminal	Part number
General purpose	AgCdO	SPDT	Plug-in	**G2R-1-S**
LED indicator				**G2R-1-SN**
Surge suppression diode				**G2R-1-SD**
LED indicator and surge suppression diode				**G2R-1-SND**
Upper-mount Bracket		SPDT	Quick Connect	**G2R-1-T**
		SPST-NO		**G2R-1A-T**

Note: 1. AgInSn and gold plated contacts available.
2. Bifurcated button available.
3. For individual product agency approvals consult factory.
4. Class B coil insulation available.
5. Push to test button available on plug-in type. Consult Omron for details.

■ NON-LATCHING (continued)

2-Pole – PCB types

Type	Contact material	Contact form	Construction	Part number
General Purpose	AgCdO	DPDT	Semi-sealed	**G2R-2**
			Sealed	**G2R-24**
		DPST-NO	Semi-sealed	**G2R-2A**
			Sealed	**G2R-2A4**
High Sensitivity		DPDT	Semi-sealed	**G2R-2-H**
			Sealed	**G2R-24-H**
		DPST-NO	Semi-sealed	**G2R-2A-H**
			Sealed	**G2R-2A4-H**

2-Pole – Plug-in/Quick-connect types

Type	Contact material	Contact form	Terminal	Part number
General purpose	AgCdO	DPDT	Plug-in	**G2R-2-S**
LED indicator				**G2R-2-SN**
Surge suppression diode				**G2R-2-SD**
LED indicator and surge suppression diode				**G2R-2-SND**

Note: 1. AgInSn and gold plated contacts available.
2. Bifurcated button available.
3. For individual product agency approvals consult factory.
4. Class B coil insulation available.
5. Push to test button available on plug-in type. Consult Omron for details.

■ LATCHING

Type	Contact form	Construction	Part number
Dual coil latching	SPDT	Semi-sealed	**G2RK-1**
	SPST-NO		**G2RK-1A**
	DPDT		**G2RK-2**
	DPST-NO		**G2RK-2A**

■ ACCESSORIES

Track mounted sockets/tracks

	Part number	
Relay	Socket	Mounting track
G2R-1-S□□ (1-pole)	**P2RF-05-E**	**PFP-100N** or **PFP-50N** and **PFP-M** end plate **PFP-S** (optional spacer)
G2R-2-S□□ (2-pole)	**P2RF-08-E**	

Back connecting sockets/plate

		Part number	
Relay	Terminal	Socket	Socket mounting plate
G2R-1-S□□ (1-pole)	Solder	**P2R-05A**	**P2R-P**
	PC	**P2R-05P**	
G2R-2-S□□ (2-pole)	Solder	**P2R-08A**	
	PC	**P2R-08P**	

Specifications

■ CONTACT DATA

Non-latching general purpose, plug-in, plug-in operation indicator self-contained, plug-in diode self-contained, and upper-mount bracket

Load	1-pole type		2-pole type	
	Resistive load (p.f. = 1)	Inductive load (p.f. = 0.4) (L/R = 7 ms)	Resistive load (p.f. = 1)	Inductive load (p.f. = 0.4) (L/R = 7 ms)
Rated load	10 A at 250 VAC 10 A at 30 VDC	7.5 A at 250 VAC 5 A at 30 VDC	5 A at 250 VAC 5 A at 30 VDC	2 A at 250 VAC 3 A at 30 VDC
Contact material	AgCdO			
Carry current	10 A		5 A	
Max. operating voltage	380 VAC, 125 VDC			
Max. operating current	10 A		5 A	
Max. switching capacity	2,500 VA, 300 W	1,875 VA, 150 W	1,250 VA, 150 W	500 VA, 90 W
Min. permissible load	100 mA, 5 VDC		10 mA, 5 VDC	

Non-latching high capacity 1-pole type

Load	Resistive load (p.f. = 1)	Inductive load (p.f. = 0.4) (L/R = 7 ms)
Rated load	16 A at 250 VAC 16 A at 30 VDC	8 A at 250 VAC 8 A at 30 VDC
Contact material	AgCdO	
Carry current	16 A	
Max. operating voltage	380 VAC, 125 VDC	
Max. operating current	16 A	
Max. switching capacity	4,000 VA, 480 W	2,000 VA, 240 W
Min. permissible load	100 mA, 5 VDC	

Non-latching high-sensitivity

Load	1-pole type		2-pole type	
	Resistive load (p.f. = 1)	Inductive load (p.f. = 0.4) (L/R = 7 ms)	Resistive load (p.f. = 1)	Inductive load (p.f. = 0.4) (L/R = 7 ms)
Rated load	5 A at 250 VAC 5 A at 30 VDC	2 A at 250 VAC 3 A at 30 VDC	3 A at 250 VAC 3 A at 30 VDC	1 A at 250 VAC 1.50 A at 30 VDC
Contact material	AgCdO			
Carry current	5A		3 A	
Max. operating voltage	380 VAC, 125 VDC			
Max. operating current	5 A		3 A	
Max. switching capacity	1,250 VA, 150 W	500 VA, 90 W	750 VA, 90 W	250 VA, 45 W
Min. permissible load	100 mA, 5 VDC		10 mA, 5 VDC	

Latching

Load	1-pole type		2-pole type	
	Resistive load (p.f. = 1)	Inductive load (p.f. = 0.4) (L/R = 7 ms)	Resistive load (p.f. = 1)	Inductive load (p.f. = 0.4) (L/R = 7 ms)
Rated load	5 A at 250 VAC 5 A at 30 VDC	3.50 A at 250 VAC 2.50 A at 30 VDC	3 A at 250 VAC 3 A at 30 VDC	1.50 A at 250 VAC 2 A at 30 VDC
Contact material	AgCdO			
Carry current	5A		3 A	
Max. operating voltage	380 VAC, 125 VDC			
Max. operating current	5 A		3 A	
Max. switching capacity	1,250 VA, 150 W	875 VA, 75 W	750 VA, 90 W	375 VA, 60 W
Min. permissible load	100 mA, 5 VDC		10 mA, 5 VDC	

Note: 1. P standard: $\lambda_{60} = 0.10 \times 10^{-6}$ operation.
2. AgInSn contacts available.
3. For individual product agency approvals consult factory.

■ COIL DATA

Non-latching DC coil

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Coil inductance (ref. value) (H)		Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption (mW)
			Armature OFF	Armature ON	% of rated voltage			
3	176	17	0.07	0.14	70% max.	15% min.	110% max. at 70°C (158°F)	Approx. 530
5	106	47	0.20	0.39				
6	88.20	68	0.28	0.55				
12	43.60	275	1.15	2.29				
24	21.80	1,100	4.27	8.55				
48	11.50	4,170	13.86	22.71				
100	5.30	18,860	67.20	83.20				
110	4.80	22,900	81.50	110.60				

Non-latching AC coil

Rated voltage (VAC)	Rated current (mA)	Coil resistance (Ω)	Coil inductance (ref. value) (H)		Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption (VA)
			Armature OFF	Armature ON	% of rated voltage			
6	150	16	0.05	0.10	80% max.	30% min.	110% max. at 70°C (158°F)	Approx. 0.9
12	75	65	0.19	0.39				
24	37.50	260	0.81	1.55				
50	18	1,130	3.25	6.73				
110	10.60	4,600	13.34	26.84				
120	7.50	6,500	21	42				
220	5.30	22,000	51.30	102				
240	3.80	30,000	85.50	131				

Non-latching high-sensitivity DC coil

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Coil inductance (ref. value) (H)		Pick-up voltage	Dropout voltage	Maximum voltage	Power consumption (mW)
			Armature OFF	Armature ON	% of rated voltage			
3	120	25	0.13	0.26	70% max.	15% min.	110% max. at 70°C (158°F)	Approx. 360
5	71.40	70	0.37	0.75				
6	60	100	0.53	1.07				
12	30	400	2.14	4.27				
24	15	1,600	7.80	15.60				
48	7.50	6,400	31.20	62.40				

■ COIL DATA (continued)

Latching dual coil type - Set coil

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Coil inductance (ref. value) (H)		Set pick-up voltage	Reset dropout voltage	Maximum voltage	Power consumption (mW)
			Armature OFF	Armature ON	% of rated voltage			
3	227	10.80	0.026	0.052	70% max.	70% max.	110% max. at 70°C (158°F)	Approx. 850
5	167	30	0.073	0.146				
6	138	43.50	0.104	0.208				
12	70.60	170	0.42	0.83				
24	34.60	694	1.74	3.43				

Latching dual coil type - Reset coil

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω)	Coil inductance (ref. value) (H)		Set pick-up voltage	Reset dropout voltage	Maximum voltage	Power consumption (mW)
			Armature OFF	Armature ON	% of rated voltage			
3	200	15	0.001	0.002	70% max.	70% max.	110% max. at 70°C (158°F)	Approx. 600
5	119	42	0.003	0.006				
6	100	60	0.005	0.009				
12	50	240	0.018	0.036				
24	25	960	0.079	0.148				

Note: 1. The rated current and coil resistance are measured at a coil temperature of 23°C (73°F) with a tolerance of ±10%.
2. The operating characteristics are measured at a coil temperature of 23°C (73°F).

■ CHARACTERISTICS

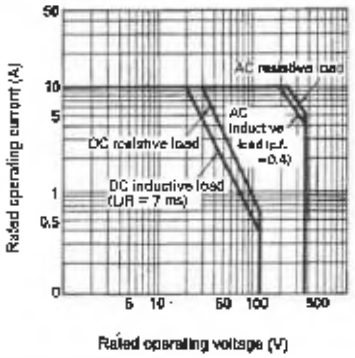
		Non-latching	Latching
Contact resistance		100 mΩ max.	
Operate (set) time		15 ms max.	20 ms max.
Release (reset) time		AC: 10 ms max.; DC: 5 ms max.	20 ms max.
Bounce time	Operate	—	Mean value approx. 3 ms
	Release	—	Mean value approx. 8 ms
Operating frequency	Mechanical	18,000 operations/hour	
	Electrical	1,800 operations/hour (under rated load)	
Insulation resistance		1,000 MΩ min. (at 500 VDC)	
Dielectric strength		5,000 VAC, 50/60 Hz for 1 minute between coil and contacts	
		1,000 VAC, 50/60 Hz for 1 minute across contacts of same pole	
		3,000 VAC, 50/60 Hz for 1 minute between contact sets, 2-pole non-latching	
		1,000 VAC, 50/60 Hz for 1 minute between set and reset coils of dual coil latching	
Vibration	Mechanical durability	10 to 55 Hz; 1.50 mm (0.06 in) double amplitude	
	Malfunction durability	10 to 55 Hz; 1.50 mm (0.06 in) double amplitude	
Shock	Mechanical durability	1,000 m/s² (approx. 100 G)	
	Malfunction durability	200 m/s² (approx. 20 G) when energized 100 m/s² (approx.10 G) when de-energized	500 m/s² (approx. 50 G) at set 100 m/s² (approx. 10 G) at reset
Ambient temperature		-40 to 70°C (-40° to 158°F)	
Humidity		35% to 85% RH	
Service life	Mechanical	AC: 10,000,000 operations min. DC: 20,000,000 operations min. (at 18,000 operations/hour)	10,000,000 operations min. (at 18,000 operations/hour)
	Electrical	See "Characteristic Data"	
Weight		Approx. 17 g (0.60 oz)	Approx. 17 g (0.60 oz)

Note: Data shown are of initial value.

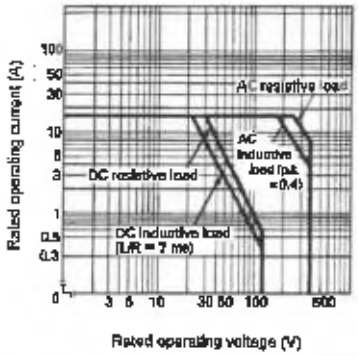
■ CHARACTERISTIC DATA

Maximum switching capacity — non-latching types

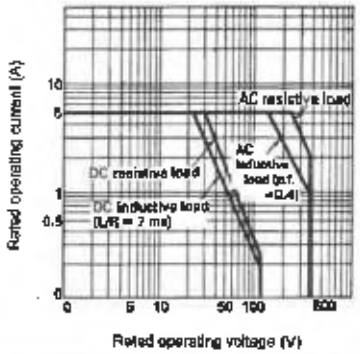
PCB: Single-pole general purpose Semi-sealed
Plug-in: Single-pole single button Quick-connect



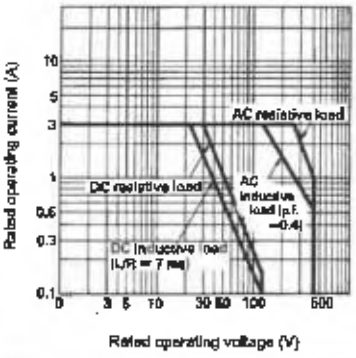
High capacity



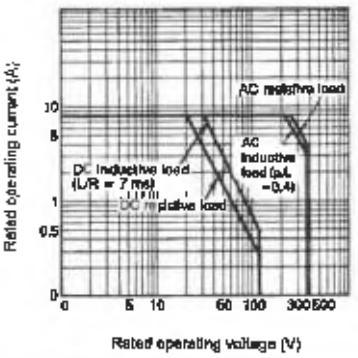
PCB: Single-pole high sensitivity Two-pole general purpose
Plug-in: Two-pole single button



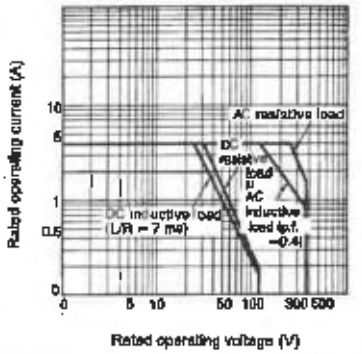
PCB: Two-pole high sensitivity



PCB: Single-pole general purpose Sealed

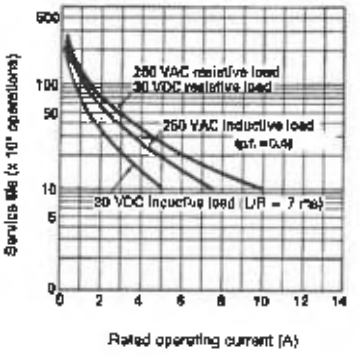


PCB: Two-pole general purpose Sealed

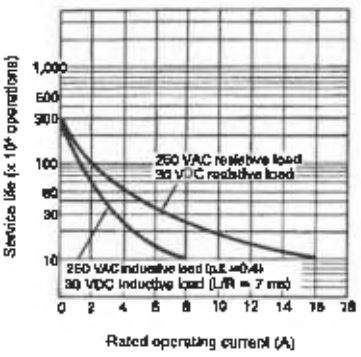


Electrical service life — non-latching types

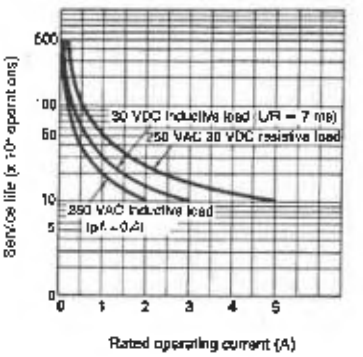
PCB: Single-pole general purpose Semi-sealed
Plug-in: Single-pole single button Quick connect



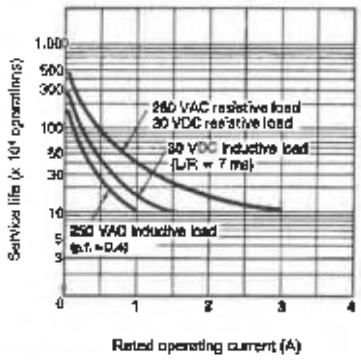
High capacity



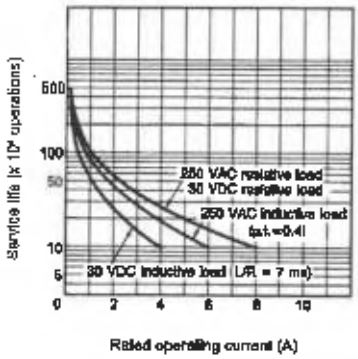
PCB: Single-pole high sensitivity Two-pole general purpose
Plug-in: Two-pole single button



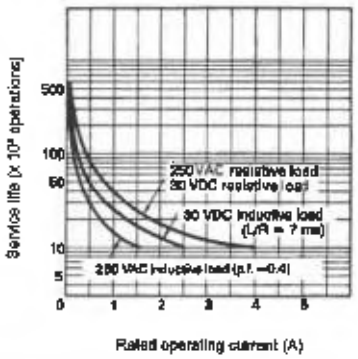
PCB: Two-pole high sensitivity



PCB: Single-pole general purpose Sealed

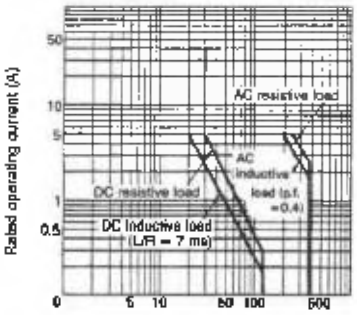


PCB: Two-pole general purpose Sealed

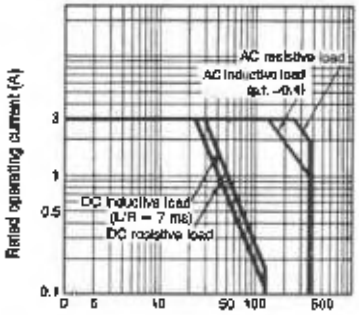


Maximum switching capacity — latching types

One-pole

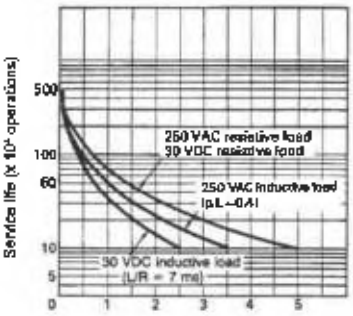


Two-pole

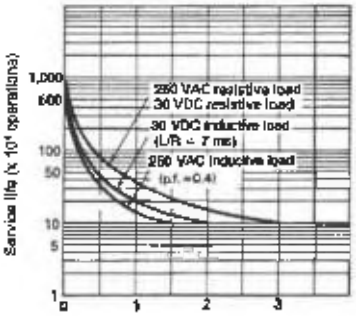


Electrical service life — latching types

One-pole



Two-pole

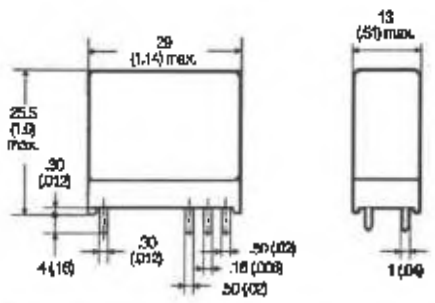


Dimensions

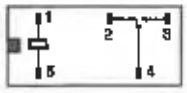
Unit: mm (inch)

■ NON-LATCHING

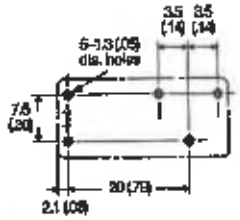
PCB Terminal: SPDT, general purpose & high sensitivity



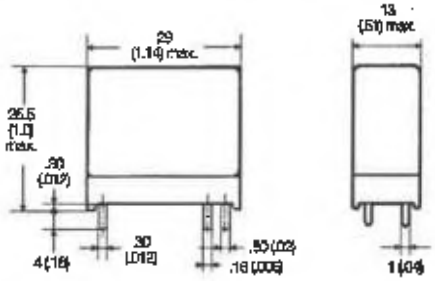
Terminal arrangement/ Internal connections (Bottom view)



Mounting holes (Bottom view)



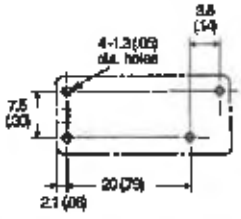
PCB Terminal: SPST-NO, general purpose & high sensitivity



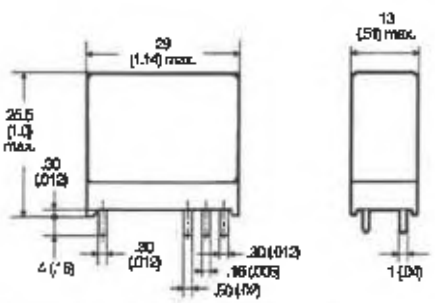
Terminal arrangement/ Internal connections (Bottom view)



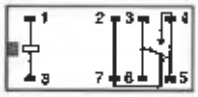
Mounting holes (Bottom view)



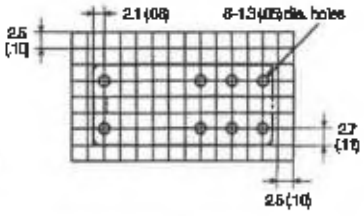
PCB Terminal: SPDT, high capacity



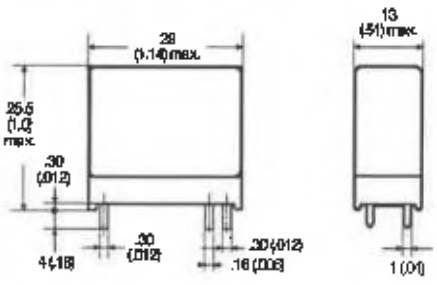
Terminal arrangement/ Internal connections (Bottom view)



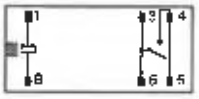
Mounting holes (Bottom view)



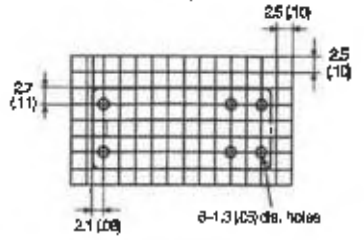
PCB Terminal: SPST-NO, high capacity



Terminal arrangement/ Internal connections (Bottom view)

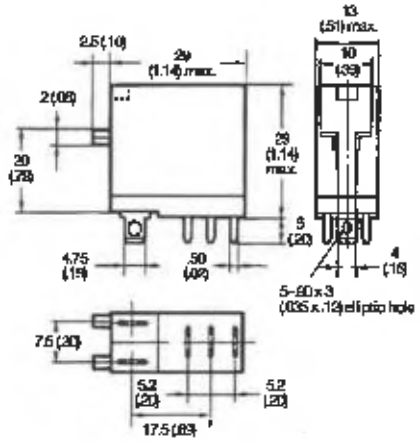


Mounting holes (Bottom view)



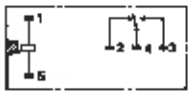
Note: 1. ▨ and ⬚ indicate mounting orientation marks.
2. A tolerance of ±0.10 (0.004) applies to the above dimensions.

Plug-in: SPDT, single button general purpose, LED indicator, surge suppression diode

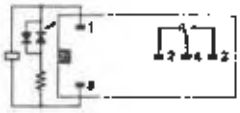


Terminal arrangement/internal connections
(Bottom view)

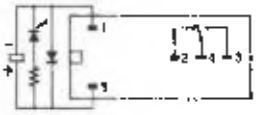
G2R-1-S



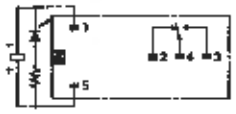
G2R-1-SN(AC)



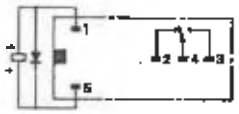
G2R-1-SND(DC)



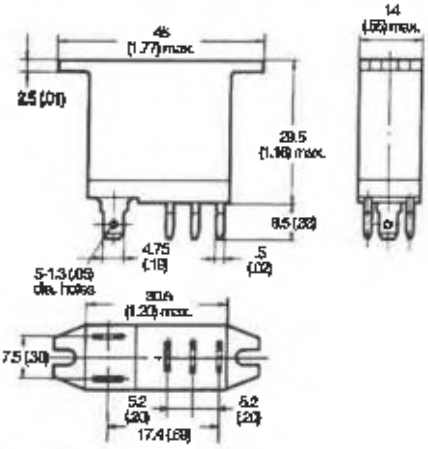
G2R-1-SN(DC)



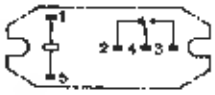
G2R-1-SD(DC)



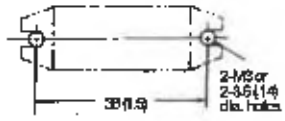
Quick-connect: SPDT



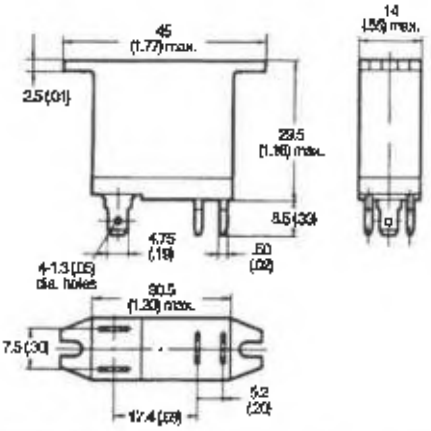
Terminal arrangement/
Internal connections
(Bottom view)



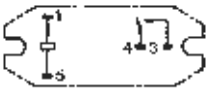
Mounting holes
(Bottom view)



Quick-connect: SPST-NO



Terminal arrangement/
Internal connections
(Bottom view)



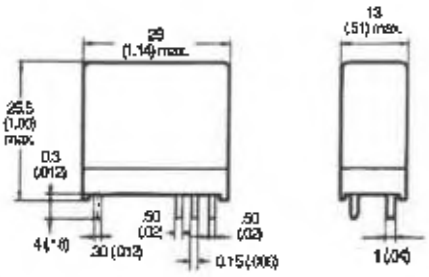
Mounting holes
(Bottom view)



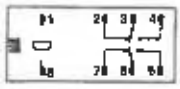
Note: 1. ▨ and ⬚ indicate mounting orientation marks.
2. A tolerance of ±0.10 (0.004) applies to the above dimensions.

Unit: mm (inch)

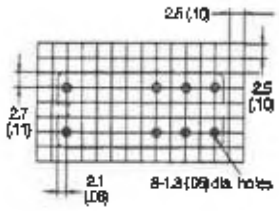
PCB Terminal: DPDT, general purpose & high sensitivity



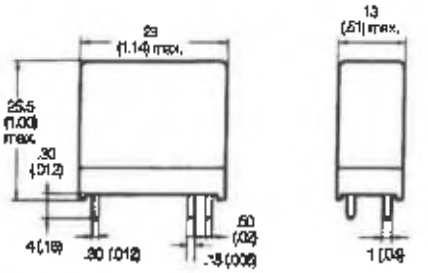
Terminal arrangement/
Internal connections
(Bottom view)



Mounting holes
(Bottom view)



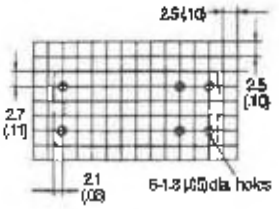
PCB Terminal: DPST-NO, general purpose & high sensitivity



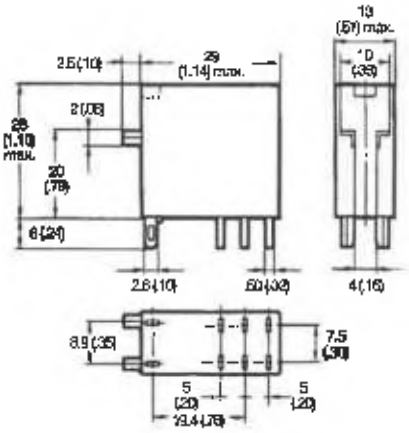
Terminal arrangement/
Internal connections
(Bottom view)



Mounting holes
(Bottom view)

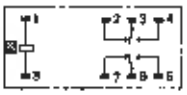


Plug-in: DPDT

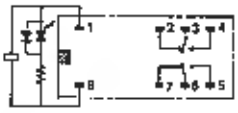


Terminal arrangement/Internal connections
(Bottom view)

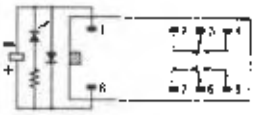
G2R-2-S



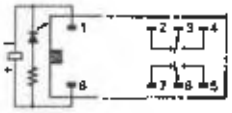
G2R-2-SN(AC)



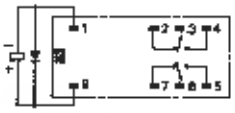
G2R-2-SND(DC)



G2R-2-SN(DC)



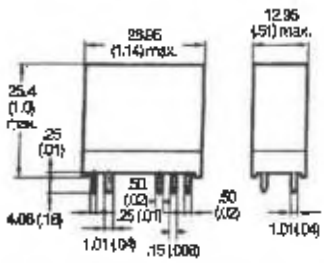
G2R-2-SD(DC)



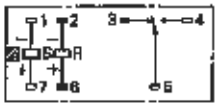
Note: 1. ▨ and ⬚ indicate mounting orientation marks.
2. A tolerance of ±0.10 (0.004) applies to the above dimensions.

■ LATCHING

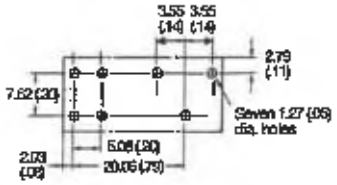
SPDT, Dual coil latching
G2RK-1



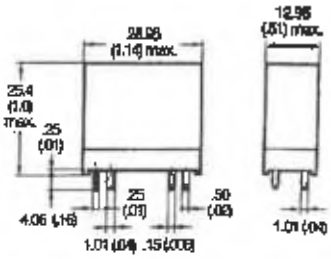
Dual coil



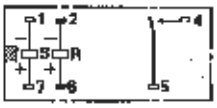
Dual coil



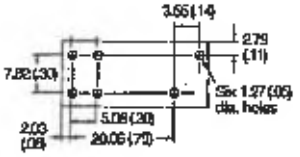
SPST-NO, Dual coil latching
G2RK-1A



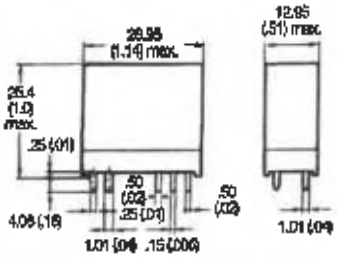
Dual coil



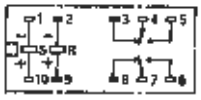
Dual coil



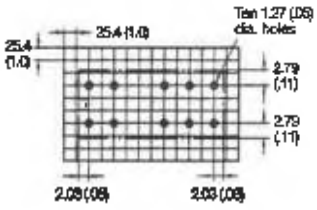
DPDT, Dual coil latching
G2RK-2



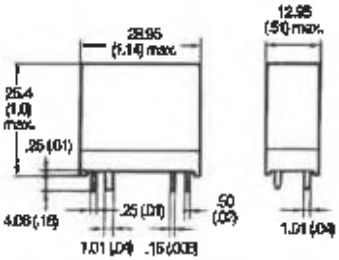
Dual coil



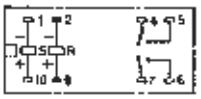
Dual coil



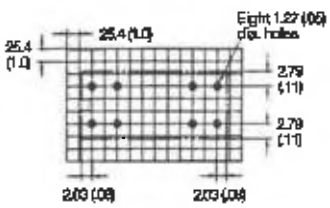
DPST-NO, Dual coil latching
G2RK-2A



Dual coil



Dual coil

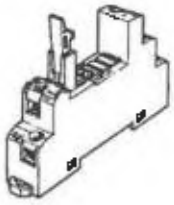


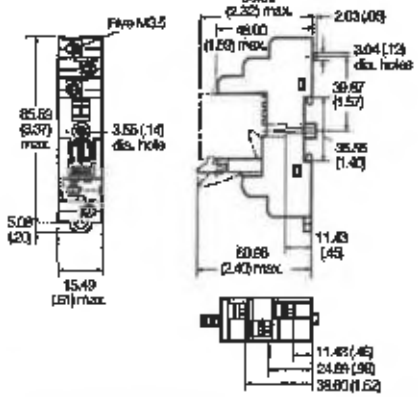
Note: 1. ▨ and [ ] indicate mounting orientation marks.
2. A tolerance of ±0.10 (0.004) applies to the above dimensions.

Unit: mm (inch)

■ ACCESSORIES

Track mounted socket
P2RF-05-E (UL E87929/CSA LR31928)

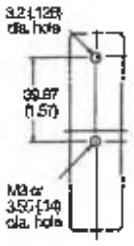




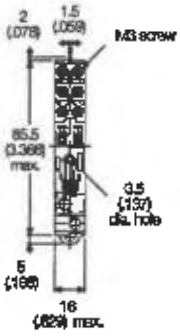
Terminal arrangement

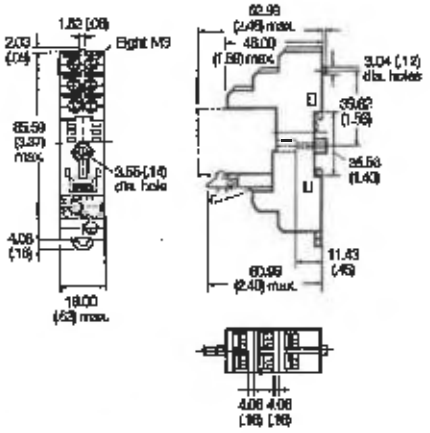


Mounting holes

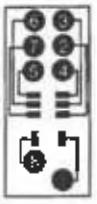


Track mounted socket
P2RF-08-E (UL E87929/CSA LR31928)

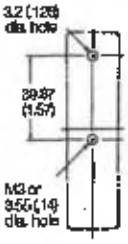




Terminal arrangement

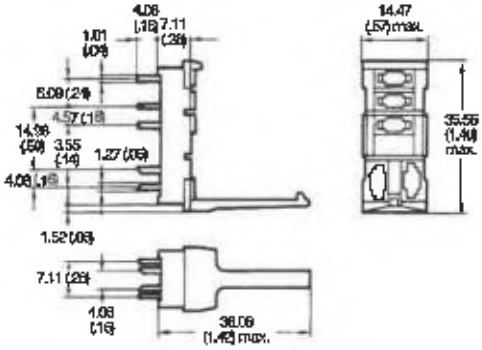


Mounting holes



Back connecting socket
P2R-05P (1-pole) (UL E87929/CSA LR31928)

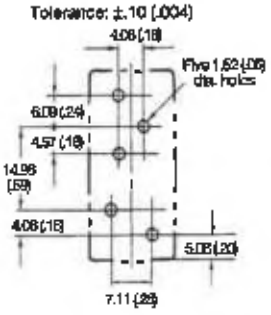




Terminal arrangement



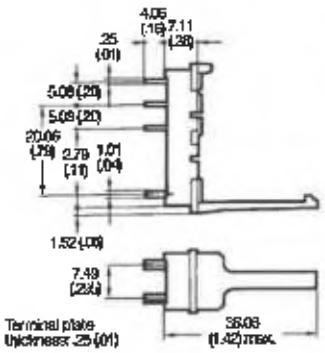
Mounting holes



Note: 1. ▨ and ⬚ indicate mounting orientation marks.
2. A tolerance of ±0.10 (0.004) applies to the above dimensions.

Back connecting socket
P2R-08P (2-pole) (UL E87929/CSA LR31928)

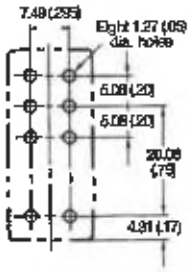




Terminal arrangement

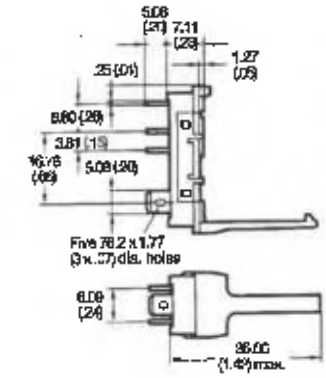


Mounting holes



Back connecting socket
P2R-05A (1-pole) (UL E87929/CSA LR31928)

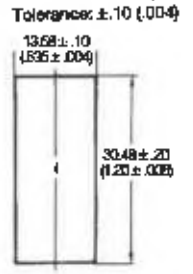




Terminal arrangement



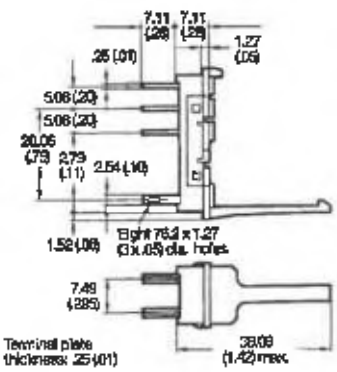
Mounting holes
(Bottom view)



Recommended thickness of the panel is 1.62 (.06) to 2.03 (.08)

Back connecting socket
P2R-08A (2-pole) (UL E87929/CSA LR31928)

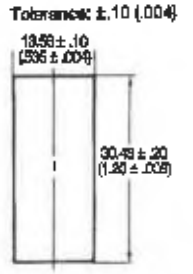




Terminal arrangement



Mounting holes
(Bottom view)

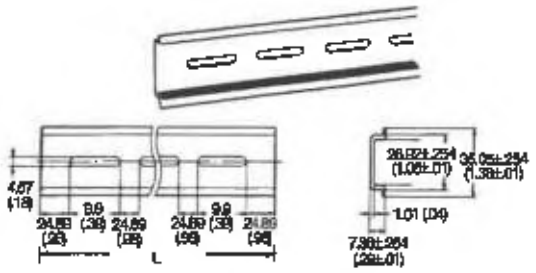


Recommended thickness of the panel is 1.52 (.06) to 2.03 (.08)

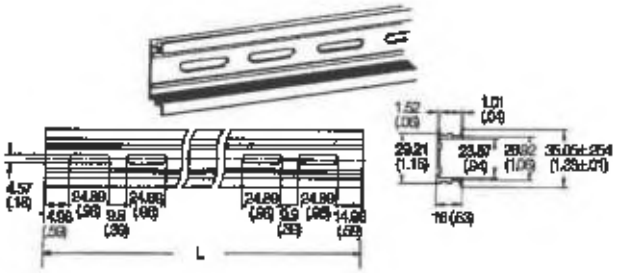
Note: 1. ▨ and [ ] indicate mounting orientation marks.
2. A tolerance of ±0.10 (0.004) applies to the above dimensions.

Unit: mm (inch)

Mounting track
PFP-100N, PFP-50N

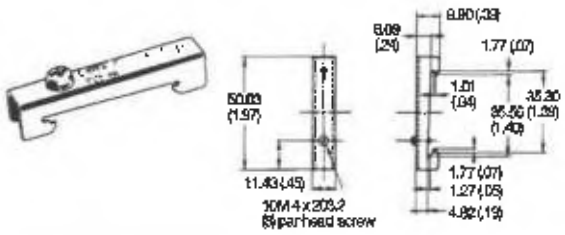


Mounting track
PFP-100N2

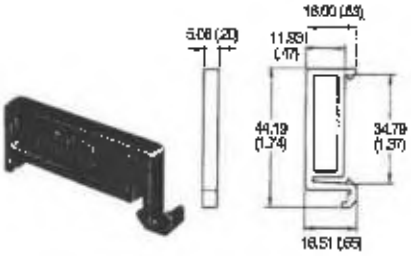


Note: 1. It is recommended that a panel thickness of 0.06 to 0.08 mm (0.002 to 0.003 in) be used.
2. L = Length
PFP-100N ..... L = 990.60 mm (39.00 in)
PFP-50N ..... L = 497.84 mm (19.60 in)
PFP-100N2 ..... L = 990.60 mm (39.00 in)

End plate
PFP-M

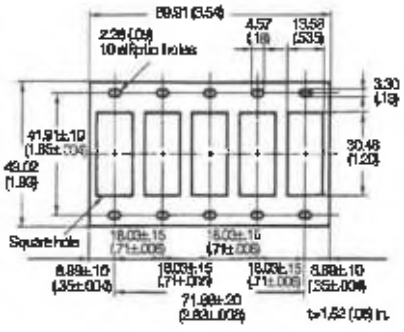


Spacer
PFP-S



Connecting socket mounting plate
P2R-P

Used to mount several connecting sockets side by side.



■ APPROVALS

UL (File No. E41643)/ CSA (File No. LR31928)

Type	Contact form	Coil rating	Contact ratings
G2R-1 G2R-14 G2R-1-H G2R-14-H G2R-1-S G2R-1-T	SPDT	3 to 110 VDC 3 to 240 VAC	10 A, 30 VDC (Resistive) 10 A, 250 VAC (General purpose) 10 A, 277 VAC (General purpose) TV-3, 120 VAC (NO contact) 360 WT, 120 VAC (Tungsten) 1/3 HP, 125 VAC (NO contact) 1/2 HP, 250 VAC (NO contact) 1/2 HP, 277 VAC (NO contact) TV-8, 120 VAC (NO contact, ASI contacts)
G2R-1A G2R-1A4 G2R-1A-H G2R-1A4-H G2R-1A-T	SPST-NO		
G2R-1-E	SPDT	3 to 110 VDC 3 to 240 VAC	20 A, 277 VAC (General purpose) 16 A, 30 VDC (Resistive) 16 A, 250 VAC (General purpose) 360 WT, 120 VAC (Tungsten) TV-3, 120 VAC (NO contact)
G2R-1A-E	SPST-NO		1/2 HP, 240 VAC 1 HP, 240 VAC TV-8, 120 VAC (NO contact, ASI contacts)
G2R-2 G2R-24 G2R-2- H G2R-24-H G2R-2-S G2R-2-A G2R-2A4 G2R-2A-H G2R-2A4-H	DPDT	3 to 110 VDC 3 to 240 VAC	10 A, 30 VDC (Resistive) 10 A, 277 VAC (General purpose) 5 A, 250 VAC (General purpose) TV-3, 120 VAC (NO contact) 1/6 HP, 120 VAC 1/3 HP, 240 VAC 1/3 HP, 265 VAC 250 VA, 120 VAC (Pilot duty)
G2RK-1	SPDT	3 to 24 VDC	10 A, 30 VDC (Resistive) 10 A, 250 VAC (General purpose) TV-3 (NO contact) 1/6 HP, 120 VAC 1/2 HP, 120 VAC A300 (Pilot duty)
G2RK-1A	SPST-NO		
G2RK-2	DPDT	3 to 24 VDC	5 A, 30 VDC (Resistive) 5 A, 250 VAC (General purpose) TV-3 (NO contact) 1/6 HP, 120 VAC 1/3 HP, 240 VAC
G2RK-2A	DPST-NO		

Note: 1. The rated values approved by each of the safety standards (e.g., UL and CSA) may be different from the performance characteristics individually defined in this catalog.
2. In the interest of product improvement, specifications are subject to change.

NOTE: DIMENSIONS ARE SHOWN IN MILLIMETERS. To convert millimeters to inches divide by 25.4.

OMRON

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Scarborough, Ontario M1B 5V8
416-286-6465

Cat. No. GC RLY7 01/00 Specifications subject to change without notice. Printed in the U.S.A.

General-purpose Relay

G2R-□-S

DSM_G2R-_-S_DS_E_3_1

Slim and Space-saving Power Plug-in Relay

- Lockable test button models now available.
- Built-in mechanical operation indicator.
- Provided with nameplate.
- AC type is equipped with a coil-disconnection self-diagnostic function (LED type).
- High switching power (1-pole: 10 A).
- Environment-friendly (Cd, Pb free).
- Wide range of Sockets also available.



Model Number Structure

Model Number Legend

G2R □-□ □ □ - □ □ -□

1 2 3 4 5 6 7

1. **Relay Function**
   Blank: General-purpose
2. **Number of Poles**
   1: 1 pole
   2: 2 poles
3. **Contact Form**
   Blank: SPDT
4. **Contact Type**
   Blank: Single
5. **Terminals**
   S: Plug-in
6. **Classification**
   Blank: General-purpose
   N: LED indicator
   D: Diode
   ND: LED indicator and diode
   NI: LED indicator with test button
   NDI: LED indicator and diode with test button
7. **Rated Coil Voltage**

Ordering Information

List of Models

Classification		Enclosure rating	Coil ratings	Contact form	
				SPDT	DPDT
Plug-in terminal	General-purpose	Unsealed	AC/DC	G2R-1-S	G2R-2-S
	LED indicator			G2R-1-SN	G2R-2-SN
	LED indicator with test button			G2R-1-SNI (S)	G2R-2-SNI (S)
	Diode		DC	G2R-1-SD	G2R-2-SD
	LED indicator and diode			G2R-1-SND	G2R-2-SND
	LED indicator and diode with test button			G2R-1-SNDI (S)	G2R-2-SNDI (S)

Note: When ordering, add the rated coil voltage and "(S)" to the model number. Rated coil voltages are given in the coil ratings table.
Example: G2R-1-S 12 VDC (S)------ New model
——— Rated coil voltage

Accessories (Order Separately)

Connecting Sockets

Applicable Relay model	Track/surface-mounting Socket		Back-mounting Socket	
	Screwless clamp terminal	Screw terminal	Terminals	Model
1 pole G2R-1-S(N)(D)(ND)(NI)(NDI)	• P2RF-05S (See note.) + (P2CM-S (option))	• P2RF-05-E • P2RF-05	PCB terminals	P2R-05P, P2R-057P
			Solder terminals	P2R-05A
2 poles G2R-2-S(N)(D)(ND)(NI)(NDI)	• P2RF-08S (See note.) + (P2CM-S (option))	• P2RF-08-E • P2RF-08	PCB terminals	P2R-08P, P2R-087P
			Solder terminals	P2R-08A

Note: Use of the P2CM Clip & Release Lever is recommended to ensure stable mounting.

Accessories for Screwless Clamp Terminal Socket (Option)

Name	Model
Clip & Release Lever	P2CM-S
Nameplate	R99-11 Nameplate for MY
Socket Bridge	P2RM-SR (for AC), P2RM-SB (for DC)

Mounting Tracks

Applicable Socket	Description	Model
Track-connecting Socket	Mounting track	50 cm (ℓ) x 7.3 mm (t): PFP-50N 1 m (ℓ) x 7.3 mm (t): PFP-100N 1 m (ℓ) x 16 mm (t): PFP-100N2
	End plate	PFP-M
	Spacer	PFP-S
Back-connecting Socket	Mounting plate	P2R-P*

*Used to mount several P2R-05A and P2R-08A Connecting Sockets side by side.

Specifications

Coil Ratings

Rated voltage		Rated current*		Coil resistance*	Coil Inductance (H) (ref. value)		Must operate voltage	Must release voltage	Max. voltage	Power consumption (approx.)
		50 Hz	60 Hz		Armature OFF	Armature ON	% of rated voltage			
AC	24 V	43.5 mA	37.4 mA	253 Ω	0.81	1.55	80% max.	30% max.	110%	0.9 VA at 60 Hz
	110 V	9.5 mA	8.2 mA	5,566 Ω	13.33	26.83				
	120 V	8.6 mA	7.5 mA	7,286 Ω	16.13	32.46				
	230 V	4.4 mA	3.8 mA	27,172 Ω	72.68	143.90				
	240 V	3.7 mA	3.2 mA	30,360 Ω	90.58	182.34				

Rated voltage		Rated current*	Coil resistance*	Coil Inductance (H) (ref. value)		Must operate voltage	Must release voltage	Max. voltage	Power consumption (approx.)
				Armature OFF	Armature ON	% of rated voltage			
DC	6 V	87.0 mA	69 Ω	0.25	0.48	70% max.	15% min.	110%	0.53 W
	12 V	43.2 mA	278 Ω	0.98	2.35				
	24 V	21.6 mA	1,113 Ω	3.60	8.25				
	48 V	11.4 mA	4,220 Ω	15.2	29.82				

*The rated current and coil resistance are measured at a coil temperature of 23°C with tolerances of ±10%.

Contact Ratings

Number of poles	1 pole		2 poles	
Load	Resistive load ($\cos\phi$ = 1)	Inductive load ($\cos\phi$ = 0.4; L/R = 7 ms)	Resistive load ($\cos\phi$ = 1)	Inductive load ($\cos\phi$ = 0.4; L/R = 7 ms)
Rated load	10 A at 250 VAC; 10 A at 30 VDC	7.5 A at 250 VAC; 5 A at 30 VDC	5 A at 250 VAC; 5 A at 30 VDC	2 A at 250 VAC; 3 A at 30 VDC
Rated carry current	10 A		5 A	
Max. switching voltage	440 VAC, 125 VDC		380 VAC, 125 VDC	
Max. switching current	10 A		5 A	
Max. switching power	2,500 VA, 300 W	1,875 VA, 150 W	1,250 VA, 150 W	500 VA, 90 W
Failure rate (reference value)	100 mA at 5 VDC		10 mA at 5 VDC	

Note: P level: $\lambda_{60} = 0.1 \times 10^{-6}$/operation

Characteristics

Item	1 pole	2 poles
Contact resistance	100 mΩ max.	
Operate (set) time	15 ms max.	
Release (reset) time	AC: 10 ms max.; DC: 5 ms max. (w/built-in diode: 20 ms max.)	AC: 15 ms max.; DC: 10 ms max. (w/built-in diode: 20 ms max.)
Max. operating frequency	Mechanical: 18,000 operations/hr Electrical: 1,800 operations/hr (under rated load)	
Insulation resistance	1,000 MΩ min. (at 500 VDC)	
Dielectric strength	5,000 VAC, 50/60 Hz for 1 min between coil and contacts*; 1,000 VAC, 50/60 Hz for 1 min between contacts of same polarity	5,000 VAC, 50/60 Hz for 1 min between coil and contacts*; 3,000 VAC, 50/60 Hz for 1 min between contacts of different polarity 1,000 VAC, 50/60 Hz for 1 min between contacts of same polarity
Vibration resistance	Destruction: 10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude) Malfunction: 10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5 mm double amplitude)	
Shock resistance	Destruction: 1,000 m/s² Malfunction: 200 m/s² when energized; 100 m/s² when not energized	
Endurance	Mechanical: AC coil: 10,000,000 operations min.; DC coil: 20,000,000 operations min. (at 18,000 operations/hr) Electrical: 100,000 operations min. (at 1,800 operations/hr under rated load) (DC coil type)	
Ambient temperature	Operating: −40°C to 70°C (with no icing or condensation)	
Ambient humidity	Operating: 5% to 85%	
Weight	Approx. 21 g	

Note: Values in the above table are the initial values.
*4,000 VAC, 50/60 Hz for 1 minute when the P2R-05A or P2R-08A Socket is mounted.

Approved Standards

UL 508 (File No. E41643)

Model	Contact form	Coil ratings	Contact ratings	Operations
G2R-1-S	SPDT	5 to 110 VDC 5 to 240 VAC	10 A, 30 VDC (resistive) 10 A, 250 VAC (general use) TV-8 (NO contact only)	6×10^5
G2R-2-S	DPDT		5 A, 30 VDC (resistive) 5 A, 250 VAC (general use) TV-8 (NO contact only)	6×10^5

CSA 22.2 No.0, No.14 (File No. LR31928)

Model	Contact form	Coil ratings	Contact ratings	Operations
G2R-1-S	SPDT	5 to 110 VDC 5 to 240 VAC	10 A, 30 VDC (resistive) 10 A, 250 VAC (general use) TV-8 (NO contact only)	6×10^5
G2R-2-S	DPDT		5 A, 30 VDC (resistive) 5 A, 250 VAC (general use) TV-8 (NO contact only)	6×10^5

IEC/VDE (EN61810)

Contact form	Coil ratings	Contact ratings	Operations
1 pole	6, 12, 24, 48 VDC 24, 110, 120, 230, 240 VAC	5 A, 440 VAC ($\cos\phi$ = 1.0) 10 A, 250 VAC ($\cos\phi$ = 1.0) 10 A, 30 VDC (0 ms)	100×10^3
2 poles	6, 12, 24, 48 VDC 24, 110, 120, 230, 240 VAC	5 A, 250 VAC ($\cos\phi$ = 1.0) 5 A, 30 VDC (0 ms)	100×10^3

LR

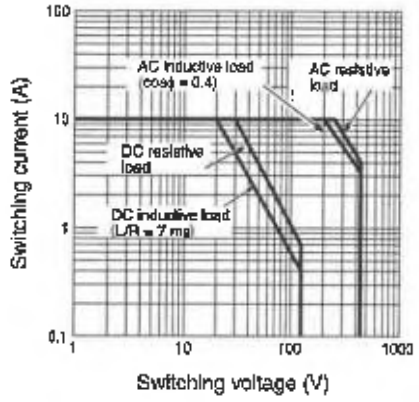
Number of poles	Coil ratings	Contact ratings	Operations
1 pole	5 to 110 VDC 5 to 240 VDC	10 A, 250 VAC (general use) 7.5 A, 250 VAC (PF0.4) 10 A, 30 VDC (resistive) 5A, 30VDC (L/R=7ms)	100×10^3
2 poles	5 to 110 VDC 5 to 240 VDC	5 A, 250 VAC (general use) 2 A, 250 VAC (PF0.4) 5 A, 30 VDC (resistive) 3A, 30VDC (L/R=7ms)	100×10^3

Engineering Data

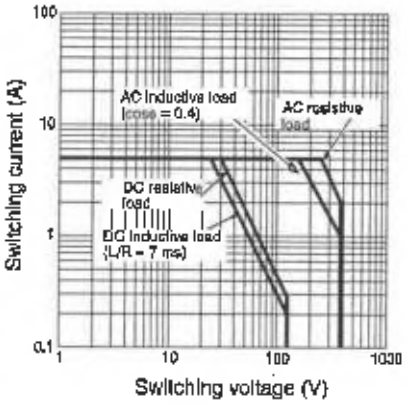
Maximum Switching Power

Plug-in Relays

G2R-1-S



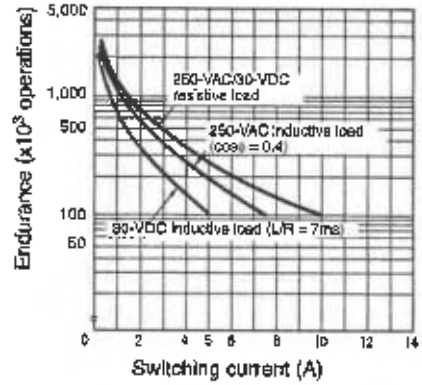
G2R-2-S



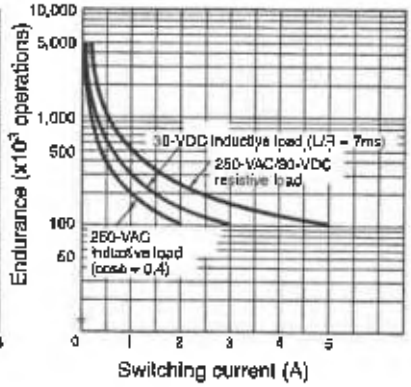
Endurance

Plug-in Relays

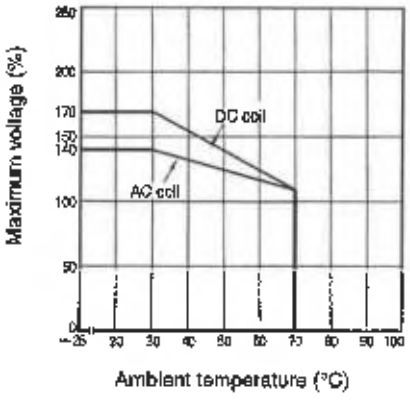
G2R-1-S



G2R-2-S



Ambient Temperature vs Maximum Coil Voltage



Note: The maximum voltage refers to the maximum value in a varying range of operating power voltage, not a continuous voltage.

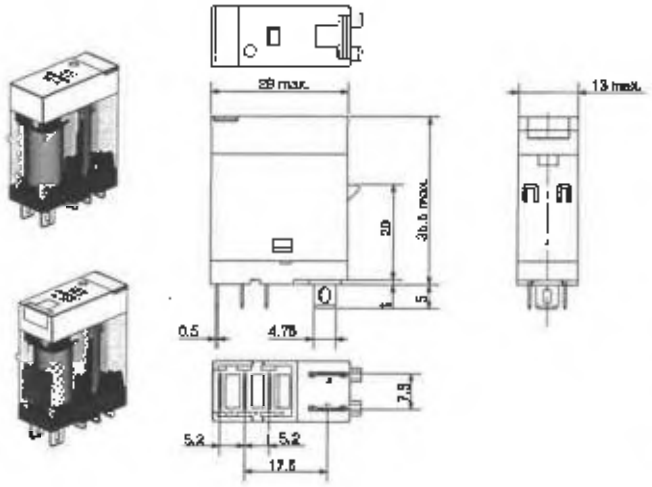
Dimensions

Note: All units are in millimeters unless otherwise indicated.

Relays with Plug-in Terminals

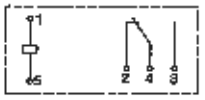
SPDT Relays

G2R-1-S, G2R-1-SN, G2R-1-SNI (S)
G2R-1-SD, G2R-1-SND, G2R-1-SNDI (S)

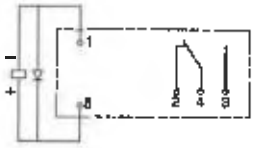


Terminal Arrangement/Internal Connections (Bottom View)

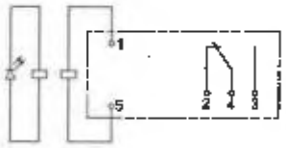
G2R-1-S



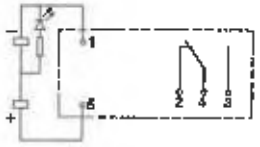
G2R-1-SD (DC)



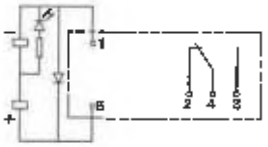
G2R-1-SN, G2R-1-SNI (AC)



G2R-1-SN, G2R-1-SNI (DC)

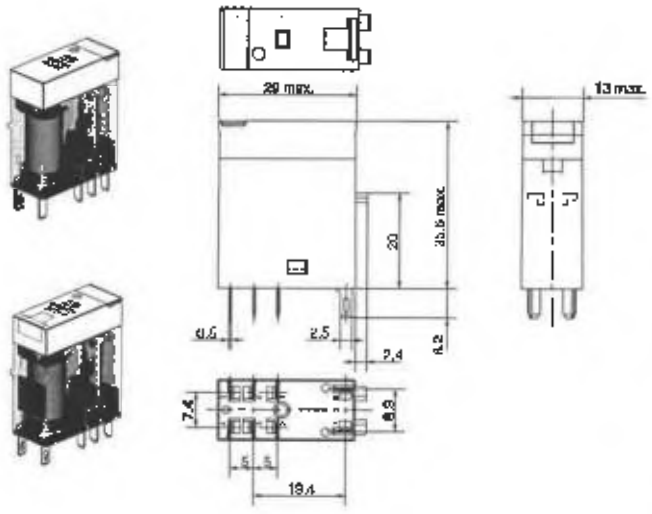


G2R-1-SND, G2R-1-SNDI (DC)



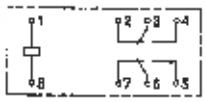
DPDT Relays

G2R-2-S, G2R-2-SN, G2R-2-SNI (S)
G2R-2-SD, G2R-2-SND, G2R-2-SNDI (S)

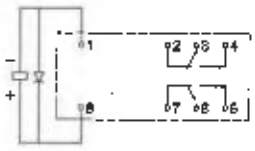


Terminal Arrangement/Internal Connections (Bottom View)

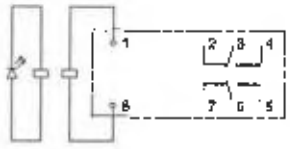
G2R-2-S



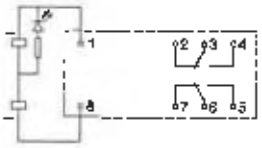
G2R-2-SD (DC)



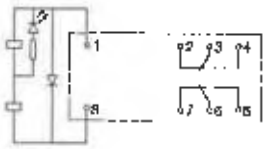
G2R-2-SN, G2R-2-SNI (AC)



G2R-2-SN, G2R-2-SNI (DC)

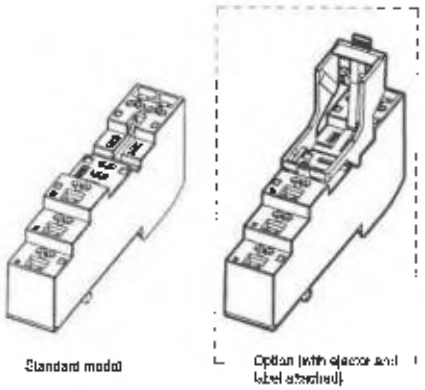


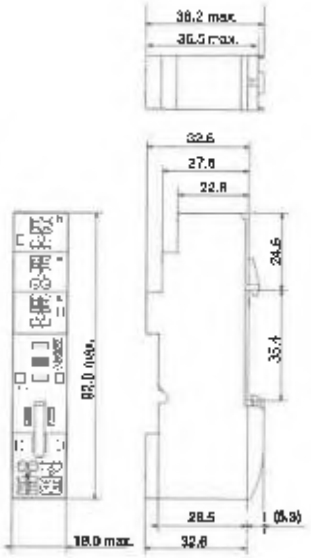
G2R-2-SND, G2R-2-SNDI (DC)



Track/Surface Mounting Sockets

P2RF-05-S

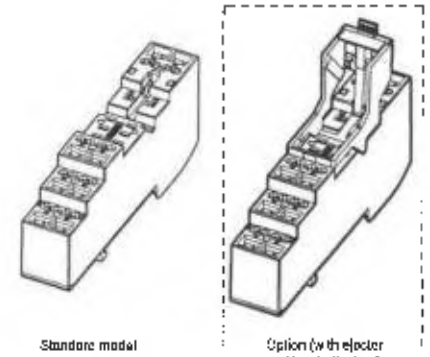


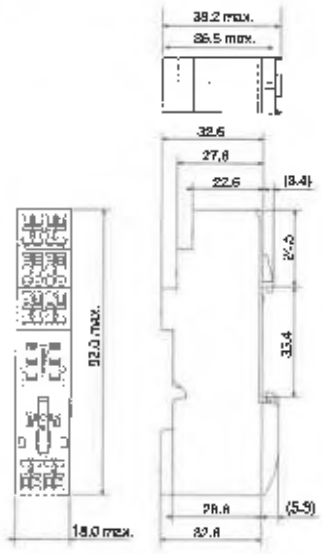


Terminal Arrangement (Top View)

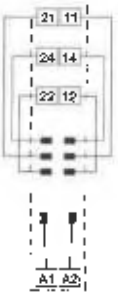


P2RF-08-S



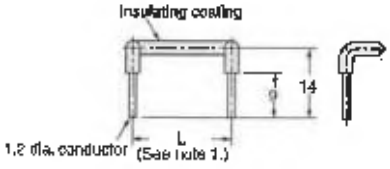


Terminal Arrangement (Top View)

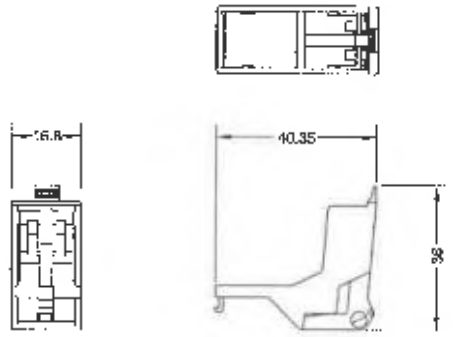


Accessories for P2RF-□-S

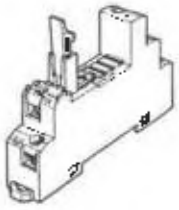
Socket Bridge

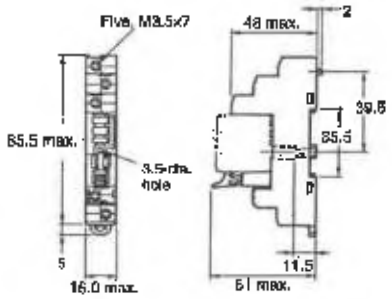


Clip and Release Lever

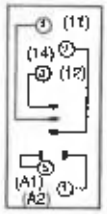


P2RF-05-E

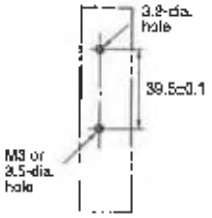




Terminal Arrangement (Top View)

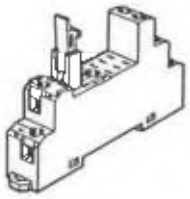


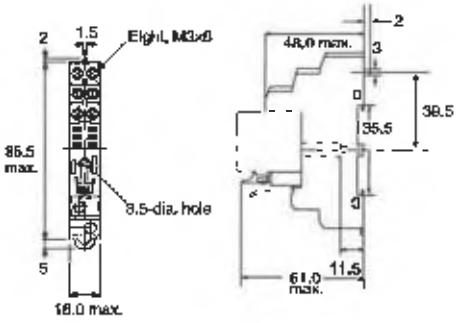
Mounting Holes (for Surface Mounting)



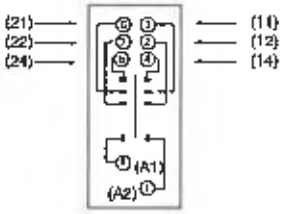
Note: Pin numbers in parentheses apply to DIN standard.

P2RF-08-E

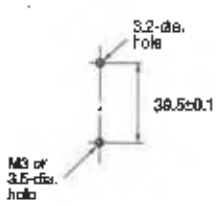




Terminal Arrangement (Top View)

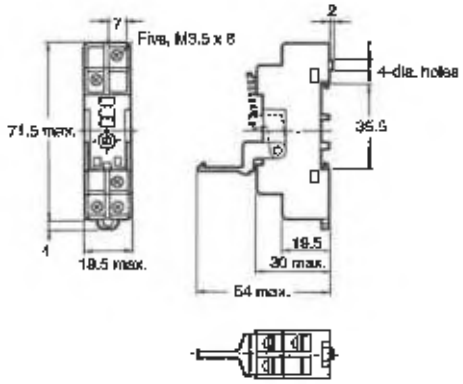


Mounting Holes (for Surface Mounting)



P2RF-05

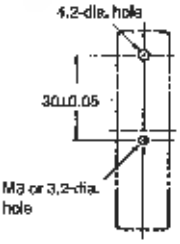




Terminal Arrangement (Top View)

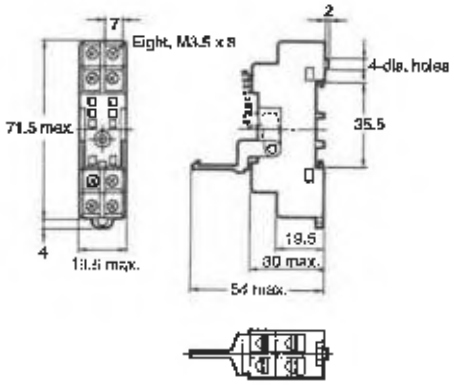


Mounting Holes (for Surface Mounting)

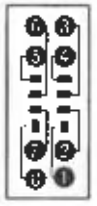


P2RF-08

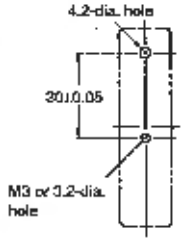




Terminal Arrangement (Top View)

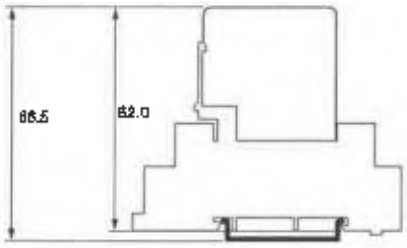


Mounting Holes (for Surface Mounting)

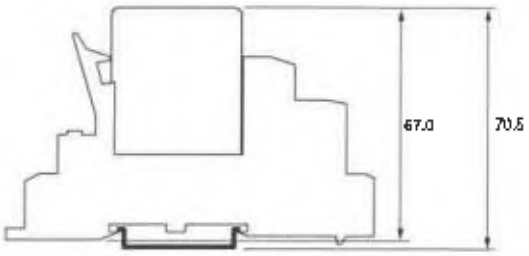


Mounting Height of Relay with Track/Surface Mounting Sockets

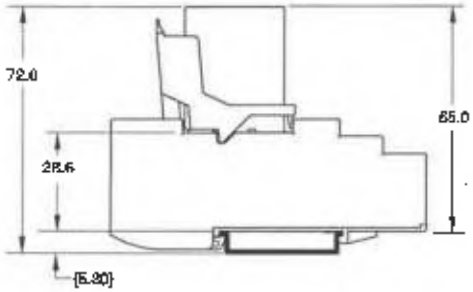
P2RF-□



P2RF-□-E



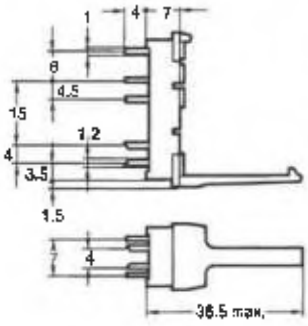
P2RF-□-S



Back-connecting Sockets

P2R-05P (1-pole)



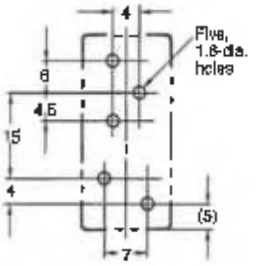


Terminal Arrangement (Bottom View)



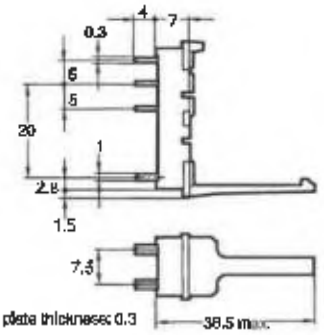
Mounting Holes

Tolerance: ±0.1



P2R-08P (2-pole)

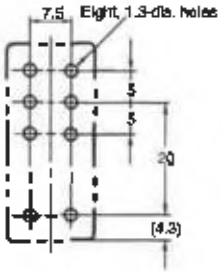




Terminal Arrangement (Bottom View)

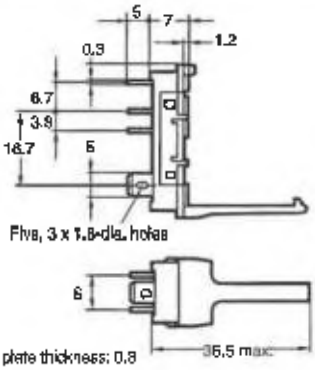


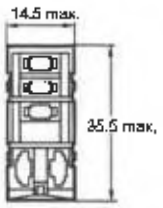
Mounting Holes



P2R-05A (1-pole)



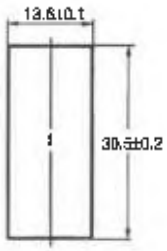




Terminal Arrangement (Bottom View)



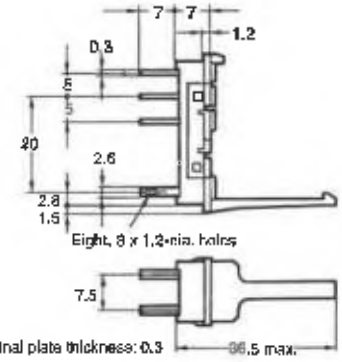
Panel Cutout

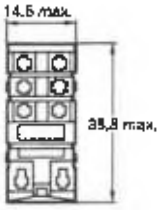


Recommended thickness of the panel is 1.6 to 2.0 mm

P2R-08A (2-pole)

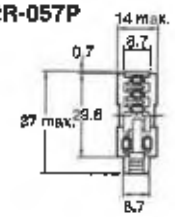


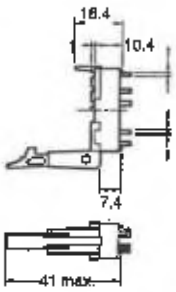






P2R-057P

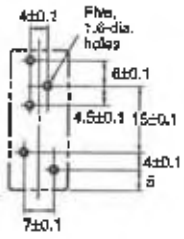




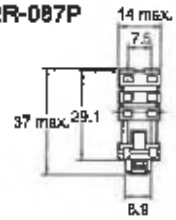
Terminal Arrangement (Bottom View)

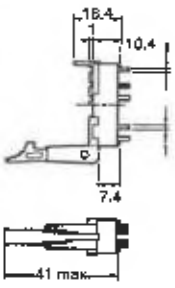


Mounting Holes



P2R-087P

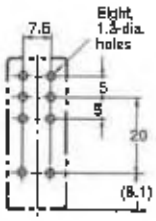




Terminal Arrangement (Bottom View)

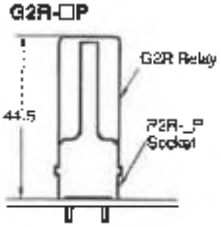


Mounting Holes

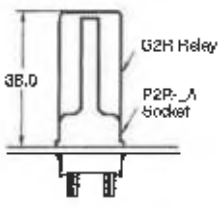


Mounting Height of Relay with Back-connecting Sockets

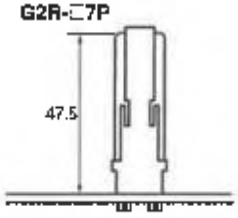
G2R-□P



G2R-□A

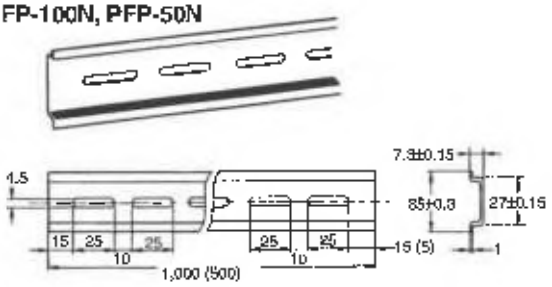


G2R-□7P

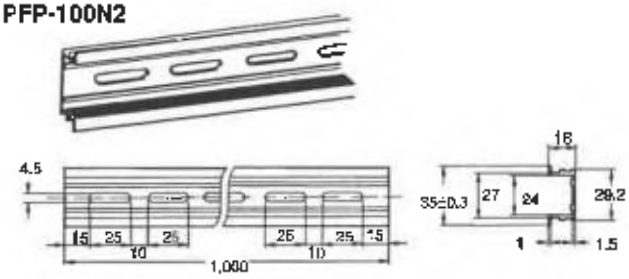


Mounting Tracks

PFP-100N, PFP-50N



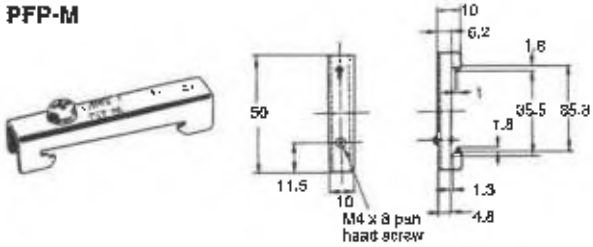
PFP-100N2



It is recommended to use a panel 1.6 to 2.0 mm thick.

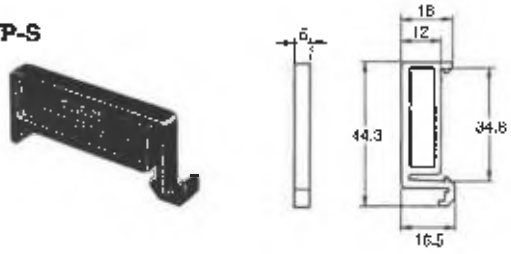
End Plate

PFP-M



Spacer

PFP-S



Precautions

⚠ Cation

- Do not use the test button for any purpose other than testing. Be sure not to touch the test button accidentally as this will turn the contacts ON. Before using the test button, confirm that circuits, the load, and any other connected item will operate safely.
- Check that the test button is released before turning ON relay circuits.
- If the test button is pulled out too forcefully, it may bypass the momentary testing position and go straight into the locked position.
- Use an insulated tool when you operate the test button.

Precautions for P2RF-□-S Connection

- Do not move the screwdriver up, down, or from side to side while it is inserted in the hole. Doing so may cause damage to internal components (e.g., deformation of the clamp spring or cracks in the housing) or cause deterioration of insulation.
- Do not insert the screwdriver at an angle. Doing so may break the side of the socket and result in a short-circuit.

Read and Understand This Catalog

Please read and understand this catalog before purchasing the products. Please consult your OMRON representative if you have any questions or comments.

Warranty and Limitations of Liability

WARRANTY

OMRON's exclusive warranty is that the products are free from defects in materials and workmanship for a period of one year (or other period if specified) from date of sale by OMRON.

OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, REGARDING NON-INFRINGEMENT, MERCHANTABILITY, OR FITNESS FOR PARTICULAR PURPOSE OF THE PRODUCTS. ANY BUYER OR USER ACKNOWLEDGES THAT THE BUYER OR USER ALONE HAS DETERMINED THAT THE PRODUCTS WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE. OMRON DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED.

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IN NO EVENT SHALL OMRON BE RESPONSIBLE FOR WARRANTY, REPAIR, OR OTHER CLAIMS REGARDING THE PRODUCTS UNLESS OMRON'S ANALYSIS CONFIRMS THAT THE PRODUCTS WERE PROPERLY HANDLED, STORED, INSTALLED, AND MAINTAINED AND NOT SUBJECT TO CONTAMINATION, ABUSE, MISUSE, OR INAPPROPRIATE MODIFICATION OR REPAIR.

Application Considerations

SUITABILITY FOR USE

OMRON shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of products in the customer's application or use of the products.

At the customer's request, OMRON will provide applicable third party certification documents identifying ratings and limitations of use that apply to the products. This information by itself is not sufficient for a complete determination of the suitability of the products in combination with the end product, machine, system, or other application or use.

The following are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible uses of the products, nor is it intended to imply that the uses listed may be suitable for the products:

- Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this catalog.
- Nuclear energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
- Systems, machines, and equipment that could present a risk to life or property.

Please know and observe all prohibitions of use applicable to the products.

NEVER USE THE PRODUCTS FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCTS ARE PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

PROGRAMMABLE PRODUCTS

OMRON shall not be responsible for the user's programming of a programmable product, or any consequence thereof.

Disclaimers

CHANGE IN SPECIFICATIONS

Product specifications and accessories may be changed at any time based on improvements and other reasons.

It is our practice to change model numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the products may be changed without any notice. When in doubt, special model numbers may be assigned to fix or establish key specifications for your application on your request. Please consult with your OMRON representative at any time to confirm actual specifications of purchased products.

DIMENSIONS AND WEIGHTS

Dimensions and weights are nominal and are not to be used for manufacturing purposes, even when tolerances are shown.

PERFORMANCE DATA

Performance data given in this catalog is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of OMRON's test conditions, and the users must correlate it to actual application requirements. Actual performance is subject to the OMRON Warranty and Limitations of Liability.

ERRORS AND OMISSIONS

The information in this document has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical, or proofreading errors, or omissions.

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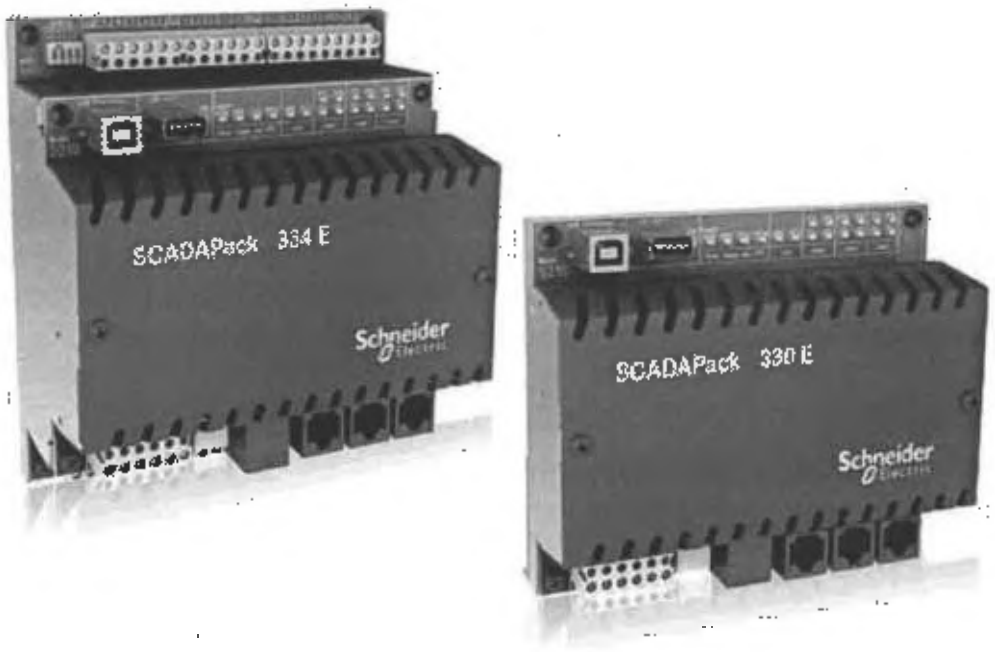
In the Interest of product improvement, specifications are subject to change without notice.

OMRON Corporation
Industrial Automation Company

http://www.ia.omron.com/

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SCADAPack 330E | 334E
Smart RTU



Schneider Electric

Built on a native DNP3 architecture, the SCADAPack 330E and 334E feature high-performance 32-bit processing, high-speed LAN, serial and USB communications, integrated power supply, advanced power-management, and a wide range of digital and analog I/O in a cost-effective, compact Smart RTU. The level 4 compliant DNP3 protocol comes with optional Secure Authentication and/or AGA-12 Encryption to improve message security for critical operations, and support for the open protocols of Modbus and IEC60870-5 is also offered. The SCADAPack 330E / 334E can be programmed locally or remotely using the IEC61131-3 programming language and is optionally configurable directly from ClearSCADA host software.

This product offers a small footprint, enabling compact mounting enclosures for applications where space is at a premium. The SCADAPack 330E is well suited for applications that require a communications hub but no I/O, while the SCADAPack 334E adds a variety of integrated I/O. Note that the SCADAPack 334E has the same I/O offering as the SCADAPack 314E but includes an Ethernet port and a third serial port.

Product Data Sheet SCADAPack 330E | 334E
Specifications

>	P330E: S210 controller board only
Controller	
Processors	• CPU: 32-bit ARM7 microcontroller, 32 MHz clock, integrated watchdog timer • Microcontroller co-processor, 20 MHz clock
Memory	16MB FLASH ROM, 4MB CMOS RAM, 4kB EEPROM
Non-Volatile RAM	CMOS SRAM with lithium battery retains contents for 2 years with no power
Event Logging Capacity	20,000 events
Maximum Database Points	1,000 typical
I/O	
Counter Inputs	• 1, 0-10Hz or 0-5kHz (dry contact) • 2, 0-10kHz (turbine or dry contact)
Communications	
Serial Ports COM1, COM2	• RS-232 port, 8-pin modular RJ45 jack, full or half duplex, or • RS-485 port, 2-wire, half duplex
Serial Port COM3	• RS-232 port, 8-pin modular RJ45 jack, full or half duplex with RTS/CTS control and operator interface power control
Baud Rates	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200
Serial Protocols	DNP3 Slave, DNP3 Master, IEC60870-5-101 Slave, IEC60870-5-103 Master, Modbus RTU Master, Modbus RTU Slave, DF1
Ethernet Port	RJ45, 10/100BaseT
Ethernet Protocols	DNP3 in TCP Master/Slave, DNP3 in UDP Master/Slave, Modbus/TCP Client and Server, IEC60870-5-104 Slave, NTP Server, Telnet Server, FTP Server, BOOTP Server
USB Peripheral Port	USB 2.0 compliant "B"-type receptacle, DNP3 protocol
Wireless[1]	Spread spectrum radio at 900MHz[2] and 2.4GHz[2]
General	
I/O Terminations	8-pole removable terminal block, 12 to 22AWG, 15A contacts
Dimensions	5.65 inch (144mm) wide, 5.00 inch (127mm) high, 1.80 inch (45mm) deep
Packaging	Corrosion resistant zinc-plated steel with black enamel paint
Environment	5% RH to 95%, non-condensing, –40°C (-40°F) to 70°C (158°F)
Power Input	• 11 - 30VDC, 3.5W typical • Add 25 to 100mW when enabling the LEDs • 12W at 24V maximum, 5V supply fully loaded
Warranty	3 years on parts and labor
Certifications	
Hazardous Locations North America	Suitable for use in Class I, Division 2, Groups A, B, C and D Hazardous Locations. Temperature Code T4 CSA certified to the requirements of: • CSA Std. C22.2 No. 213-M1987 - Hazardous Locations. • UL Std. No. 1604 - Hazardous (Classified) Locations.
Hazardous Locations - Europe	ATEX II 3G, Ex nA IIC T4 per EN 60079-15, protection type n (Zone 2). Does not include Wireless versions.
Hazardous Locations	IECEx, Ex nA IIC T4 per IEC 60079-15, protection type n (Zone 2) Does not include Wireless versions.

1 Available only with optional integrated wireless modules or with stand-alone wireless modules.
2 Not applicable in all countries.

Disclaimer: Schneider Electric reserves the right to change product specifications. For more information visit www.schneider-electric.com.

Product Data Sheet SCADAPack 330E | 334E
Specifications

>	P334E: 5210 controller board and integrated 5607 I/O board
Controller	
Processors	• CPU: 32-bit ARM7 microcontroller, 32 MHz clock, integrated watchdog timer • Microcontroller co-processor, 20 MHz clock
Memory	16MB FLASH ROM, 4MB CMOS RAM, 4kB EEPROM
Non-Volatile RAM	CMOS SRAM with lithium battery retains contents for 2 years with no power
Event Logging Capacity	20,000 events
Maximum Database Points	1,000 typical
I/O	
Analog Inputs	8, 0-20/4-20mA / 0-5/0-10V (15-bit) software configurable
Analog Outputs	• Standard: None • 2, 0-20/4-20mA (12-bit) with optional 6305 on 5607 I/O board
Digital I/O	• 16, 12/24V, 48V, 115/125V, 240V digital inputs • 10 relay outputs: dry contact or DC solid state, dry contact rating: 3A, 30VDC or 240VAC (resistive), DC solid state rating: 3A, 60 VDC
Counter Inputs	1, 0-10Hz or 0-5kHz (dry contact); 2, 0-10kHz (turbine or dry contact)
Communications	
Serial Ports COM1, COM2	• RS-232 port, 8-pin modular RJ45 jack, full or half duplex, or • RS-485 port, 2-wire, half duplex
Serial Port COM3	RS-232 port, 8-pin modular RJ45 jack, full or half duplex with RTS/CTS control and operator interface power control
Baud Rates	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200
Serial Protocols	DNP3 Slave, DNP3 Master, IEC60870-5-101 Slave, IEC60870-5-103 Master, Modbus RTU Master, Modbus RTU Slave, DF1
Ethernet Port	RJ45, 10/100BaseT
Ethernet Protocols	DNP3 in TCP Master/Slave, DNP3 in UDP Master/Slave, Modbus/TCP Client and Server, IEC60870-5-104 Slave, NTP Server, Telnet Server, FTP Server, BOOTP Server
USB Peripheral Port	USB 2.0 compliant "B"-type receptacle, DNP3 protocol
Wireless[1]	Spread spectrum radio at 900MHz[2] and 2.4GHz[2]
General	
I/O Terminations	5, 6 and 9-pole removable terminal blocks, 12 to 22AWG, 15A contacts
Dimensions	5.65 inch (144mm) wide, 6.50 inch (165mm) high, 2.60 inch (72mm) deep
Packaging	Corrosion resistant zinc-plated steel with black enamel paint
Environment	5% RH to 95%, non-condensing, –40°C (–40°F) to 70°C (158°F)
Power	
5210 Controller Board	• 11 - 30VDC, 8.5W typical • Add 25 to 100mW when enabling the LEDs • 12W at 24V maximum, 5V supply fully loaded
5607 I/O Module	• 11 - 30VDC, 10.3mA plus analog outputs • 325mA (max.) at 5V required from 5210 controller board
Warranty	3 years on parts and labor
Certifications	
Hazardous Locations North America	Suitable for use in Class I, Division 2, Groups A, B, C and D Hazardous Locations. Temperature Code T4 CSA certified to the requirements of: • CSA Std. C22.2 No. 213-M1987 – Hazardous Locations. • UL Std. No. 1604 - Hazardous (Classified) Locations.
Hazardous Locations – Europe	ATEX II 3G, Ex nA IIC T4 per EN 60079-15, protection type n (Zone 2). Does not include Wireless versions.
Hazardous Locations	IECEx, Ex nA IIC T4 per IEC 60079-15, protection type n (Zone 2) Does not include Wireless versions.

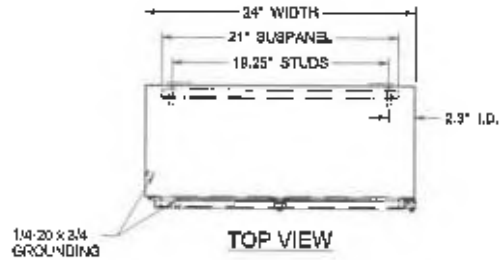
1 Available only with optional integrated wireless modules or with stand-alone wireless modules.
2 Not applicable in all countries.

Disclaimer: Schneider Electric reserves the right to change product specifications. For more information visit www.schneider-electric.com.

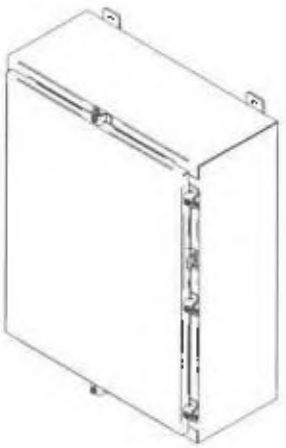
Product Data Sheet SCADAPack 330E | 334E
Model Code

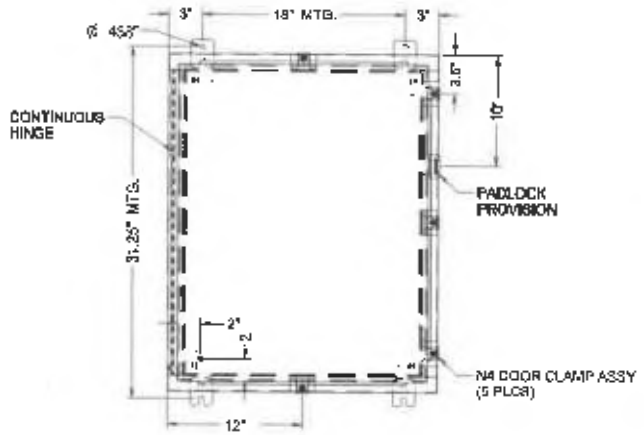
	TBUP334-EA55-AB00 represents a sample code for a SCADAPack 334E with 12V dry contact relay outputs
Model	**Select: Controller**
TBUP330	SCADAPack 330E , 32 Bit controller, 3 Accumulators
TBUP334	SCADAPack 334E, with Model 5607 I/O board, comes with above I/O plus 8 Analog I/P, 16 Digital I/P and 10 Digital O/P
Code	**Select: Platform**
E	E Firmware platform (Configuration Software included), executes two IEC61131-3 kernels, Workbench required
Code	**Select: SCADA Security**
A	None
B	AGA-12 Encryption for DNP3
C	DNP3 Secure Authentication SAv2
D	DNP3 Secure Authentication with AGA-12
	Note: The Security Administrator Application must be purchased to generate and manage security keys for Secure Authentication and/or Encryption (AGA-12)
Code	**Select: Protocol Option**
5	Modbus, DNP3, DF1, Modbus/TCP, TCP/IP, IEC 60870-5-101/104 Slave
6	Adds IEC 60870-5-103 Master, Protection Relay Protocol (for data transmission with IEDs)
Code	**Select: License Option**
5	DNP3 Data Concentrator License (limit of 500 points from 10 IEDs), supports multiple DNP3 Masters (up to 3 Masters)
Code	**Select: Analog Inputs**
A	P330 : None P334 : adds 8 selectable as 0-20mA, 4-20mA, 0-5V or 0-10V
Code	**Select: Digital Inputs/Outputs**
A	P330 : None
B	P334 : 16 Digital Inputs (12/24V) and 10 Dry Contact Relay outputs
D	P334 : 16 Digital Inputs (120V) and 10 Dry Contact Relay outputs
F	P334 : 16 Digital Inputs (12/24V) and 10 Solid State Relay outputs, ATEX Certified (with no integrated radio)
H	P334 : 16 Digital Inputs (120V) and 10 Solid State Relay outputs
Code	**Select: Analog Outputs**
0	None
1	P334 only : 2 channel Analog Output option, 0-20 mA
Code	**Select: Integrated Communication Interfaces**
0	None
	FreeWave & MDS Radios (requires one RS232 port)
1	900Mhz FreeWave Spread Spectrum Radio
A	900MHz MDS Spread Spectrum Radio
	Trio Radios - 900MHz (requires one RS232 port)
B	900MHz Trio Spread Spectrum Radio with encryption, 902-928MHz (FCC / IC)
C	900MHz Trio Spread Spectrum Radio with encryption, 915-928MHz (AUS)
D	900MHz Trio Spread Spectrum Radio, 915-928MHz (BRAZIL)
E	900MHz Trio Spread Spectrum Radio, 921-928MHz (NZ)
	Trio Radios - 2.4GHz (requires one RS232 port)
J	2.4GHz Trio Spread Spectrum Radio, ETSI/100mW, ATEX (EUROPE)
K	2.4GHz Trio Spread Spectrum Radio with Encryption, 500mW (CANADA, USA & AUSTRALIA)
L	2.4GHz Trio Spread Spectrum Radio, 500mW (OUTSIDE OF EUROPE, CANADA, USA & AUSTRALIA)

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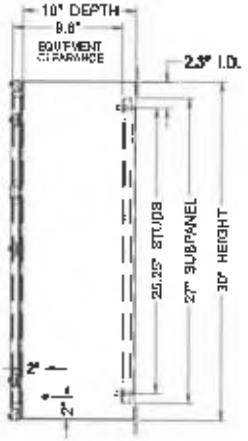


TOP VIEW





FRONT VIEW



RIGHT SIDE VIEW

SUBPANEL(S) SHOWN FOR REFERENCE ONLY AND IS ORDERED AS A SEPARATE LINE ITEM OR AS A SEPARATE PURCHASE

ORTHOGRAPHIC VIEWS ARE DRAWN AT 1:1 SCALE (PRINTED SCALE MAY VARY)

DIMENSIONS APPLY BEFORE SURFACE TREATMENT	
TOLERANCES UNLESS OTHERWISE SPECIFIED	
0.xxx	± 0.010
0.xx	± 0.05
0.x	± 0.1
x	± 0.25
xx°	1°

	NAME	DATE
DRAWN BY:	JPDG	11/03/14

Schaefer's ELECTRICAL ENCLOSURES

THIRD ANGLE PROJECTION

CUSTOMER: CUSTOMER NAME

TITLE: N4X SINGLE DOOR WALL MOUNT ENCLOSURE 30.000"H x 24.000"W x 10.000"D

REVISION	SEE TRAVELER	COST CENTER: 00-00-00

FILE: SPN4SS-302410 Approval

CUST. DWG. ____ REV. .

MAT: 14GA. 304 SS

SHEET 1 OF 1

Transient Discriminating Filter

TDF3A120V

CRITEC® Transient Discriminating Filter



Ordering Information

Region	Part / Article #
North America	TDF3A120V
Latin America	TDF3A120V
Europe/Middle East/Africa	700001
Asia/Australia	TDF3A120V

Application Information

- The TDF series has been specifically designed for process control applications to protect the switched mode power supply units on devices such as PLC controllers, SCADA systems and motor controllers. Units are UL® Recognized and available for 3A, 10A and 20A loads and suitable for 110-120VAC/DC and 220-240VAC circuits.
- The TDF is a series connected, single phase surge filter providing an aggregate surge capacity of 50kA (8/20µs) across L-N, L-PE, and N-PE. The low pass filter provides up to 65dB of attenuation to voltage transients. Not only does this reduce the residual let-through voltage, but it also helps further reduce the steep voltage rate-of-rise providing superior protection for sensitive electronic equipment.

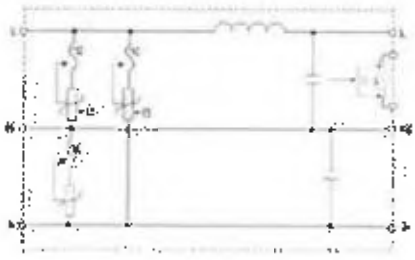
Features

- Transient Discriminating (TD) Technology provides increased service life
- In-line series protection
- High efficiency low pass sine wave filtering – ideal for the protection of switched mode power supplies
- Three modes of protection: L-N, L-PE & N-PE
- 35 mm DIN rail mount – simple installation
- LED status indication and opto-isolated output – for remote status monitoring
- CE, UL® 1449 Edition 3 Listed

Product Specifications

Approvals	C-Tick CE (NOM 3A, 120V) CSA® 22.2 UL® 1283 UL® 1449 Ed. 3 Recognized Component Type 2
Back-up Overcurrent Protection	3 A
Connection	1 mm² to 6 mm² (#18AWG to #10)
Depth	68.00 mm
Distribution System	TN-C-S TN-S

Enclosure **Filtering**	DIN 43 880, UL94V-0 thermoplastic, IP 20 (NEMA-1) -62 dB @ 100 kHz
Frequency	0-60 Hz
Height	90.00 mm
Humidity	0 % RH [Min] 90 % RH [Max]
Max Continuous Operating Voltage Uc - AC	170 V
Max Discharge Current	10 kA 8/20 µs N-PE 20 kA 8/20 µs L-N 20 kA 8/20 µs L-PE
Max Line Current, IL	3.0 A [Max]
Module Width	4 M
Mounting	35 mm top hat DIN rail
Nominal Voltage - AC	110 V [Min] 120 V [Max]
Operating Current	135.000 mA
Product Series	CRITEC® Transient Discriminating Filter
Protection Modes	All modes protected
Stand-off Voltage	240 V
Status	Green LED, On=Ok. Isolated opto-coupler output
Surge Rated to Meet	ANSI®/IEEE® C62.41.2 Cat A, Cat B, Cat C
Technology	In-line series low pass sine wave filter TD Technology
Temperature	-35°C [Min] 55°C [Max]
Voltage Protection Level (8/20µs)	250 V @ 3 kA 500 V @ 500 A
Weight	0.70 kg
Width	72.00 mm



WARNING

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Due to a policy of continued product development, specifications are subject to change without notice.

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UTB SP

CRITEC® Universal Transient Barrier

Features

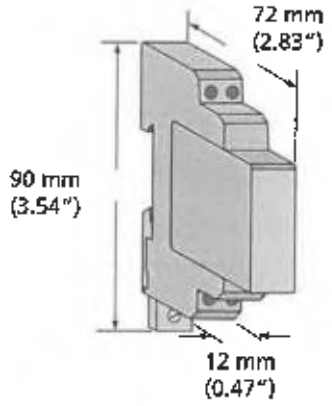
- General purpose barrier – protection of low voltage circuits and transducers
- Separate plug and base design - hot swappable feature allows ease of module replacement
- Multi stage protection – fine over-voltage protection, helps ensure lowest residual surge voltages reach sensitive equipment
- Common-mode and differential-mode protection – protects against both possible surge conditions
- Ease of grounding – through DIN mounting rail or via terminal
- Surge rating to 20kA 8/20µs – ideal for exposed wiring
- Allows for protection 25 analog signals or 50 digital signals per linear foot of DIN rail space

The UTB series provides transient protection for equipment from surges induced onto balanced pair signal lines. They are well suited to the protection of industrial equipment such as PLCs and SCADA systems. Other uses include the protection of fire and security alarms, industrial monitoring and control equipment.

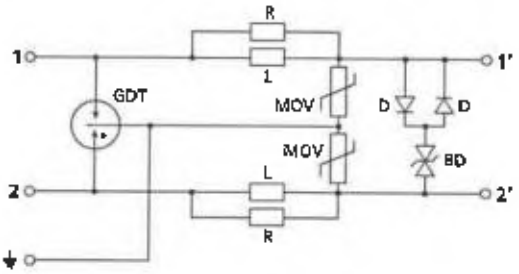


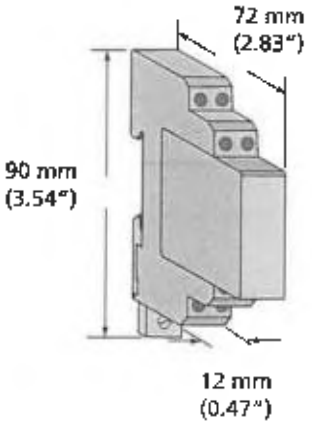
The UTB-SP (single pair) employs a hybrid multistage clamping circuit, to help ensure the best possible protection to sensitive electronic equipment while maintaining a minimum of line interference and insertion loss.

The UTB-SPG (single pair - isolated ground) provides isolation between the shield/ common return and protective ground at the point of connection.

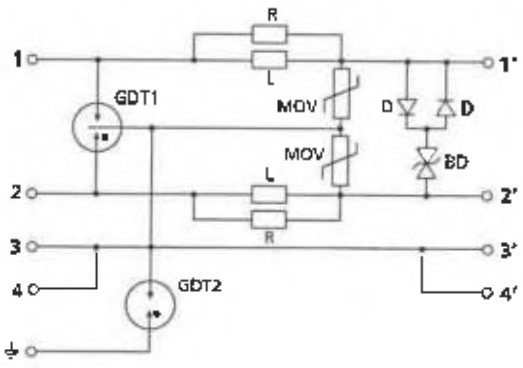


UTB SP





UTB SPG



UTB SP

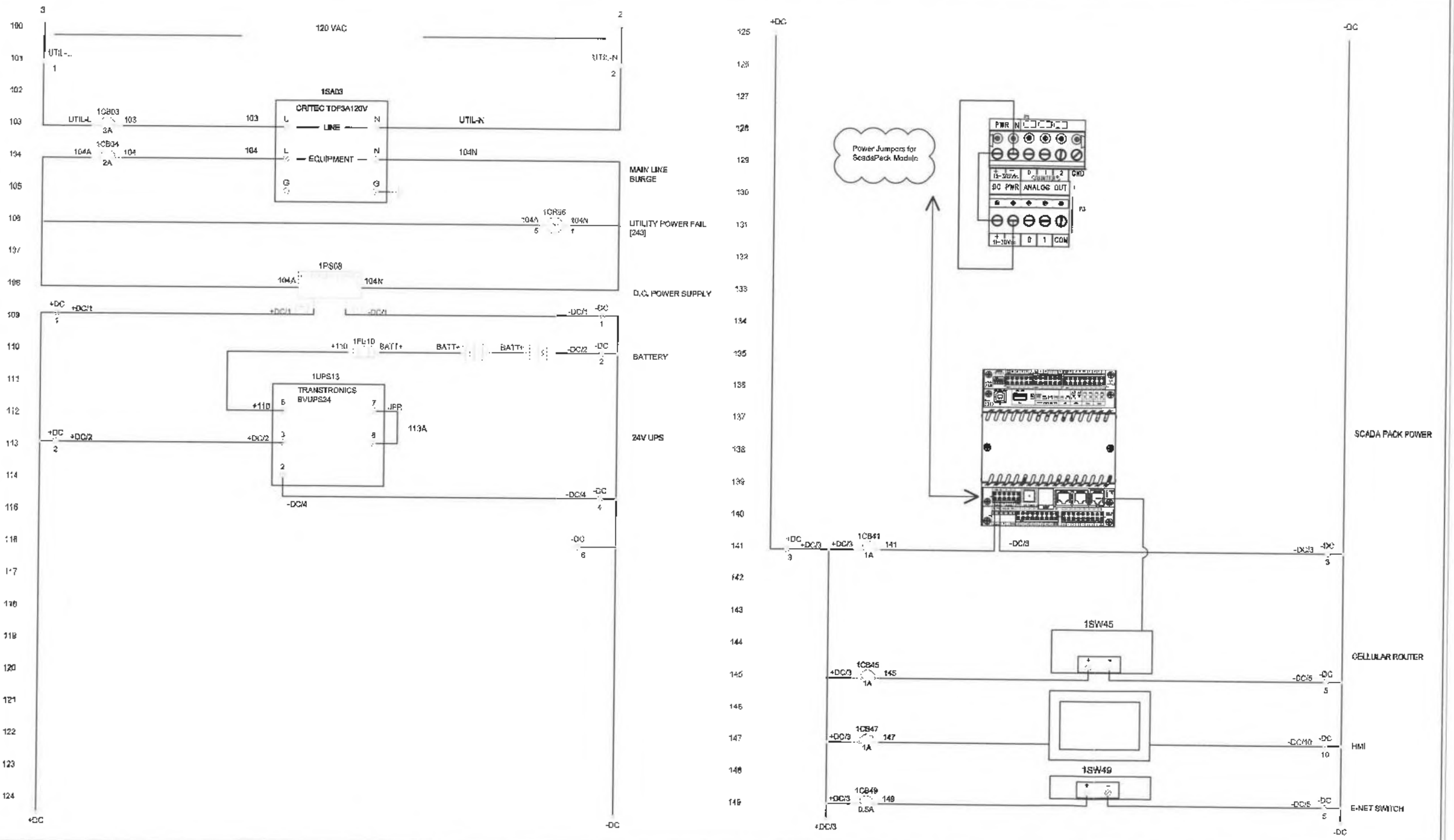
Model	UTB5SP	UTB15SP	UTB30SP	UTB60SP	UTB110SP
Item Number for Europe	702861	702862	702863	702864	702866
Nominal Voltage	0 V to 3 VAC 0 V to 5 VDC	3 V to 10 VAC 5 V to 15 VDC	10 V to 21 VAC 15 V to 30 VDC	21 V to 42 VAC 30 V to 60 VDC	100 V to 110 VAC 142 V to 154 VDC
Max Cont. Operating Voltage, U_c	5VAC 7VDC	12VAC 18VDC	23VAC 33VDC	45VAC 64VDC	120VAC 170VDC
Max Line Current, I_L	2 A				
Frequency	0.5MHz	1MHz	2MHz	3MHz	
Loop Resistance	1.0 Ω				
Max Discharge Current, I_{max}	20kA 8/20µs (L+L)-PE				
Protection Modes	Differential & Common Mode				
Technology	GDT, MOV, Silicon				
Voltage Protection Level (8/20µs)	L-L 10V @ 3kA	L-L 25V @ 3kA	L-L 44V @ 3kA	L-L 85V @ 3kA	L-L 220V @ 3kA
Dimensions H x D x W: mm (in)	90 x 72 x 12 (3.54 x 2.83 x 0.47)				
Weight: kg (lbs)	0.07 (0.15)				
Enclosure	DIN 43 880, UL94V-0 thermoplastic, IP 20 (NEMA-1)				
Connection	1 mm² to 2.5 mm² (#18AWG to 14AWG) Grounding via terminal or DIN rail connection				
Mounting	35 mm top hat DIN rail				
Temperature	-20°C to 65°C (-4°F to 149°F)				
Humidity	0 % RH to 90 % RH				
Approvals	CE, UL® 497B				
Surge Rated to Meet	ANSI®/IEEE® C62.41.2 Cat A, Cat B, Cat C				
Replacement Module Item Number for Europe	UTB5SPM (702867)	UTB15SPM (702868)	UTB30SPM (702869)	UTB60SPM (702871)	UTB110SPM (702872)

UTB SPG

Model	UTB5SPG	UTB15SPG	UTB30SPG	UTB60SPG	UTB110SPG
Item Number for Europe	702873	702874	702876	702877	702878
Nominal Voltage	0 V to 3 VAC 0 V to 5 VDC	3 V to 10 VAC 5 V to 15 VDC	10 V to 21 VAC 15 V to 30 VDC	21 V to 42 VAC 30 V to 60 VDC	100 V to 110 VAC 142 V to 154 VDC
Max Cont. Operating Voltage, U_c	5VAC 7VDC	12VAC 18VDC	23VAC 33VDC	45VAC 64VDC	120VAC 170VDC
Max Line Current, I_L	2 A				
Frequency	0.5MHz	1MHz	2MHz	3MHz	
Loop Resistance	1.0 Ω				
Max Discharge Current, I_{max}	20kA 8/20µs (L+L)-PE				
Protection Modes	Differential & Common Mode				
Technology	GDT, MOV, Silicon				
Voltage Protection Level (8/20µs)	L-L 10V @ 3kA	L-L 25V @ 3kA	L-L 44V @ 3kA	L-L 85V @ 3kA	L-L 220V @ 3kA
Dimensions H x D x W: mm (in)	90 x 72 x 12 (3.54 x 2.83 x 0.47)				
Weight: kg (lbs)	0.07 (0.15)				
Enclosure	DIN 43 880, UL94V-0 thermoplastic, IP 20 (NEMA-1)				
Connection	1 mm² to 2.5 mm² (#18AWG to 14AWG) Grounding via terminal or DIN rail connection				
Mounting	35 mm top hat DIN rail				
Temperature	-20°C to 65°C (-4°F to 149°F)				
Humidity	0 % RH to 90 % RH				
Approvals	CE, UL® 497B				
Surge Rated to Meet	ANSI®/IEEE® C62.41.2 Cat A, Cat B, Cat C				
Replacement Module Item Number for Europe	UTB5SPGM (702879)	UTB15SPGM (702881)	UTB30SPGM (702882)	UTB60SPGM (702883)	UTB110SPGM (702884)

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DATE	REVISION	BY	CHD

BCI TECHNOLOGIES

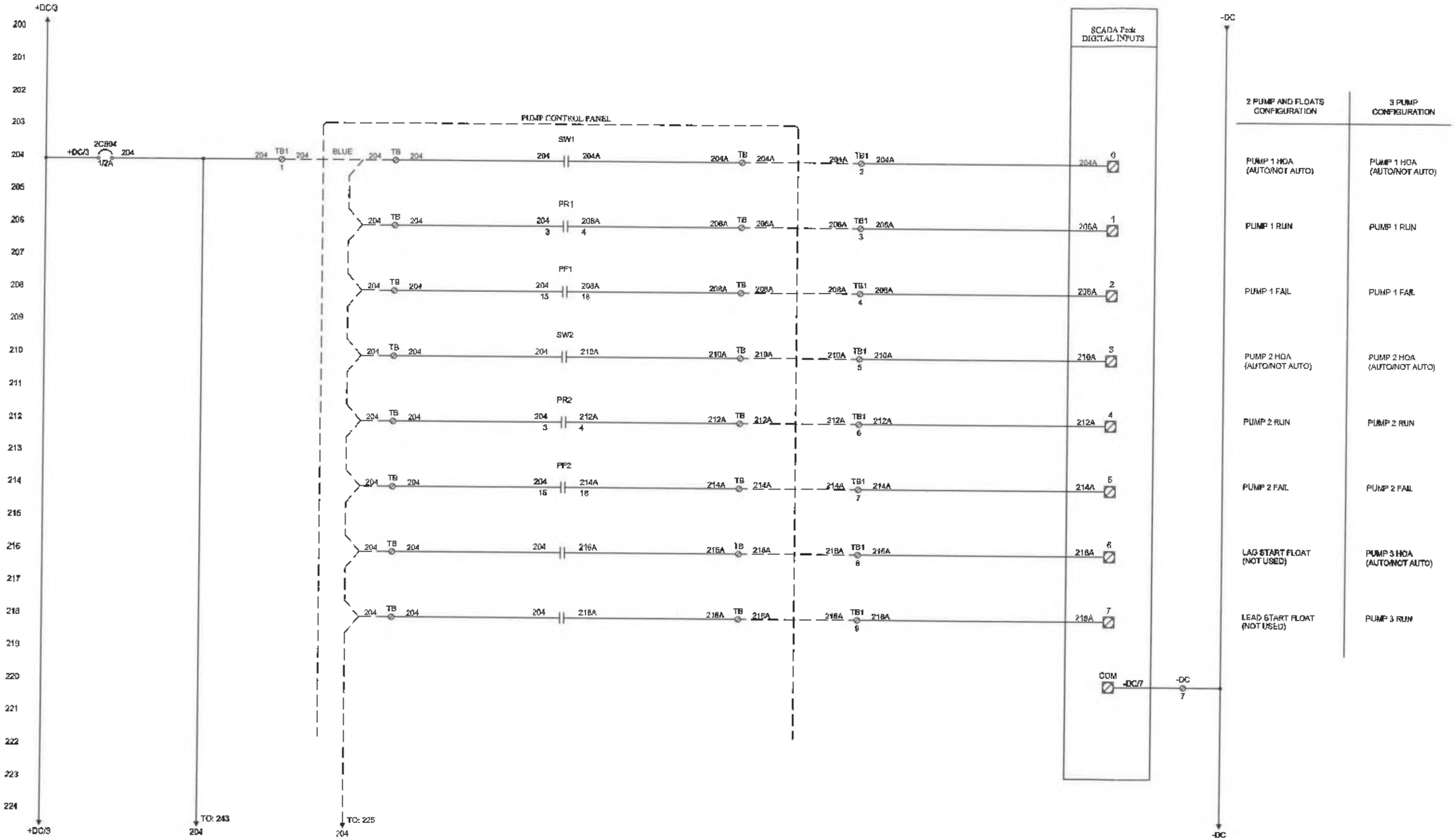
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CUSTOMER: FOREST UTILITES

TITLE: LSPRO PANEL
MAIN POWER DISTROBUTION

SCALE	DRAWN BY	CHECKED BY	APPD BY
	KST		

DATE	SHEET	OF SHEETS	DRAWING NO.
11/19/2018	1	6	10853-EE-001-01



DATE	REVISION	BY	CHD

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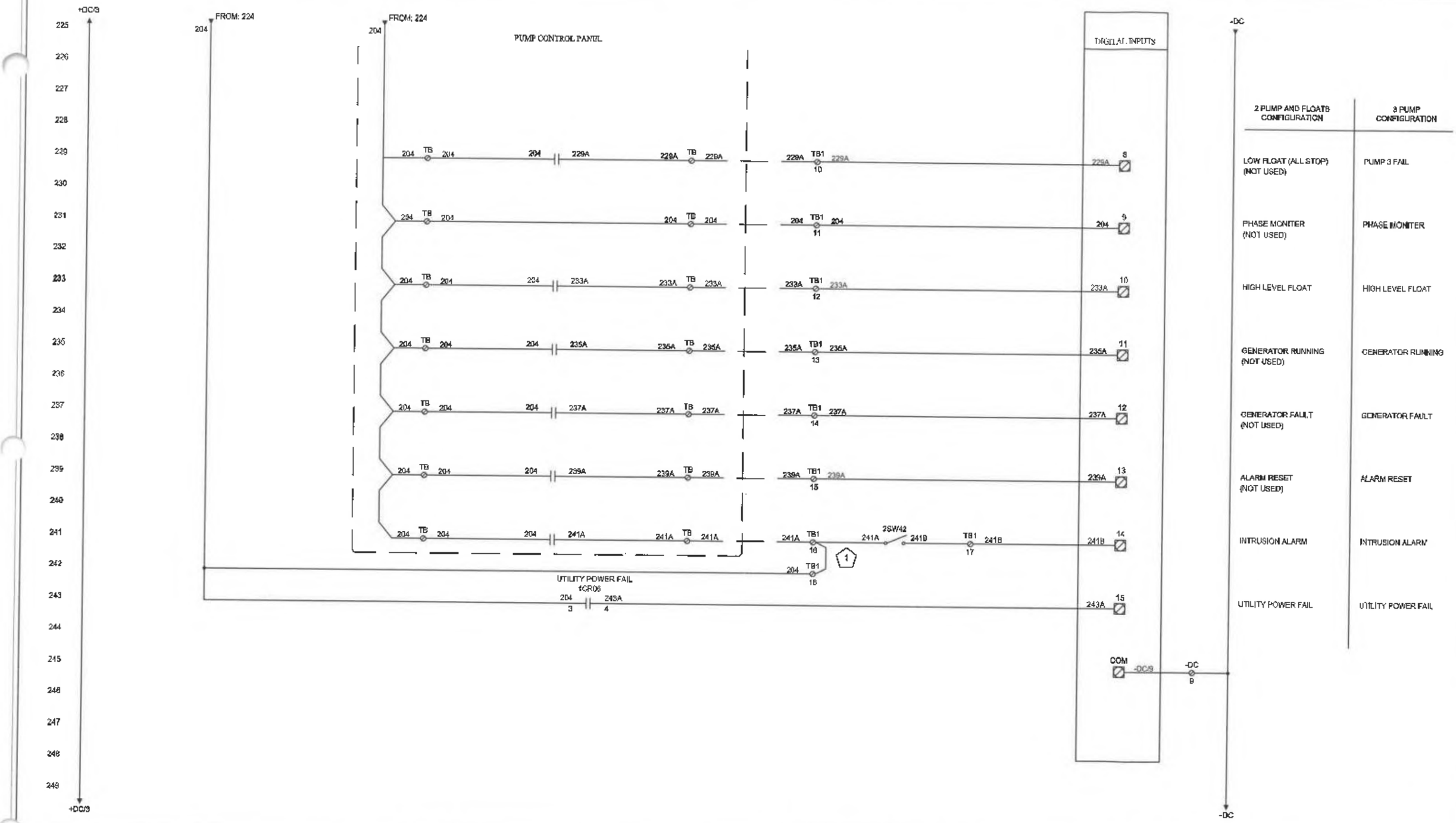
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CUSTOMER: FOREST UTILITIES

TITLE: LSPRO PANEL DIGITAL INPUTS

SCALE	DRAWN BY	CHECKED BY	APPD BY
	KST		

DATE	SHEET	OF SHEETS	DRAWING NO.
11/19/2015	2	5	10863-EE-002-01



NOTES;
1. IF PUMP CONTROL PANEL DOES NOT HAVE AN INTRUSION SWITCH, PLACE A JUMPER BETWEEN TB1-16 AND TB1-18.

DATE	REVISION	BY	CHK

BCI TECHNOLOGIES

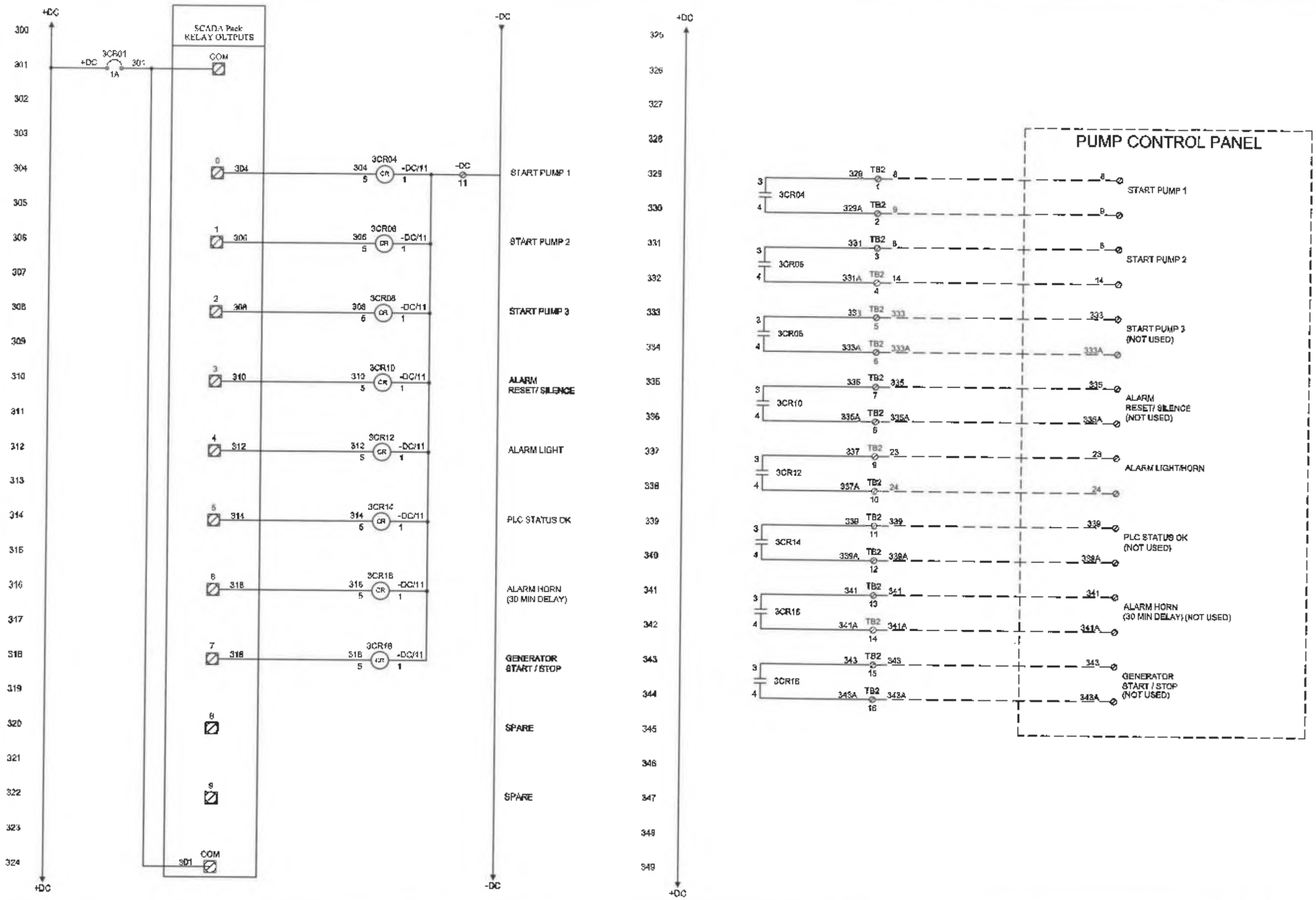
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CUSTOMER: FOREST UTILITES

TITLE: LSPRO PANEL DIGITAL INPUTS (cont)

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KST		

DATE: 11/19/2015 SHEET 3 OF SHEETS 8 DRAWING NO. 10863-EE-002-02



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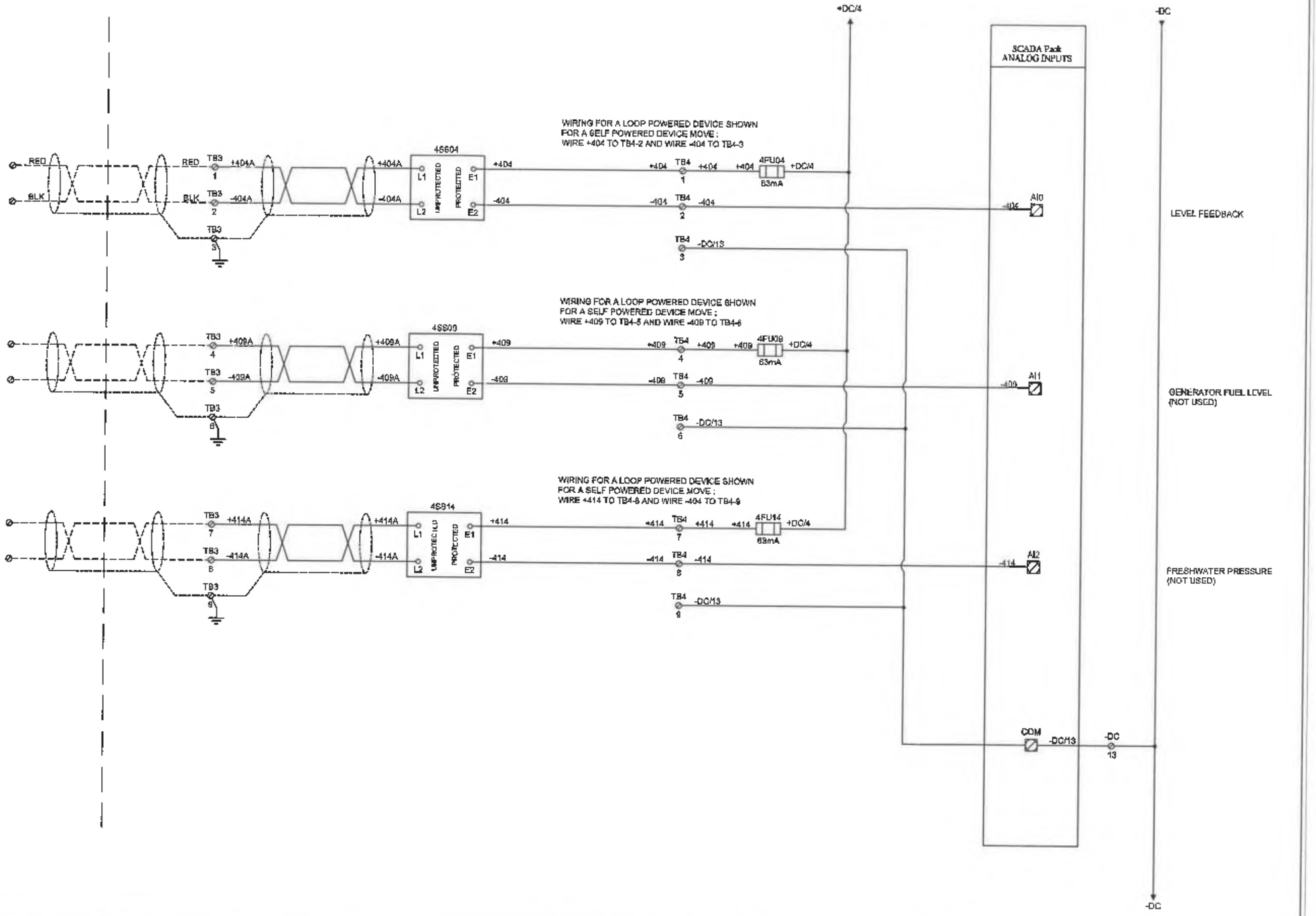
CUSTOMER: FOREST UTILITES

TITLE: LSPRO PANEL
RELAY OUTPUTS

SCALE	DRAWN BY	CHECKED BY	APPD BY
	KST		

DATE	SHEET	OF SHEETS	DRAWING NO.
11/19/2015	5	6	10883-EE-003-01

PUMP PANEL



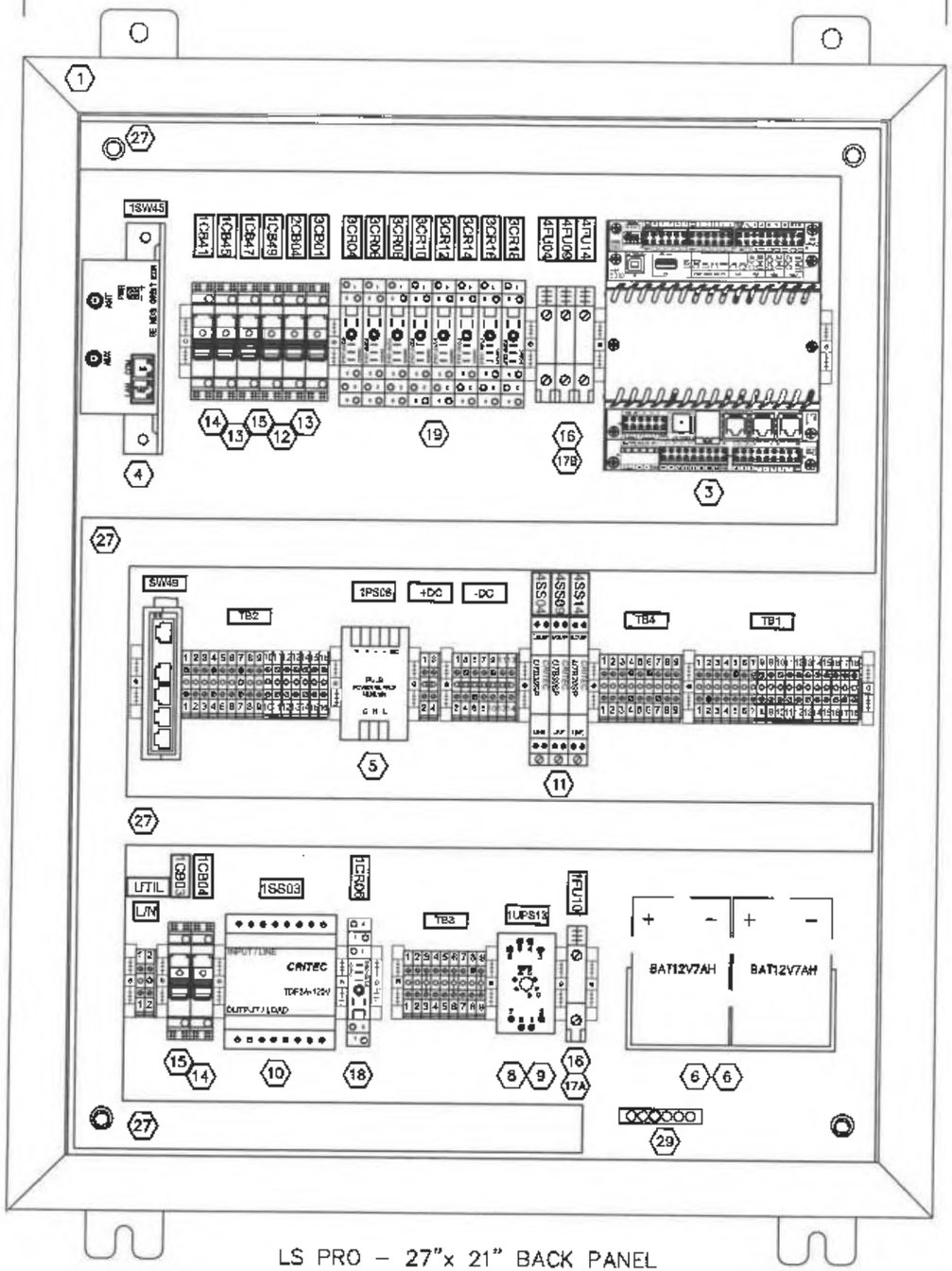
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DATE	REVISION	BY	CHD

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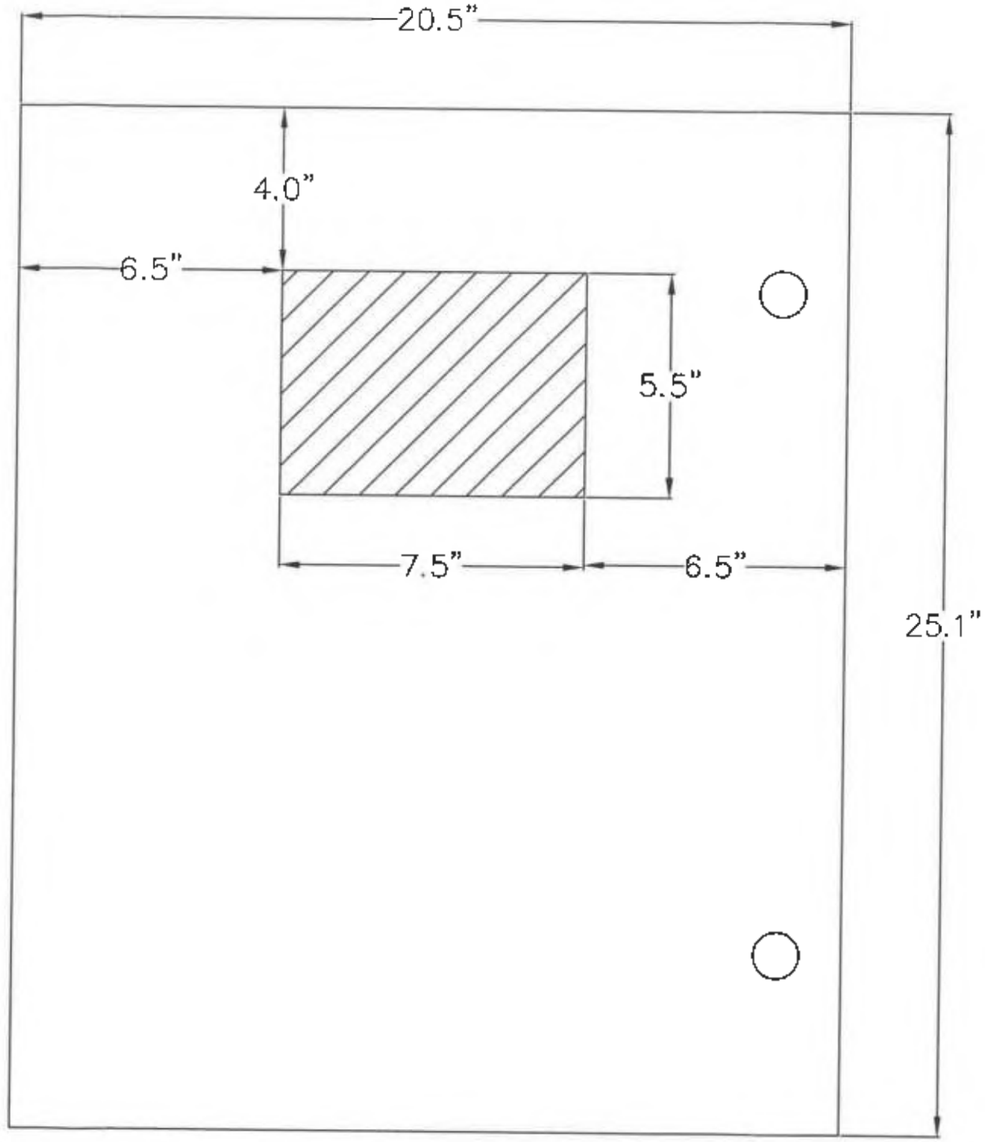
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CUSTOMER:	FOREST UTILITIES
TITLE:	LSPRO PANEL ANALOG INPUTS
SCALE:	
DRAWN BY:	KST
CHECKED BY:	
APPD BY:	
DATE:	11/19/2015
SHEET	6 OF SHEETS 6
DRAWING NO.	10863-EE-004-01



LS PRO – 27"x 21" BACK PANEL
(shown with door removed)

Dead Front



DATE	REVISION	BY	CHD

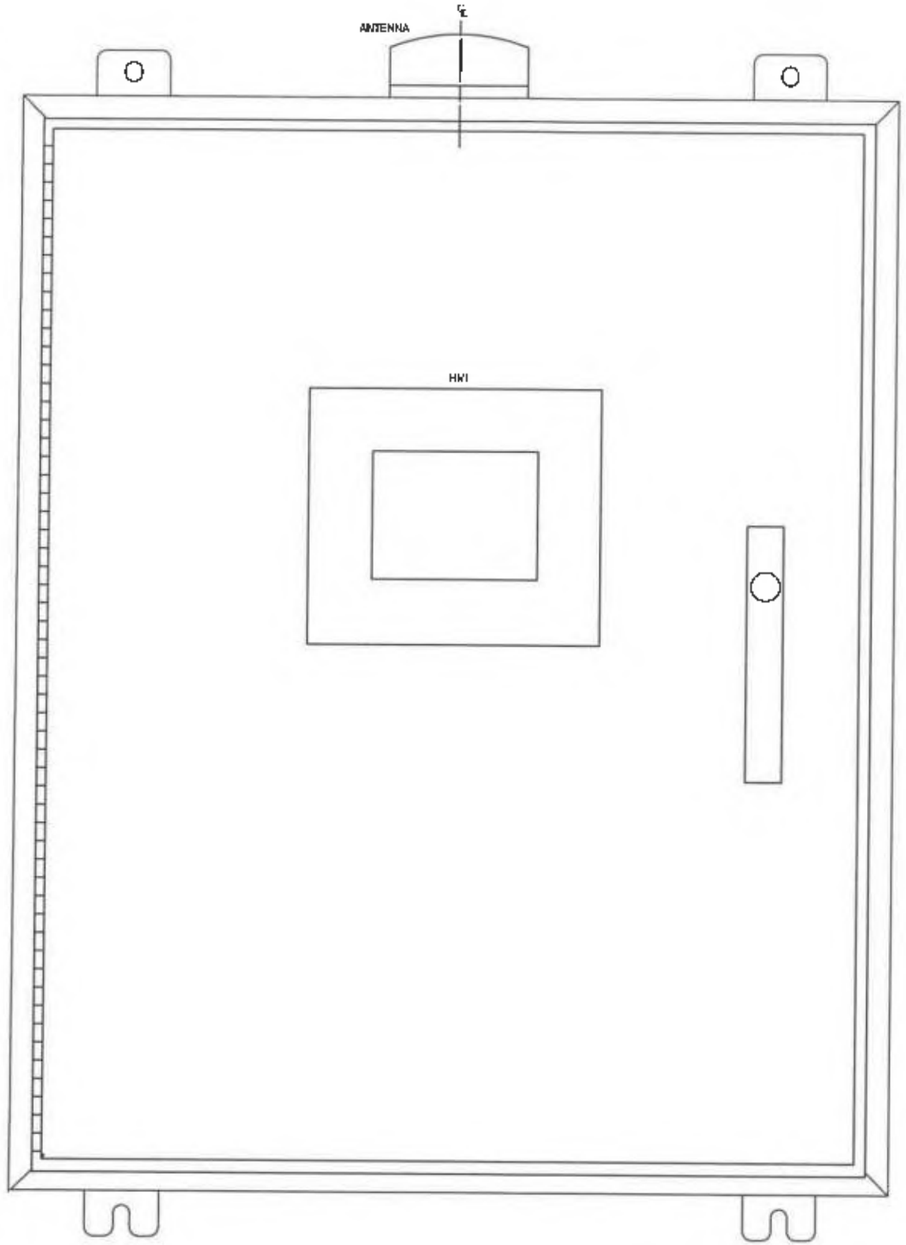
BCI TECHNOLOGIES

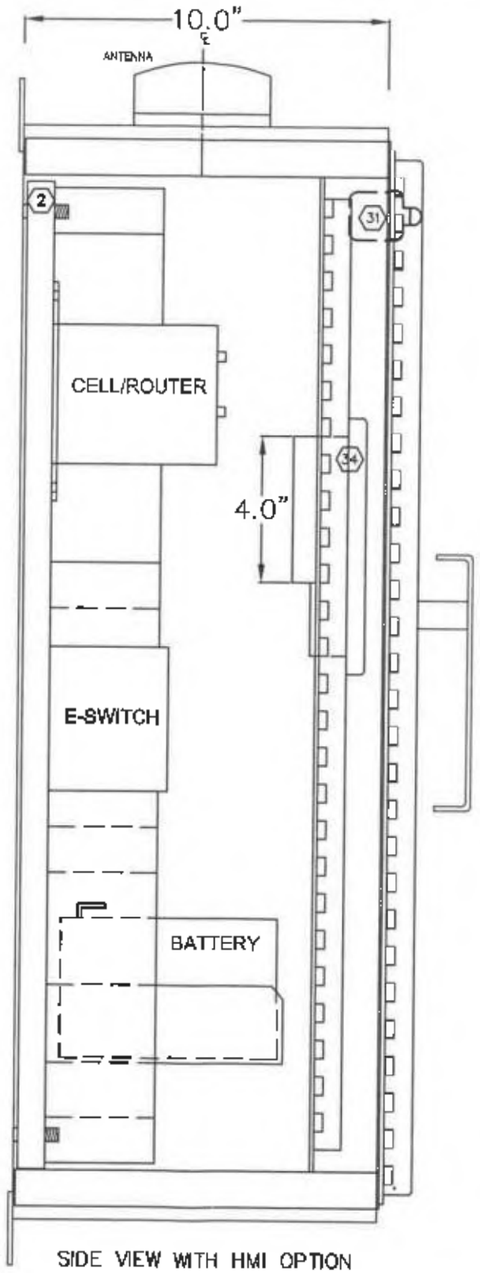
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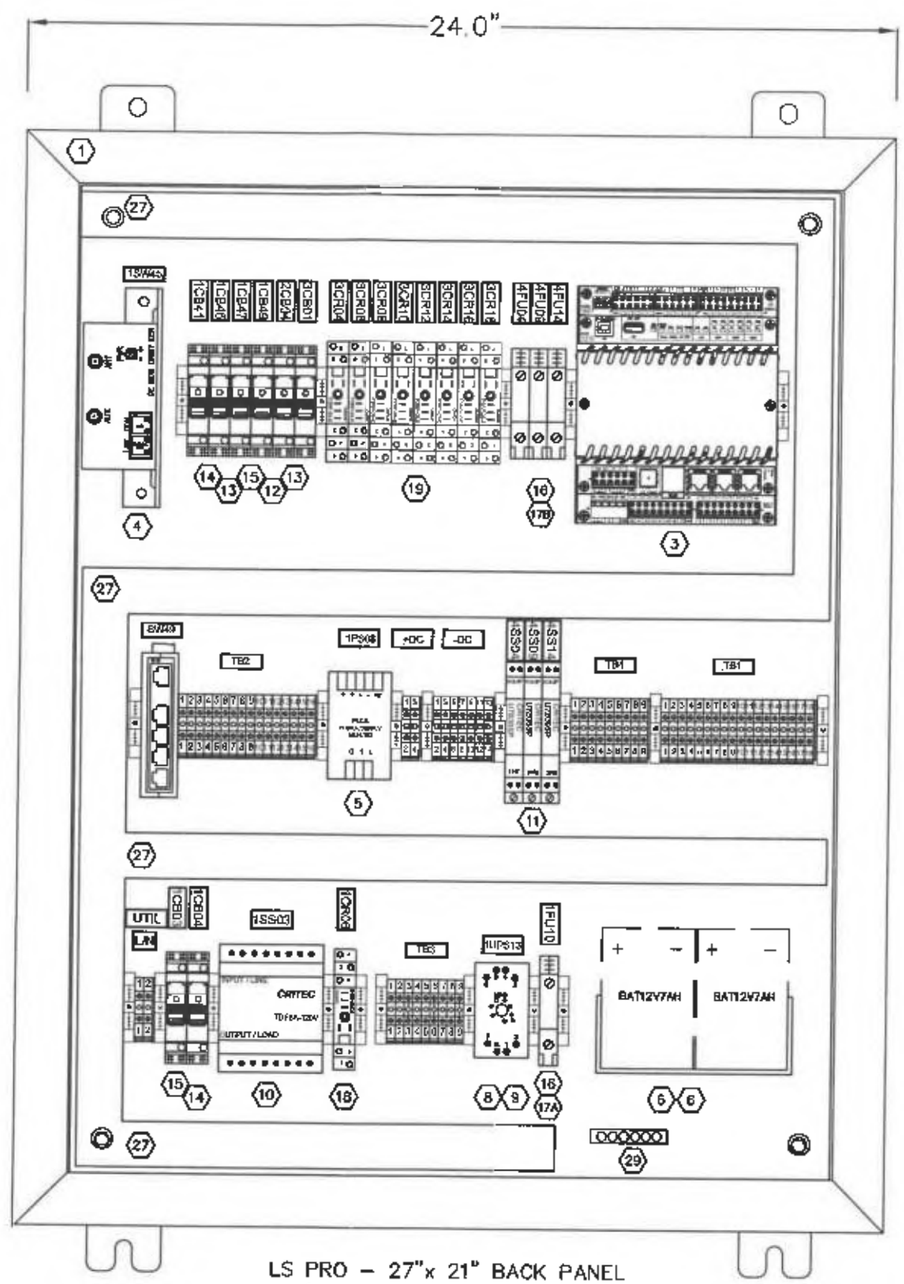
TITLE: LSPRO PANEL
BACK PANEL & DEAD FRONT DETAILS

SCALE:	DRAWN BY: SJB	CHECKED BY:	APPD BY:
DATE: 3/16/2015	SHEET 2 OF SHEETS 2	DRAWING NO. 10771-PL-001-02	





SIDE VIEW WITH HMI OPTION
(with side removed)



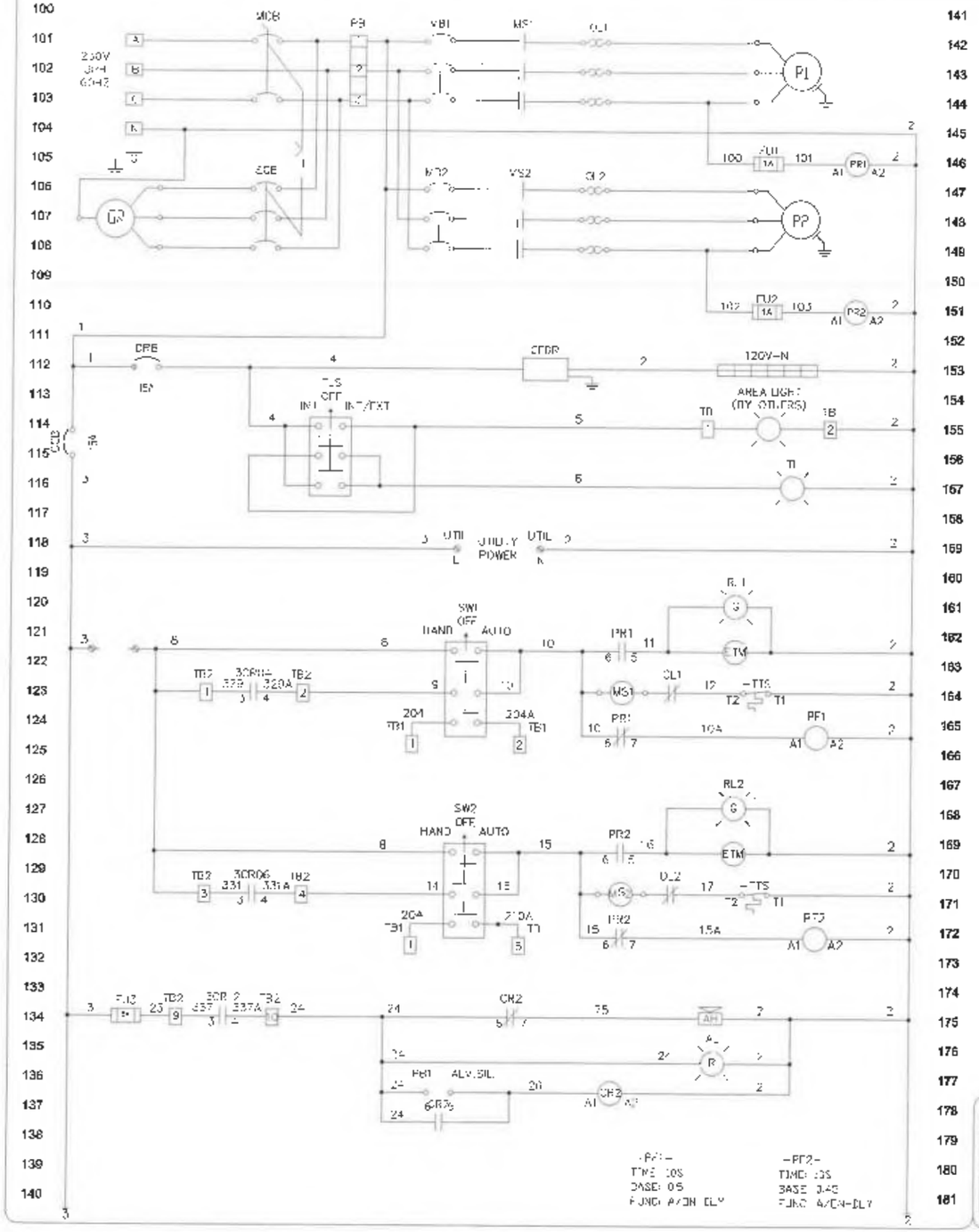
LS PRO – 27"x 21" BACK PANEL
(shown with door removed)

DATE	REVISION	BY	CH'D

BCI TECHNOLOGIES

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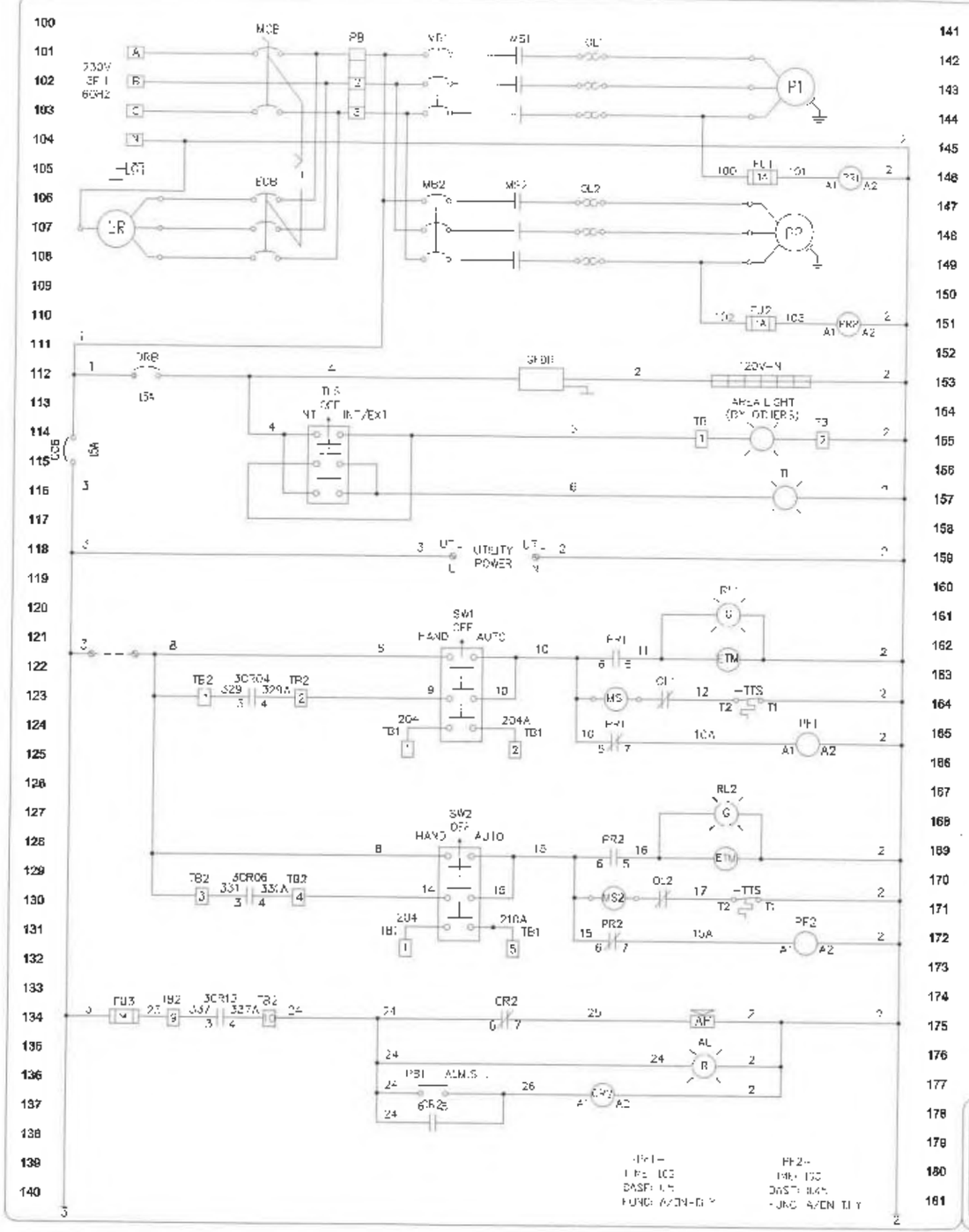
CUSTOMER:	FOREST UTILITIES
TITLE:	LSPRO PANEL PANEL LAYOUT
SCALE:	
DRAWN BY:	KST
CHECKED BY:	
APPR'D BY:	
DATE:	11/19/2015
SHEET	1 OF SHEETS 1
DRAWING NO.	10963-PL-001-01



	DATE	NAME
DRAWN BY	27 MAY 16	CLR
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FOREST UTILITIES
6000 FOREST BLVD
FORT MYERS, FL. 33908

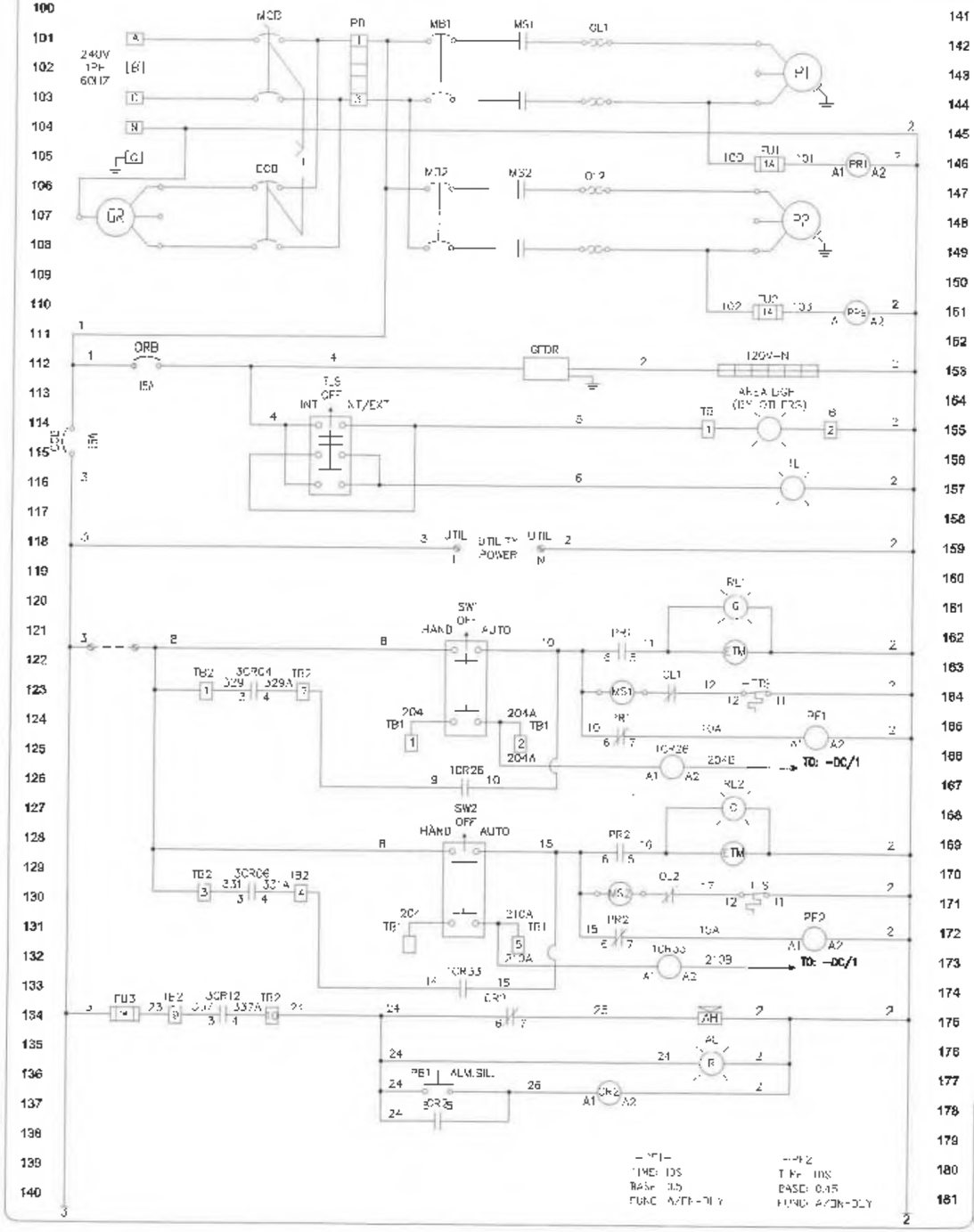
PROJECT: FOREST LS PRO - SCADAPACK
DRAWING-NO.:
JOB-NO.: 10863
PAGE DESCRIPTION: LS-1- 230V, 3Ph, DUPLEX
PAGE: 1 OF 1



	DATE	NAME
DRAWN BY	27 MAY 16	CLR
CKD BY		

FOREST UTILITIES
6000 FOREST BLVD
FORT MYERS, FL. 33908

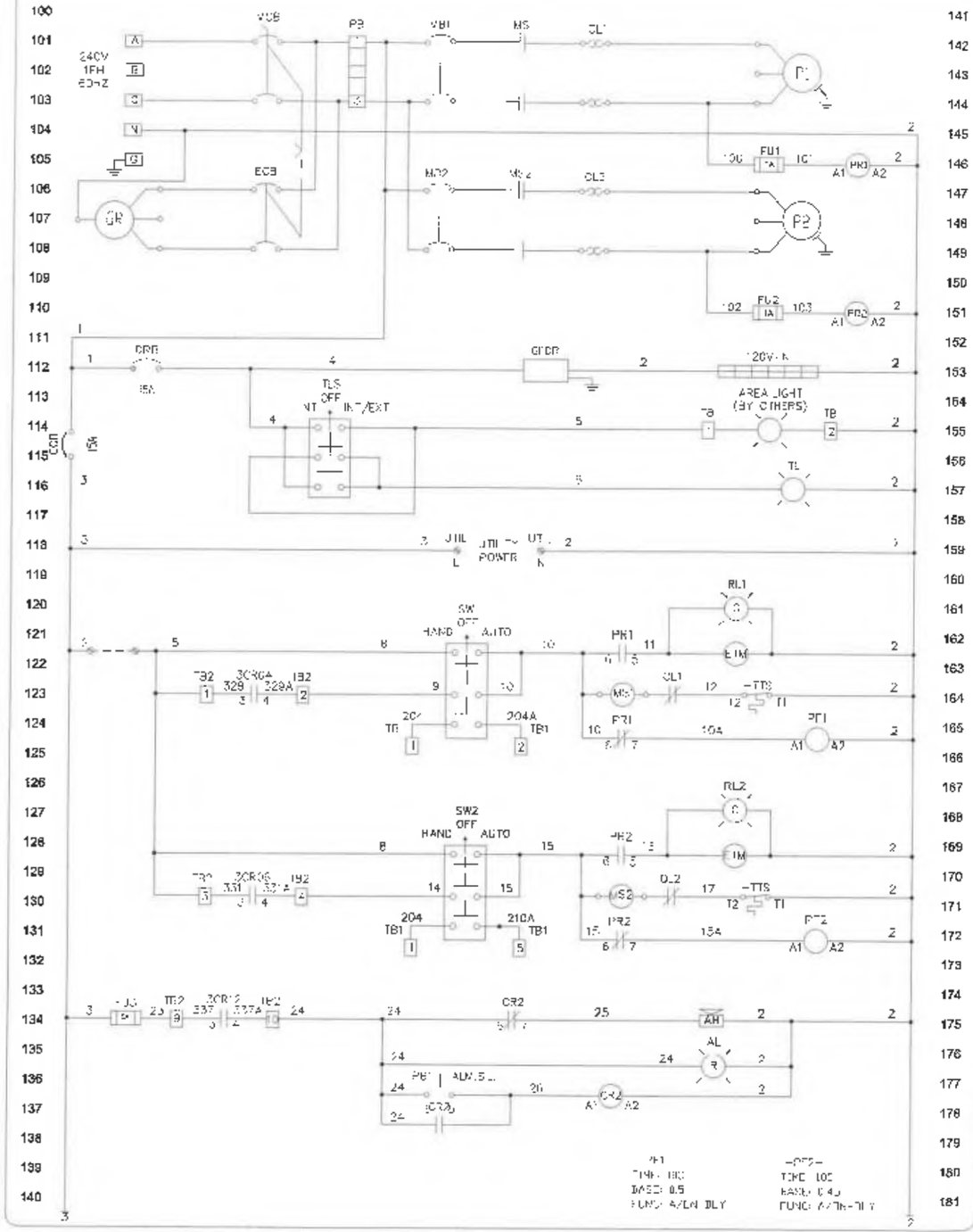
PROJECT: FOREST LS PRO - SCADAPACK
DRAWING-NO.:
JOB-NO.: 10863
PAGE DESCRIPTION: LS-3- 230V, 3Ph, DUPLEX
PAGE: 1 OF 1



	DATE	NAME
DRAWN BY	27 MAY 16	CLR
CKD BY		

FOREST UTILITIES
6000 FOREST BLVD
FORT MYERS, FL. 33908

PROJECT: FOREST LS PRO - SCADAPACK
DRAWING-NO.:
JOB-NO.: 10863
PAGE DESCRIPTION: LS-4- 240V, 1Ph, DUPLEX
PAGE: 1 OF 1



	DATE	NAME
DRAWN BY	27 MAY 16	CLR
CKD BY		

FOREST UTILITIES
6000 FOREST BLVD
FORT MYERS, FL. 33908

PROJECT: FOREST LS PRO - SCADAPACK
DRAWING-NO.:
JOB-NO.: 10863
PAGE DESCRIPTION: LS-25- 240V, 1Ph, DUPLEX
PAGE: 1 OF 1

1.0 INTRODUCTION

The MDS™ Orbit ECR (Edge Connect Router) Series is a flexible industrial router for critical applications. The Orbit ECR offers advanced networking capabilities including concurrent bridging and routing, route failover, advanced QoS and GRE tunneling to enable the transport of GOOSE, SCADA, and other critical automation protocols over cellular and other RF uplinks reliably. The ECR's advanced cyber security capabilities include IPSec VPNs, stateful firewalling, MAC filtering, secure boot and tamper detection.

The Orbit ECR supports a single radio/modem uplink plus an optional WI-FI. Its diverse portfolio includes 900MHz ISM, multi-carrier cellular modems, WiFi, 400MHz/900MHz licensed narrowband. It further packs a flexible Terminal Server to transport serial/SCADA protocols over IP efficiently. Its user-friendly GUI device manager uses configuration wizards to simplify provisioning.

The Orbit ECR series shares the same firmware with the Orbit MCR as well as the same portfolio of radio modules for full compatibility. Units are offered with of 1 Ethernet/1 Serial and USB interfaces.



Figure 1: ECR Sample Unit, Showing Connectors & Indicators

1.1 Technical Manual

This Setup Guide covers basic installation and startup instructions for the unit. A more detailed Technical Manual is also available (05-6632A01). Refer to the Technical Manual for important warnings, cautions and notes. GE MDS manuals, Setup guides, Firmware, drivers and Application Notes are available free of charge at www.gemds.com.

GE MDS has produced a series of instructional videos for configuration and setup of the Orbit products on YouTube. These are available free of charge at: http://tinyurl.com/pey2ull

2.0 INSTALLATIONS

2.1 Main Requirements

⚠ **WARNING:** *When the unit is to be installed in hazardous* locations, use only the serial or Ethernet connections on the unit's front panel. Do not use the USB port in hazardous locations.

There are three main requirements for installation:

- Adequate and stable primary power (10-60 VDC).
- Efficient and properly installed antennas for configured options.
- Correct interface connections between the unit and associated data equipment.

2.2 Installation Steps

Installation details for the product may vary, depending on site-specific factors. The steps here provide the basic tasks needed at most sites.

1. **Mount the unit.** Attach the supplied brackets to the bottom of the case (if not already attached), using the screws provided. Mounting bracket dimensions are shown in Figure 2: Mounting Bracket Dimensions. If DIN Rail mounting brackets are to be used, consult the *Technical Manual* for details.

NOTE: To prevent moisture from entering the unit, do not mount the case with the cable connectors pointing up. Also, dress all cables to prevent moisture from running along the cables and into the enclosure.

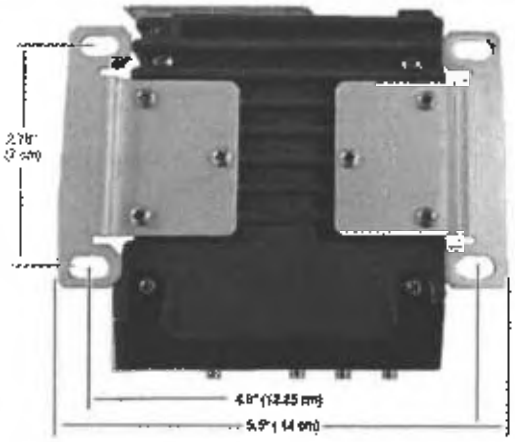


Figure 2: Mounting Bracket Dimensions

2. **Install the antennas and feedlines.** The antennas used must be designed to operate in the appropriate frequency band and be mounted in a location providing a clear path to the associated station(s). Antennas should be mounted away from large masses of metal and other obstructions.

   Often, at least one of the antennas will be connected directly to one of the coaxial connectors on the unit's front panel. When remotely mounted antennas are used, coaxial feedlines should be low loss and be kept as short as possible.

   Proper grounding techniques should be applied. As an added convenience, there is a tapped 6-32 hole on the underside of the unit that can be used an ¼" screw and braid or ground strap.

3. **Connect the data equipment.** Connection may be made using any combination of **Serial** protocols (RS-232/RS-485), **Ethernet** signaling, or **USB.** Refer to the *Technical Manual* for wiring details.
   - **Serial connection:** Attach data equipment to the front panel COM port. The unit is hardwired as a DCE device, thus a straight-through Ethernet cable can be used with an RJ45 to DB9-F adapter (GE MDS part no. 73-2434A12).
   - **Ethernet connection:** Attach data equipment to the front panel ETH port. The auto-sensing MDIX feature allows either a straight-through or crossover cable to be used.

- **USB connection:** Attach data equipment to the front panel mini USB port. The unit supports USB 2.0 with proper drivers installed. Drivers available at www.gemds.com.

4. **Connect primary power.** Input power must be 10.0 to 60 Vdc and capable of providing at least 15 watts. A power connector with screw-terminals is provided (Figure 3, DC Power Connector). Strip the wire leads to 6 mm (1/4 inch) and insert them into the wire ports. Be sure to observe proper polarity as shown. Tighten the binding screws securely.



Figure 3, DC Power Connector

CAUTION: The unit is designed for negative-ground power power systems only. The power supply should be equipped with NEC Class 2 overload protection, to guard against a short circuit between its output terminals and the unit's power connector.

2.3 Unit Configuration

2.3.1 Default Settings

As shipped from the factory, the unit is configured with a set of pre-defined defaults. For example, when equipped with Cell, the unit is configured to operate as a WiFi hotspot. (3G requires carrier-specific configuration.) For "4G WiFi hotspot" operation, the unit normally contains the following settings:

- WiFi enabled as an Access Point (AP)
  - SSID = **GEMDS_SERNUM** (SERNUM refers to the unit's serial number, printed on a chassis sticker.)
  - SSID broadcast enabled
  - Security = WPA2-PSK, CCMP with passphrase: **GEMDS_ORBIT**
- Default Ethernet IP address **192.168.1.1/24**
- Firewall/NAT/DNS proxy enabled
- DHCP enabled (192.168.1.2 to 192.168.1.10)
- If 900 MHz radio present (unlicensed), radio set to **Remote**

This configuration allows connection of a PC to the unit via WiFi or the LAN port and access to the Internet via cellular, if equipped and supported by a suitable service plan.

2.3.2 Connecting via Ethernet/WiFi

The configuration PC may be connected to the unit by hardwired cable (USB, serial or Ethernet), or by WiFi. The following steps describe a WiFi or Ethernet connection to the built-in web server. This connection can be made using the WiFi or Ethernet information above. The initial sign-in prompt appears as shown below:



1. Enter the username (default is **admin**).
2. Enter the Password (default is **admin**). Press Sign In. Upon successful login, the Device Overview page appears.
3. For initial configuration the Setup Wizard appears and provides guidance in typical setups. This will be disabled after the initial setup, but may be re-run at any time from the **Wizards** page.



Key items that should be set/reviewed:

- Create one-time programmable passwords for device recovery.
- Change login passwords (to maintain security).
- Evaluate default factory configuration and lock it down to required security level.

Refer to the *Technical Manual* for detailed information on the above items.

2.3.3 Connecting via Serial

The configuration PC may be connected to the unit by hardwired cable (USB, serial, or Ethernet), or by WiFi. The following steps describe a cabled serial cable connection, as illustrated in Figure 5.

Note that not all PCs have a serial port. If one is not available, a USB-to-Serial adapter and appropriate driver software may be used to provide serial connectivity

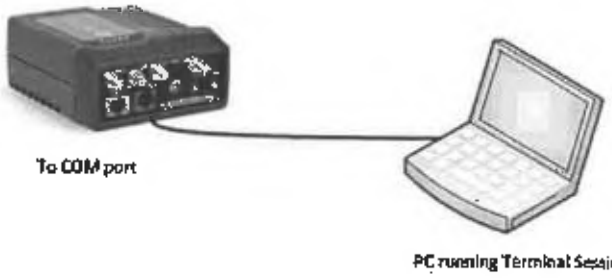


Figure 4. Setup for PC Configuration—Serial Port
(RJ-45 adapter is required)

1. Connect a PC to the unit's COM port and establish a console terminal session, using HyperTerminal or a similar communications program. The following parameters must be used: 115200 bps, 8 bits, no parity, one stop bit (8N1), flow control disabled, VT100 emulation.

NOTE: As an alternative, the unit may be configured via a *Secure Shell (SSH) terminal*. For enhanced security, the unit does *not* support Telnet configuration. Refer to the *Technical Manual* for further information.

2. Press the ENTER key to receive the login prompt. The COM LED flashes to indicate data communications.
3. Enter the username (**admin** is the default) and press ENTER.
4. At the **Password** prompt, enter the password (**admin** is the default). Press ENTER. Upon successful login, the connection message appears.
5. Enter the configuration **mode** by typing **configure** followed by the ENTER key.
6. Review and configure all key settings for the required application. Built-in help is available by pressing the **Tab** key. A summary of all unit settings may be viewed by entering the **% show | details** command.
   Tab-completion is a useful feature that presents CLI users with assistance while typing commands. Depending on the text that was already entered, tab-completion will display different possible completions. When the Tab key is pressed and no text

has been entered, the CLI shows all possible commands that can be typed.

Key items that should be set/reviewed for the unit are:

- Create one-time programmable passwords for device recovery.
- Change login passwords (to maintain security).
- Evaluate default factory configuration and lock it down to required security level.

Refer to the Technical Manual for detailed information on the above items.

7. When finished, log out of the console session and disconnect from the PC.

2.3.4 Cellular Setup and Connection

The MDS Orbit ECR is available with the following Cell options:

- 4G LTE, HSPA+,GSM/GPRS, CDMA (North America)
- 4G LTE, HSPA+,GSM/GPRS (EMEA/APAC)
- 3G GSM/UMTS/HSPA+ (Global)

Insert the SIM card with the power OFF and then information regarding the cell—including IMEI and ICCID—can be found in the Cell Status section. Navigate to:

Home / Interfaces State / Interface = Cell

or type the following at the CLI prompt:

```
> show interfaces-state interface Cell cell-status
```

NOTE: 3G Dual SIM functionality is a selective order-entry feature. Default units are shipped with only SIM-A enabled; SIM-B is not supported.

For most setups all that is needed is to set the Access Point Name (APN). Use the Interface Setup Wizard



Figure 5. Cell Basic Setup Info

On the Web UI navigate to:

Interfaces / Cell / Basic Config / Cellular / Connection Profile

In the **Bearer Config** - enter the APN and press the **Finish** button then the green **Save** button at the top of the window. (If Verizon 4G, this field is pre-configured to **vzwinternet.**)

Or, use the following commands at CLI prompt:

4G LTE (Verizon Only):

```
> configure
% set interfaces interface Cell cell-config connec-
tion-profile PROFILE-1 bearer-config apn <APN>
% commit and-quit
```

3G GSM (Global) and 4G LTE (EMEA/APAC):

```
> configure
% set interfaces interface Cell enable true
% set interfaces interface Cell cell-config connec-
tion-profile PROFILE-1 bearer-config apn  <APN>
% commit and-quit
```

2.3.5 900 MHz Unlicensed Operation

An Orbit device configured as an ECR-900 provides next-generation LAN extension operating in the FCC 900 MHz ISM band. Similar to the older MDS™ iNET-II 900 transceivers, it supports connection of Ethernet and/or Serial devices in the field in a Point-to-Multipoint or Point-to-Point wireless network topology.

In its simplest configuration, the **Network Name** (3rd item down) must be changed in all units. For the AP, you must change **Device Mode** to **AP** and change **Network Name** to a valid entry. All other parameters can remain at their default settings.

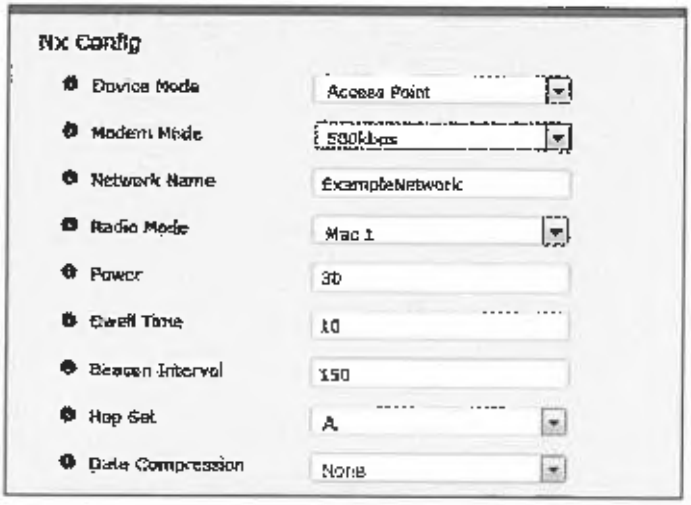


Figure 6. Orbit ECR-900 -Remote Setup

Configure the remote to match the AP:

1. Set **Device Mode** to Remote.
2. Set **Modem Mode** - choices: **125kbps, 250kbps, 500kbps, 1000kbps, 1000Wkbps - 1250kbps, or auto.**
3. Set **Network Name** - The name of the network.
4. Set **Radio Mode** to Mac 1.
5. Set **Power** - Valid values: 20 to 30 dBm.
6. Set **Data Compression** - LZO or none.

Review settings for the required application. Press the green **Save** button at the top of the window.

NOTE: For ECR-900 MHz configurations, DHCP is typically disabled to allow for configuration of a specific IP address. On the Web UI, navigate to Services / Dhcp Server / Basic Config /General , click on the Enabled box and press the green Save button at the top of the window.

2.4 Initial Checkout

In-service operation of the unit is completely automatic. The only operator actions required are to apply power and observe the LEDS for proper indications Table 1 summarizes the unit's LED functions.

LED Functions

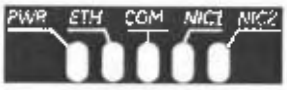


Figure 7. LED Status Indicators

Table 1: Description of LED Status Indicators

LED Name	LED State	Description
PWR (DC Power)	Off	No power to unit
	Solid Green	Unit is powered, no problems detected
	Solid Amber	Initializing-boot-up
	Fast Blink/Red	Alarm indication

	(1x/sec.)	
ETH (Ethernet)	Off	No Ethernet link to network
	Solid Green	Ethernet link present
	Blinking Green	Ethernet traffic in/out
COM (Serial Comm. Port)	Off	No serial connection, or idle
	Blinking Green	Serial traffic in/out

NOTE: As shown below, NIC1 and NIC2's operation will vary depending on the interfaces installed. Refer to the Technical Manual for further details.

LED -WiFi	State	Description
WiFi Interface	Off	Interface disabled
Access Point Mode	Solid Green	Operating as AP and at least one client connection
	Solid Red	Operating as an AP and no client connection
Station Mode	Off	No connection
	Solid Green	Wi-Fi connection established.

LED - NIC - Cell	State	Description
Cell Interface	Off	No cellular connection
	Solid green	Cell connection

LED – NIC -900 MHz (NX915)	State	Description
	Off	Interface disabled
Access Point Mode	Blink Red	NIC Initialization
	Solid Red	No Remotes connected
	Solid Green	Linked with at least 1 Remote
Remote Mode	Blink Red	NIC Initialization / Not linked to an Access Point
	Solid Green	Linked with Access Point

NOTE: In addition to the LEDs above, the Ethernet connector has two embedded LEDs. A flashing green indicates Ethernet data activity. A yellow indicates 100 Mbps operation.

3.0 INSTALLATIONS

For proper operation, all units must meet the basic requirements which follow. Check these items first when troubleshooting:

- Adequate and stable primary power
- Secure connections (antennas, data and power)
- A clear transmission path between associated units
- An efficient, properly installed antenna system
- Proper configuration of unit settings
- Correct interface between the unit and other equipment

3.1 LEDs & Event Logging

The unit's LED indicator panel can provide useful information when troubleshooting. Refer to Table 1 for LED status indicators.

An event (such as an alarm condition) is a notification that something significant occurred on the unit. Events can be stored locally and/or transported to a remote server. Consult the *Technical Manual* for details on Event Logging, including Common Event Expression (CEE™) syntax.

4.0 COM PORT REFERENCE

The COM port (

Figure 6) is commonly used to connect an external DTE telemetry device to the unit, supporting either the RS-232 or RS-485 (balanced) format, depending on how the device is configured. The unit supports data rates of 300,1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 and 230,000 bps (asynchronous data only).

This connector mates with a standard RJ-45 plug available from many electronics parts distributors.

1 2 3 4 5 6 7 8

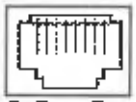


Figure 8. Com Connector (RJ-45)
As viewed from outside the unit.

4.1 Pin Descriptions—RS-232 Mode

Table 2 provides pin descriptions for the COM connector when operating in RS-232 mode. Refer to the *Technical Manual* for RS-422/485 descriptions.

Table 2: COM1 Pin Descriptions—RS-232

Pin #	Input/ Output	Pin Description
1	Reserved	– (Do not connect)
2	OUT	DCD (Data Carrier Detect)
3	Reserved	-- (Do not connect)
4	Ground	Connects to ground (negative supply potential) on chassis
5	OUT	RXD (Received Data)—Supplies received data to the connected device
6	IN	TXD (Transmitted Data)—Accepts TX data from the connected device
7	OUT	CTS (Clear to Send)
8	IN	RTS (Request to Send)

NOTE: The unit is hardwired as a DCE device

Technical Assistance

Technical assistance is available by contacting the Technology group GE MDS during business hours (8:30 AM to 6:00 PM Eastern Time). Please use one of the following means to contact the factory:
Telephone: (800) 474-0964 Option #3
E-mail: gemds.techsupport@ge.com
Web: www.gedigitalenergy.com/Communications
FAX: (585) 242-8369

REGULATORY AND PRODUCT INFORMATION—MDS ORBIT ECR

Hazardous Locations Notice

⚠ WARNING
EXPLOSION HAZARD!

When installed in hazardous locations, use only the serial and Ethernet connections on the unit's front panel. Do *not* use the USB port in hazardous locations.

RF Exposure Notice

To comply with RF exposure requirements, the antenna shall be installed to ensure a minimum separation distance of 20 cm from persons. The antenna may not be co-located or operated in conjunction with other transmitting devices.

All RF modules contained within the Orbit ECR have a conducted RF power maximum limit of 2W.

Approved Antennas

Only approved antennas may be used on the unit's RF output connectors, examples are listed below. The use of non-approved antennas may result in a violation of FCC rules and subject the user to FCC enforcement action.

Antenna Application	GE MDS Part Number
WiFi (indoor direct connect), RP SMA, 2.4-2.5 GHz Antenna, 3.2dBi Gain	97-4278A34
WiFi (Magnetic Mount) 5 ft./1.52 m Cable, RP SMA Plug (accessory) use with above	97-4278A76
WiFi (outdoor external mount), Omni Ant. N M Term., 2.4-2.5 GHz, 2 dBi Gain	97-4278A48
Cell (direct connect), 850/2170/2700MHz 2dBi - SMA Paddle antenna (indoor)	97-2485A04
3G/4G Cellular (outdoor external mount, ground plane),850/2170/2700MHz 4.5 DBi, N-FEMALE	97-2485A05
900 MHz NX915 - 5/8-wavelength Omni Ant. with 16' coax to N-Female connector	97-3194A17

Warning: Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

FCC Class A Notice

This device complies with Part 16 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Modifications: Any modifications made to this device that are not approved by GE MDS LLC, Inc. may void the authority granted to the user by the FCC to operate this equipment.

Industry Canada Notice

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Servicing Precautions

When servicing energized equipment, be sure to wear appropriate Personal Protective Equipment (PPE). During internal service, situations could arise where objects accidentally contact or short circuit components and the appropriate PPE would alleviate or decrease the severity of potential injury. When servicing radios, all workplace regulations and other applicable standards for live electrical work should be followed to ensure personal safety.

Manual Revision and Accuracy

This manual was prepared to cover a specific version of firmware code. Accordingly, some screens and features may differ from the actual unit you are working with. While every reasonable effort has been made to ensure the accuracy of this publication, product improvements may also result in minor differences between the manual and the product shipped to you. If you have additional questions or need an exact specification for a product, please contact GE MDS, using the information at the back of this guide.

In addition, manual updates can be found on our web site at www.gemds.com.

Environmental Information

The manufacture of this equipment has required the extraction and use of natural resources. Improper disposal may contaminate the environment and present a health risk due to hazardous substances contained within. To avoid dissemination of these substances into our environment and to limit the demand on natural resources, we encourage you to use the appropriate recycling systems for disposal. These systems will reuse or recycle most of the materials found in this equipment in a sound way. Please contact GE MDS or your supplier for more information on the proper disposal of this equipment.

Product Test Data Sheets

Test Data Sheets showing the original factory test results for this unit are available upon request from the GE MDS Quality Leader. Contact the factory using the information at the back of this manual. Serial numbers must be provided for each product where a Test Data Sheet is required.

CSA/US Notice

This product is approved for use in Class 1, Division 2, Groups A, B, C & D Hazardous Locations. Such locations are defined in Article 500 of the National Fire Protection Association (NFPA) publication NFPA 70, otherwise known as the National Electrical Code. The transceiver has been recognized for use in these hazardous locations by the Canadian Standards Association (CSA) which also issues the US mark of approval (CSA/US). The CSA Certification is in accordance with CSA STD C22.2 No. 213-M1987.

CSA Conditions of Approval: The transceiver is not acceptable as a stand-alone unit for use in the hazardous locations described above. It must either be mounted within another piece of equipment which is certified for hazardous locations, or installed within guidelines, or conditions of approval, as set forth by the approving agencies. These conditions of approval are as follows: The transceiver must be mounted within a separate enclosure which is suitable for the intended application. The antenna feedline, DC power cable and interface cable must be routed through conduit in accordance with the National Electrical Code. Installation, operation and maintenance of the transceiver should be in accordance with the transceiver's installation manual and the National Electrical Code. Tampering or replacement with non-factory components may adversely affect the safe use of the transceiver in hazardous locations and may void the approval. A power connector with screw-type retaining screws, as supplied by GE MDS, must be used.

⚠ WARNING
EXPLOSION HAZARD!

Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous. Refer to Articles 500 through 502 of the National Electrical Code (NFPA 70) for further information on hazardous locations and approved Division 2 wiring methods.

Grounding Requirements

To minimize the chance of damage to the unit and connected equipment, a safety ground (NEC Class 2 compliant) is recommended which bonds the antenna system, chassis, power supply and connected data equipment to a *single-point* ground, keeping all ground leads as short as possible.

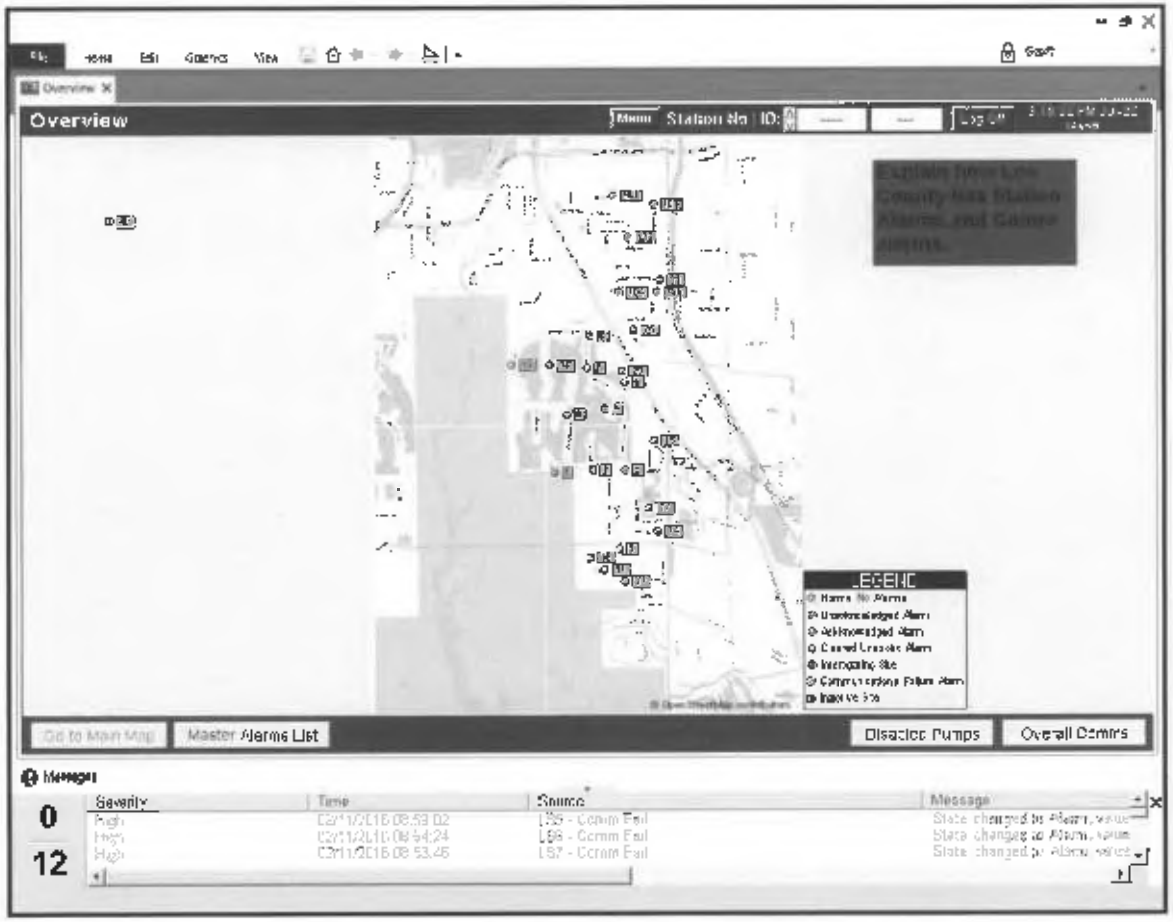
Normally, the unit is adequately grounded if the supplied flat mounting brackets are used to mount it to a well-grounded metal surface. If the unit is not mounted to a grounded surface, it is recommended that a safety ground wire be attached to one of the mounting brackets or a screw on the enclosure.

The use of a lightning protector is recommended where the antenna cable enters the building. Bond the protector to the tower/support ground, if possible. All grounds and cabling must comply with applicable codes and regulations

Forest
ClearSCADA Liftstation Monitoring system

System Overview

Overview Page



Click on a green box to view a station

Links to system information screens



Station Navigation by Station Number

Clicking on the Station Number box or the Station ID box pops up a prompt to enter the number. If a invalid number is entered it will inform you and ask that you try again.

Station Number Box

Station ID Box
(Not used in this system)



The Up down arrows only work with the Station Number . Also if you are on a non-station screen there the boxes are --- , and if you press either of the arrows you will be prompted to type the Station Number you wish to go to.

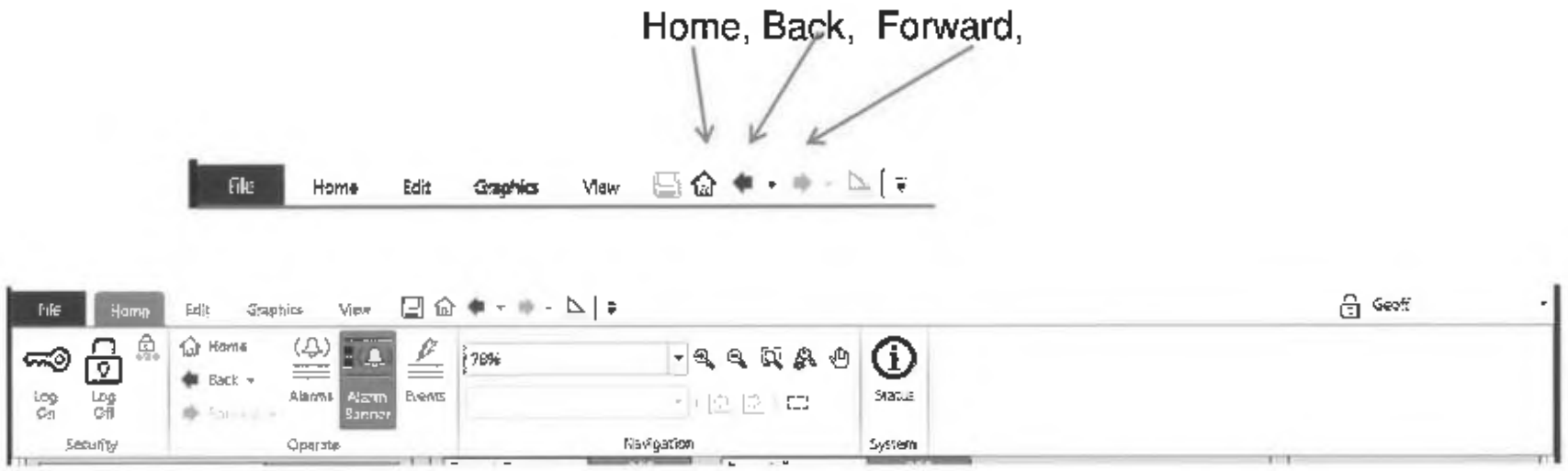


This button opens the Log on/Log off form.

SCADAPack Stations do not have a Site ID So "No ID" is displayed.

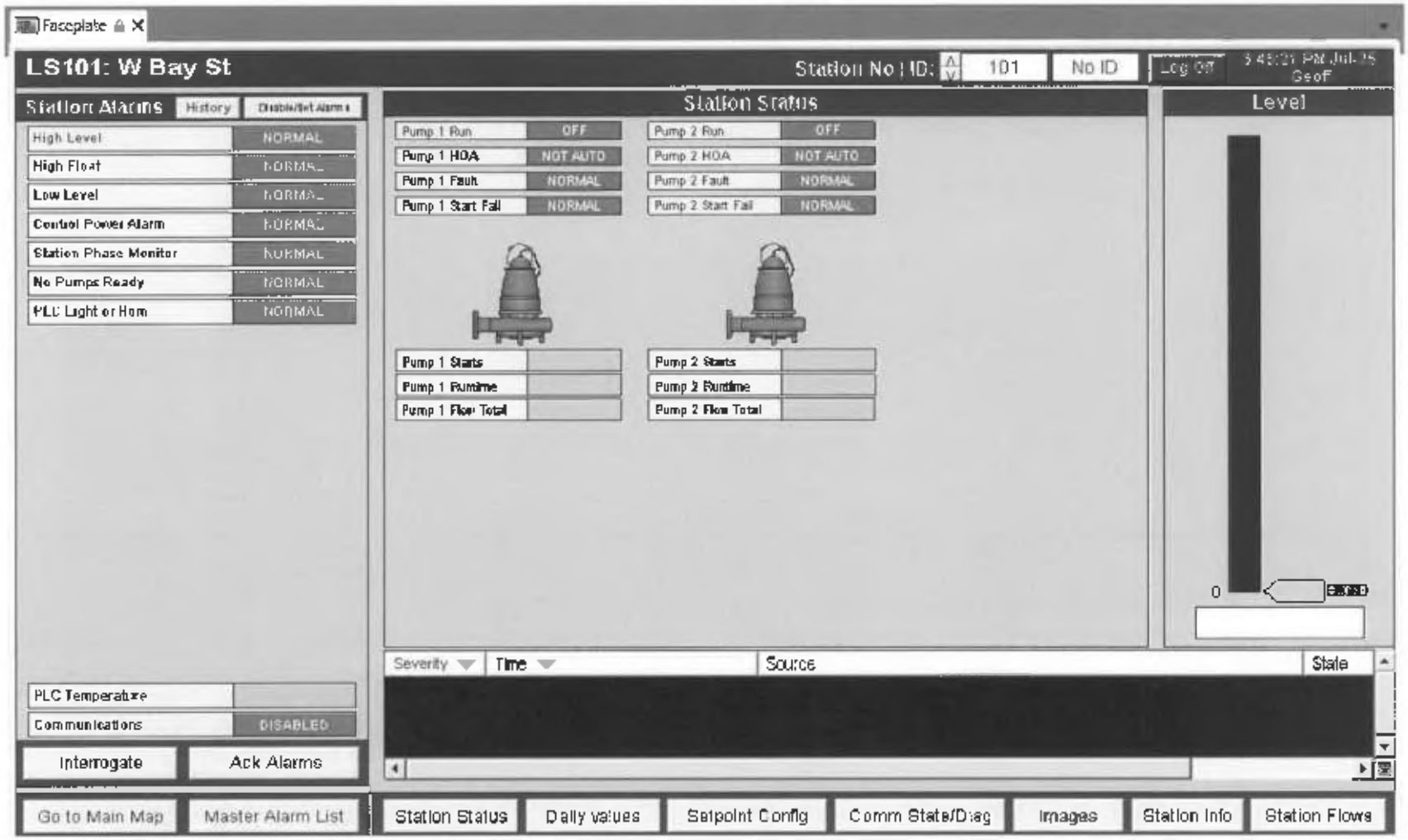
Operate Toolbar

ViewX Built in system Navigation



If the Home tab is selected there is logon options, Navigation buttons again, a button to a full screen system Alarm list, Show/Hide the Alarm Banner button, and a button to show a full screen list of all the system events. Then Screen navigation which if it is enabled for that screen it allows the user use the zoom features.

Stations



This is the Main Screen for a Station.

- The "Interrogate" button will request the current values from the site.
- The "Ack Alarms" button will Acknowledge all alarms for this Station.

Daily values screen



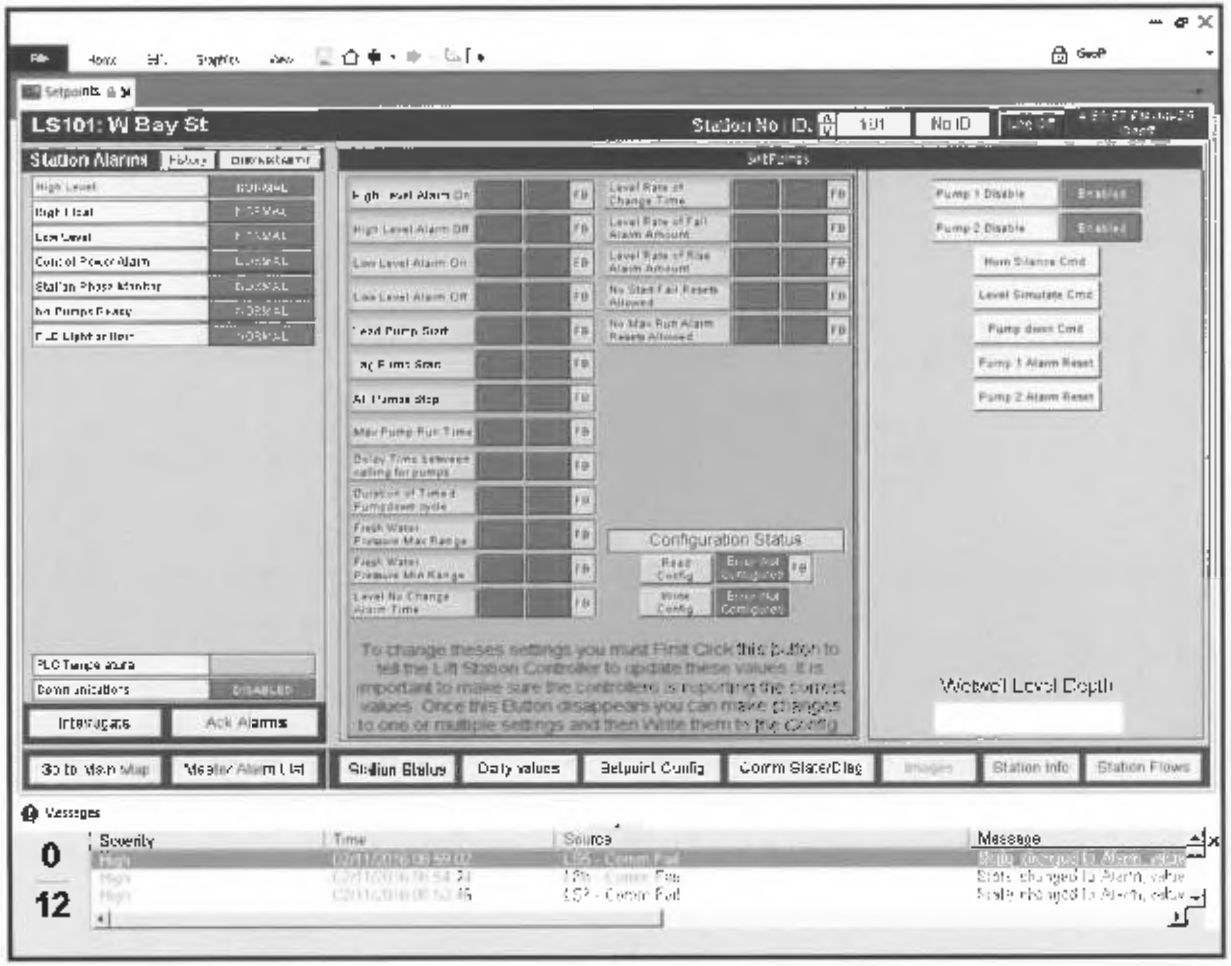
The pumps' Current day runtime and the previous day runtime are on this screen.

Setpoint Config

The Configuration screens lets a logged on user change settings. There is a specific procedure that the notes on the screen tell the user how to make a settings change.

The giant button in the middle has to be pressed first which verifies that what is displayed on the screen is what is currently in the controller.

There is text that tells the progress of the read and write processes.



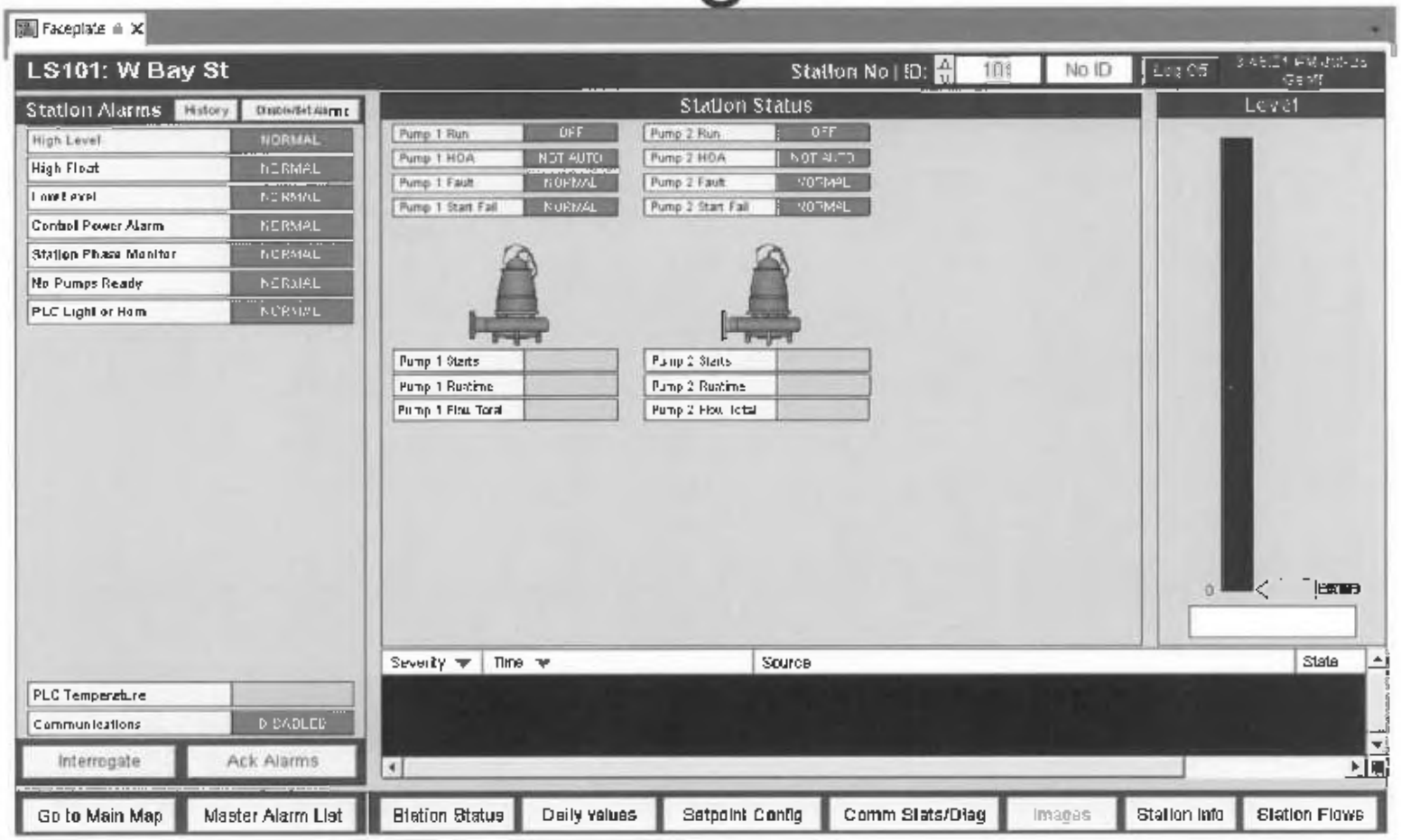
Once the Readback is finished receiving what is current in the controller the user can press a settings button and change a setting. After all settings have been changed the Write Config button is presses to send the changes to the controller.

Comm Stats/Diag



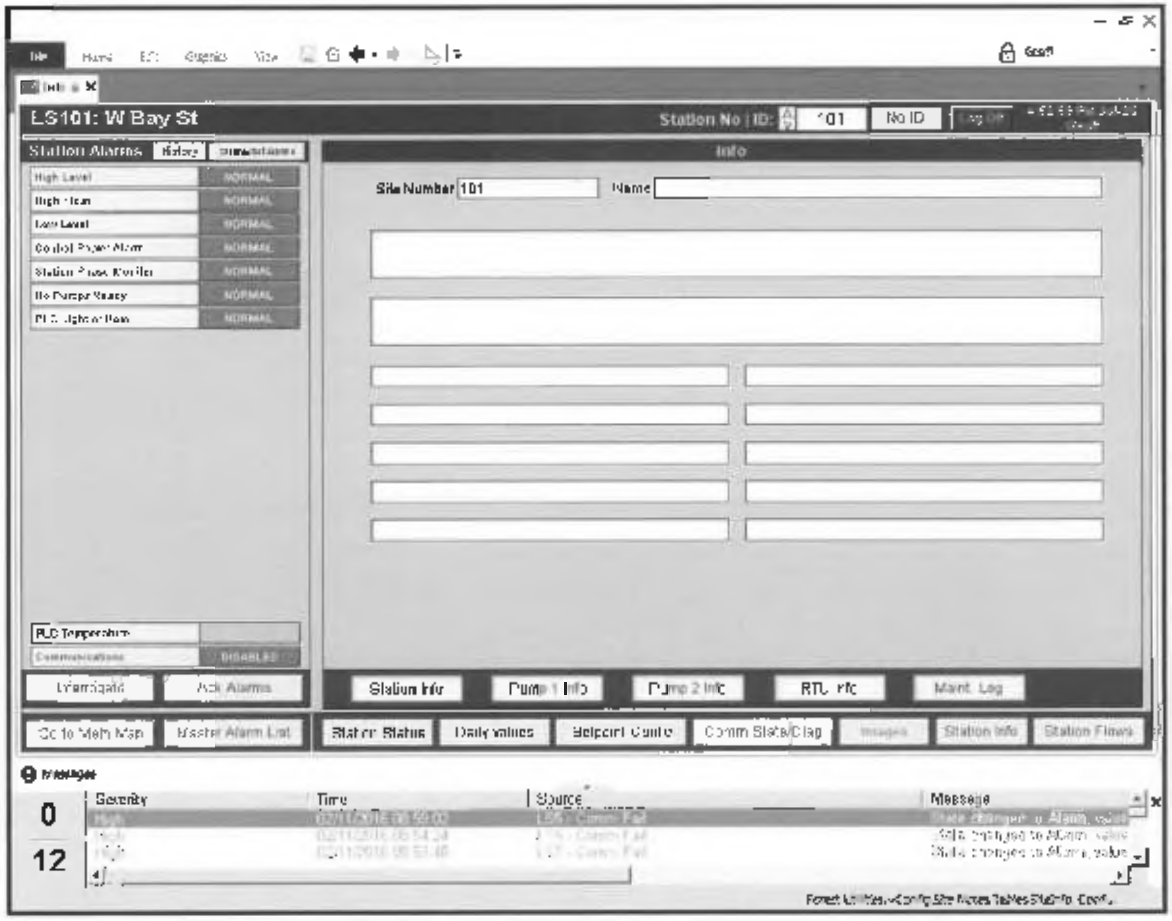
This shows the communications configuration, status, and statistics.

Images



The Images button has not been implemented. It requires a custom Web sever to be purchased.

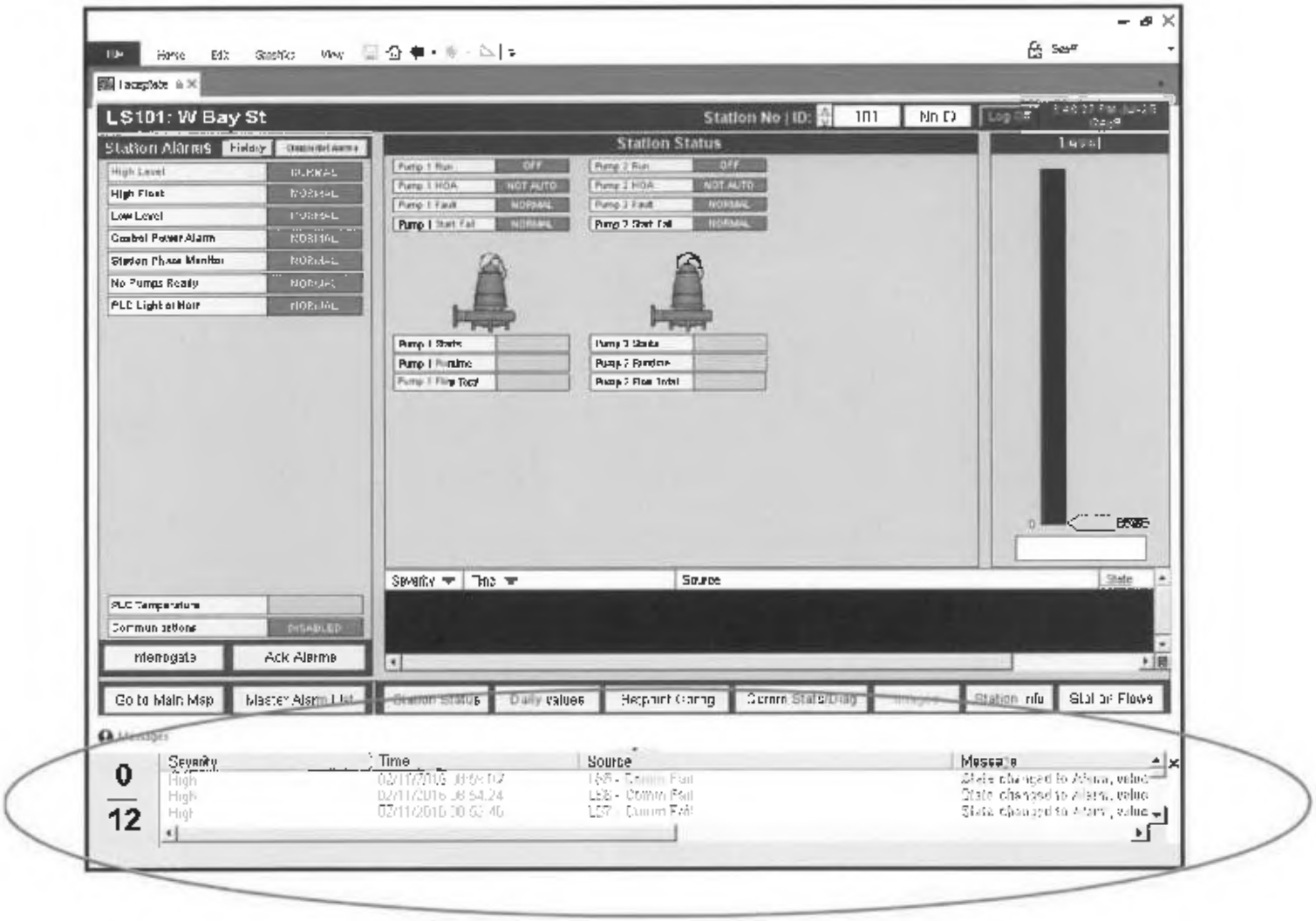
Station Info



The info screen allows users to see and add site information on screen.

Station Flows





- The ViewX Client has an alarm banner across the bottom to allow for a quick view of the newest system alarms.

Alarm behavior

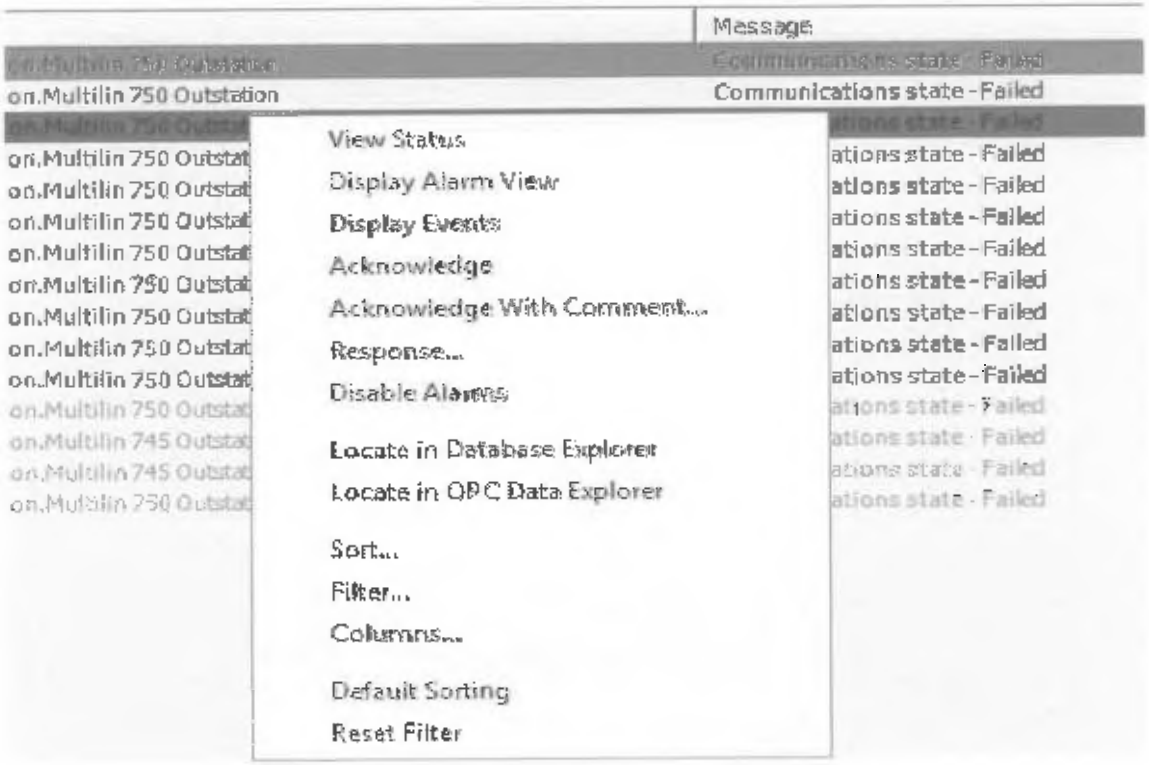
- The alarms blink red when active and unacknowledged.
- They are a solid red when active and acknowledged.
- They are solid yellow when they are no longer active but have not been acknowledged.
- Right clicking on an alarm and selecting Display Alarm View will navigate the user to the main screen for the station that has that alarm on it.

Alarm behavior continued

- Right click also allows the operator to acknowledge alarms. Multiple alarms can be selected by left clicking on the first one and dragging the mouse pointer down to the last one the user wants to acknowledge then right click and select acknowledge.
- The Master Alarm List screen only allows single alarm selection.

Alarm Right click menu.

The Master Alarm List uses a Left click to get the same menu with the addition of a Print option.





This is the right click menu for the alarms when a user with the right to acknowledge them is logged in the guest account (no one logged in) does not allow acknowledge or respond. The Sort and Filter options are only available from the full screen alarm view. The next page describes each of the options in the right click drop down menu.

Some options may not be available if it is not applicable or if a user's rights does not allow then to do something.

An example is the capability to Acknowledge and Alarm:

1. This option is not available if the Alarm has already been acknowledged.
2. A user may not have been granted the right to Acknowledge Alarms. Like the Guest user cannot acknowledge alarms so that option is not displayed.

- View Status - displays a form with The Current information for the point that generated the alarm.
- Display Alarm View - navigates to the screen for the device is on that has the alarm.
- Display Events - will display a list of the logged changes from the last hour for the point in alarm.
- Acknowledge - acknowledges the alarm
- Acknowledge With Comment - acknowledges the alarm and adds a comment that is recorded in the event history.
- Response – adds a comment to the alarm but does not acknowledge it. An alarm with a response has a blue/green background color.
- Disable Alarms – Will disable the select point from generating any Further Alarms.

- Locate in Database Explorer - navigates to the Point that generated the alarm in the Database Explorer . From the Database Explorer the configuration of the point can be viewed.
- Locate in OPC Data Explorer - navigates to the Point that generated the alarm in the OPC Data Explorer . From the OPC Data Explorer various values the system keeps on a the point can be viewed.

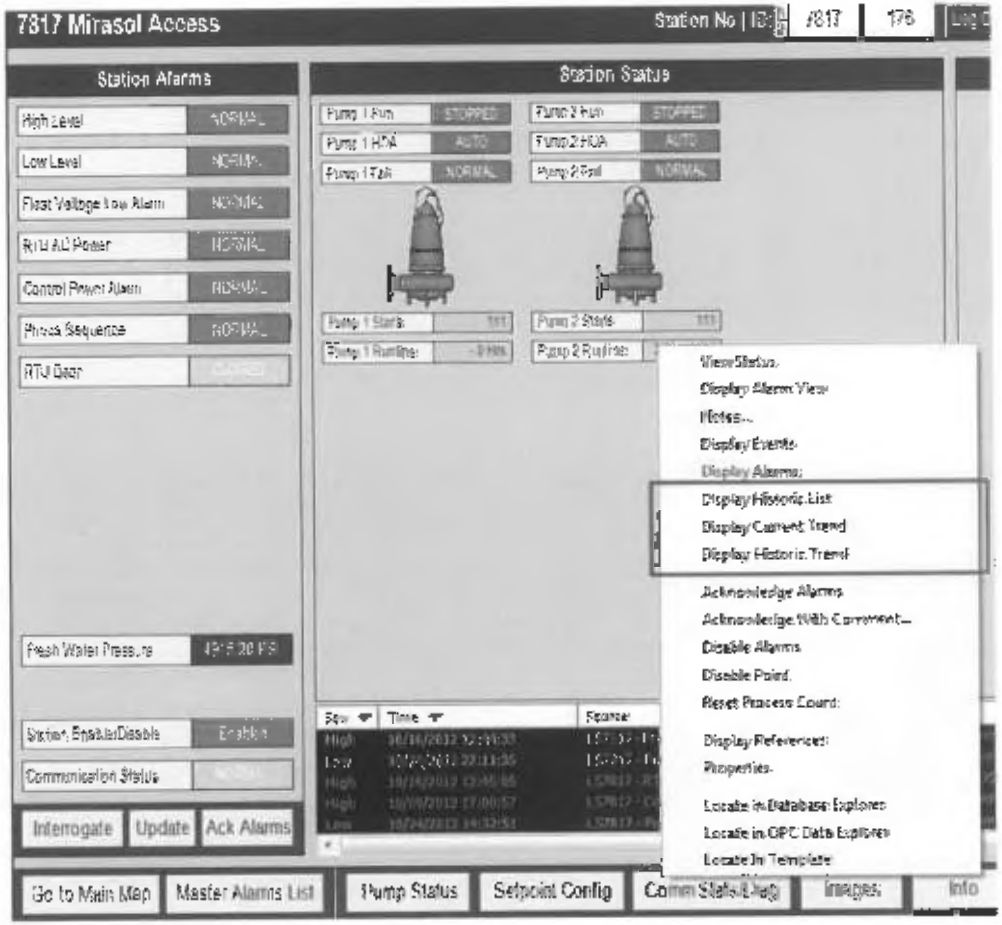
The Locate options are advanced features usually used by administrators.

- Sort – opens a sort order menu so the user can change the default sort. This is reset when the screen is left.
- Filter– opens a Filter menu so the user can filter on certain alarm criteria. This is not always reset when the screen is left. The user may have to open the filter menu again and remove the filters.
- Columns – opens a Columns menu so the user can change the default order of the Columns. This is not always reset when the screen is left. The user may have to open the Columns menu again adjust the columns back.

The Filters and Columns always reset when the screen is left on the Master Alarm List and the Station Alarm section. The System Alarm Screen is where the may be left as they were last changed by a user.

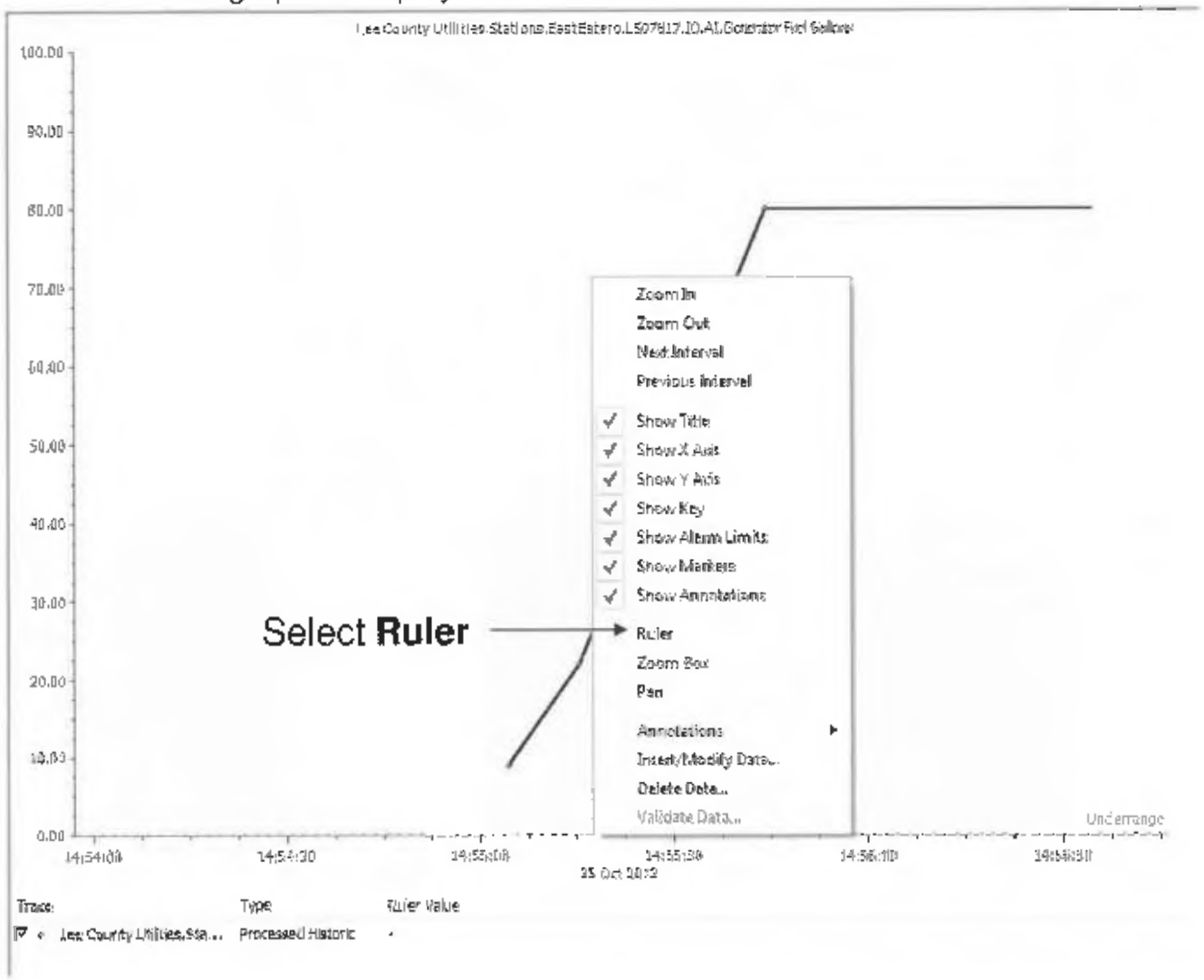
Viewing the Historic trend of [redacted]

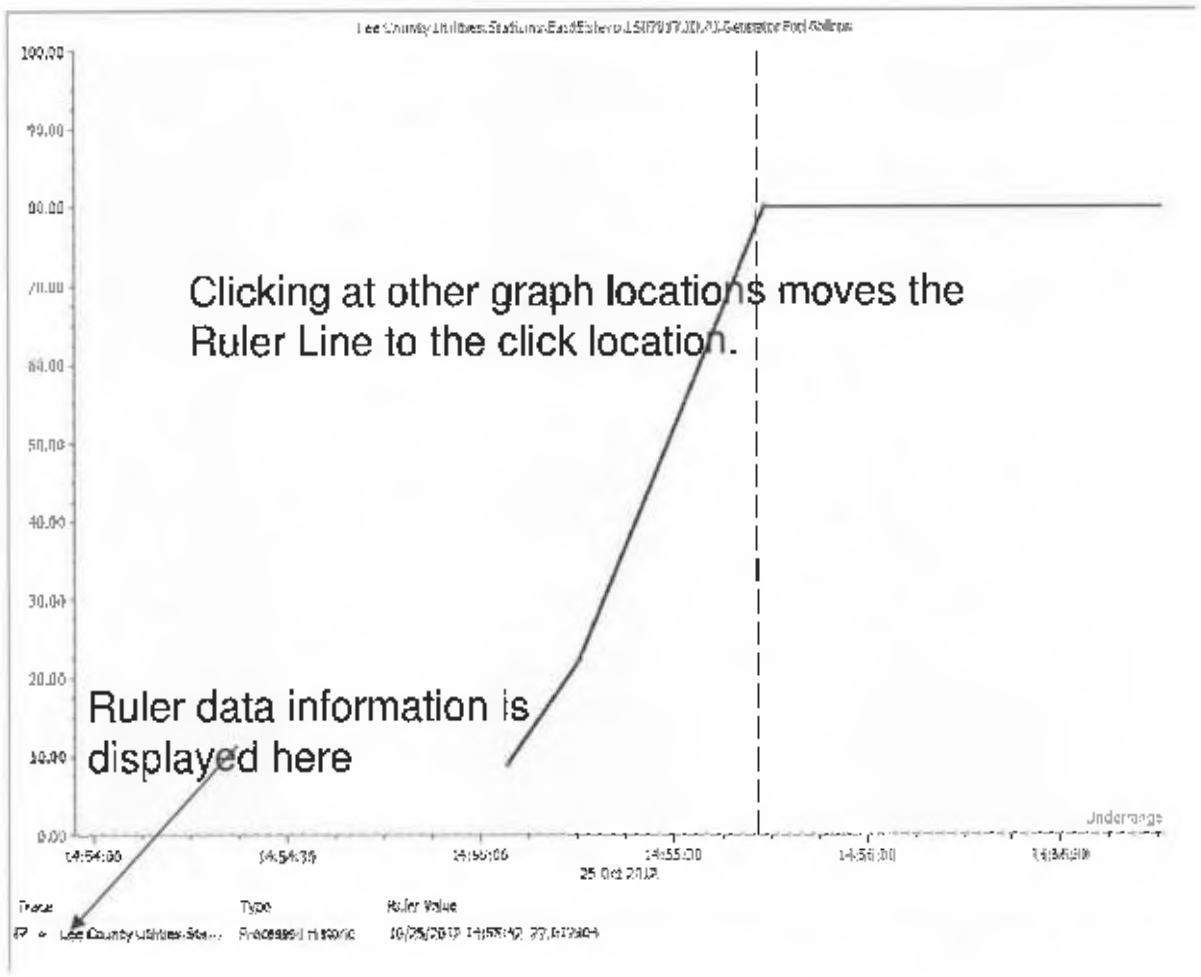
Left Clicking on a value will generally open a menu from Which the Historic values can be viewed as:
A Historic List, in a spreadsheet format.
A Historic trend in a graph.
A Current trend in a Graph.
The Current trend does not display any historic values, it will trend any changes in the value from the time it is opened to the time it is closed. This trend information is not save when it is closed



Trend Screen Overview

Right Click within the trend graph to display the control menu.



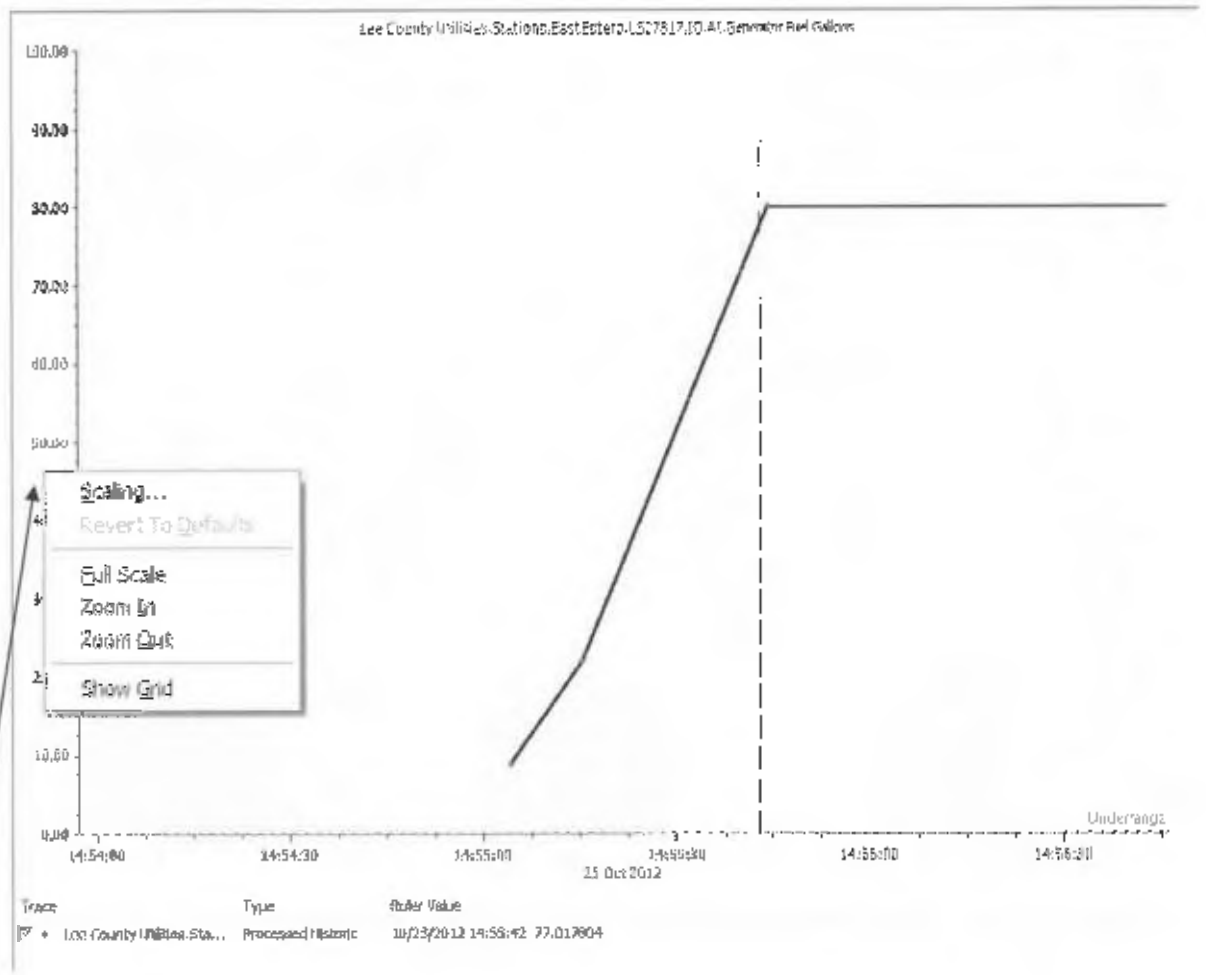


The Mouse Cursor will now look like this. ↔
Clicking in the trend graph places the ruler line at the click point.

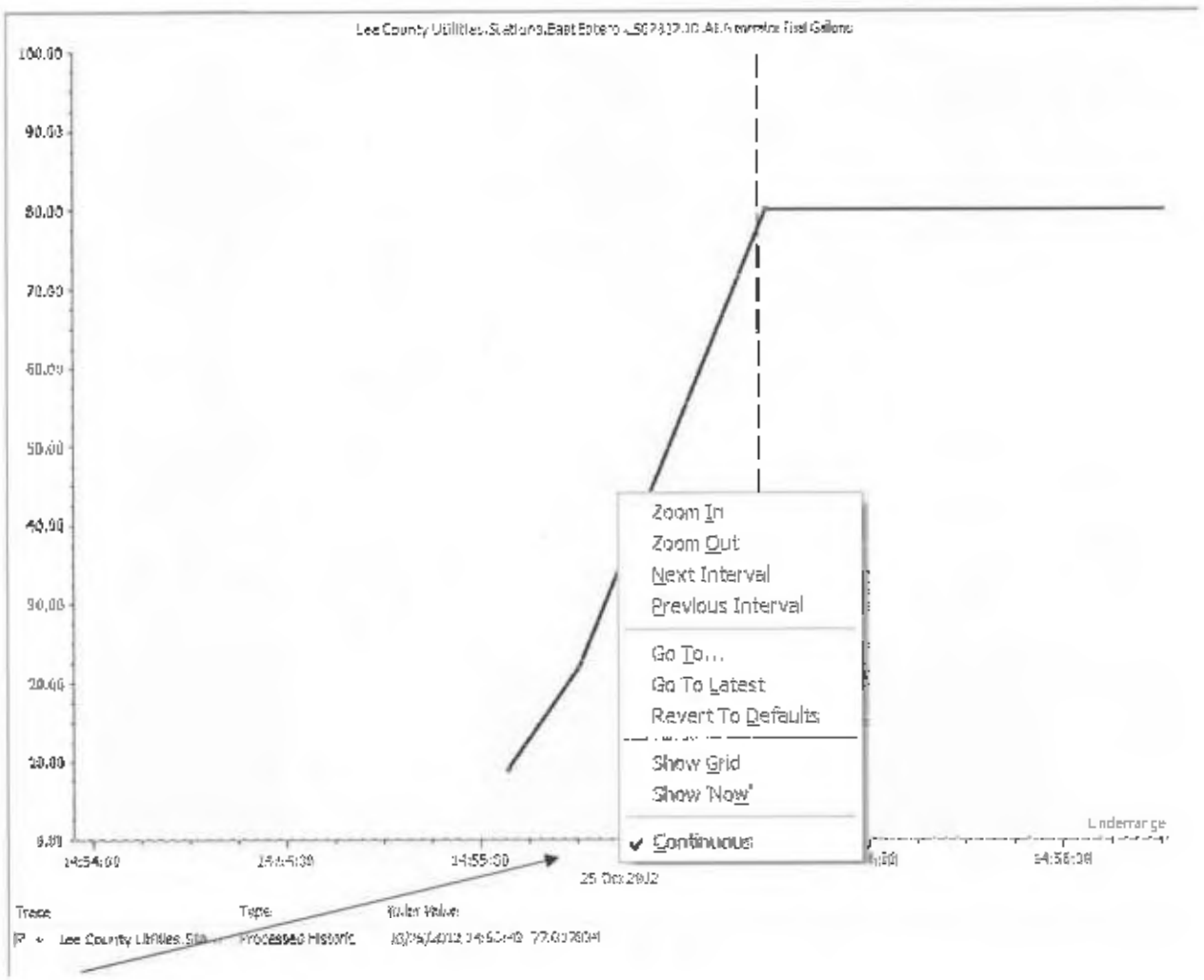
Trace is the Description

Type let the user know if they are looking at Historic or Current trend data.

Ruler Value is the value of the point where the ruler line is currently placed with a Time stamp



Right click on the Y axis to open the scale change menu.
Alternatively just point at the scale near where the trend line is and scroll the mouse wheel



Right click below the X axis to zoom the time scale in and out, Jump to the next time interval, or the previous time interval. The time interval is the span of time currently displayed on the trend. The zoom in will shorten the time span and the Zoom out will increase it. Selecting the Go to … will open the following menu.



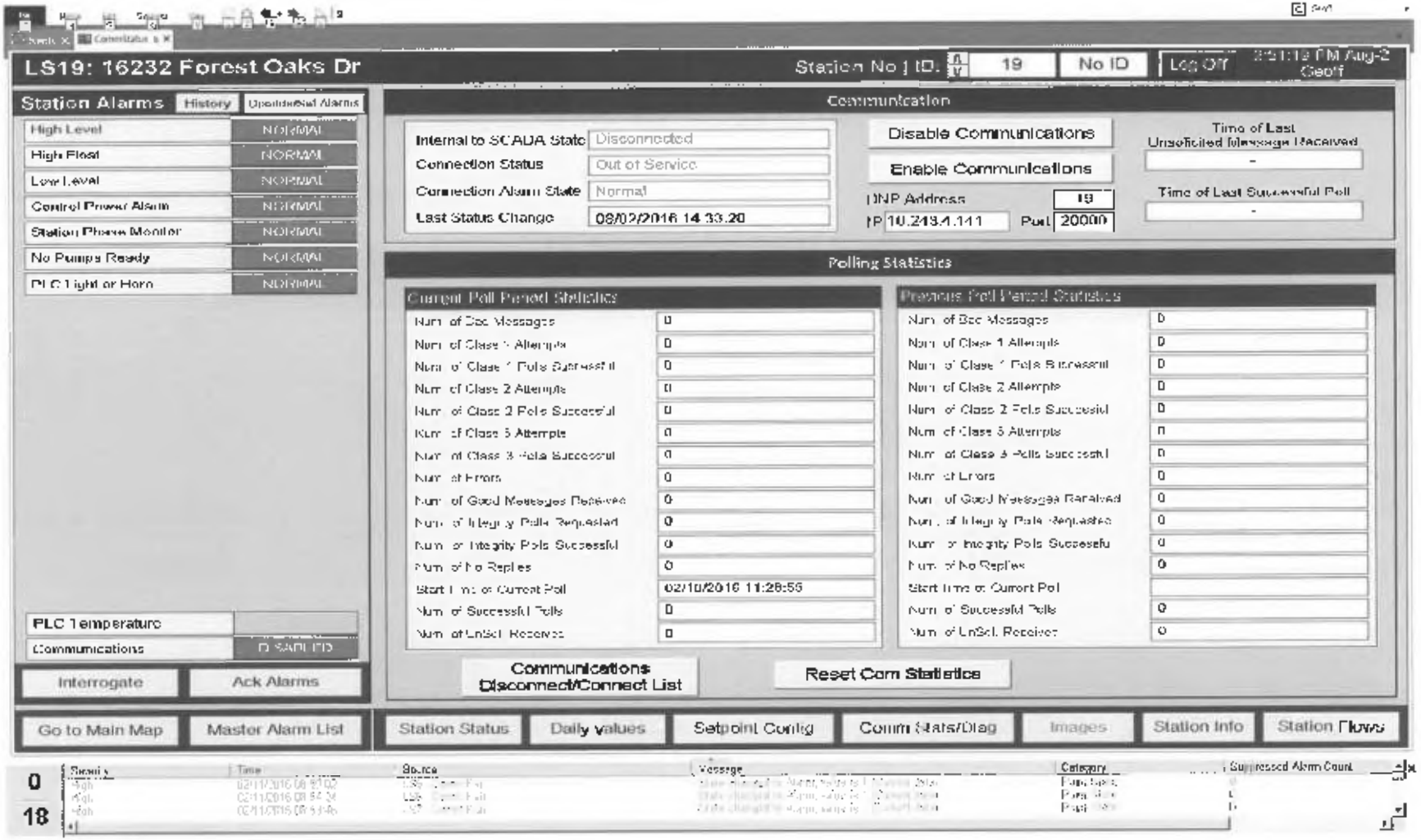
This Menu is use to quickly go to a point in time on the trend. It has preset options such as the Current Hour, Yesterday, Last week, Etc., and you can also chose a Specific date and time to go to.
The option Go To Latest take the trend to the most recent value trended and set the time span to the default span.
The option Show Now sets a red vertical dashed line at the point of the Current time.

Configuring a new station

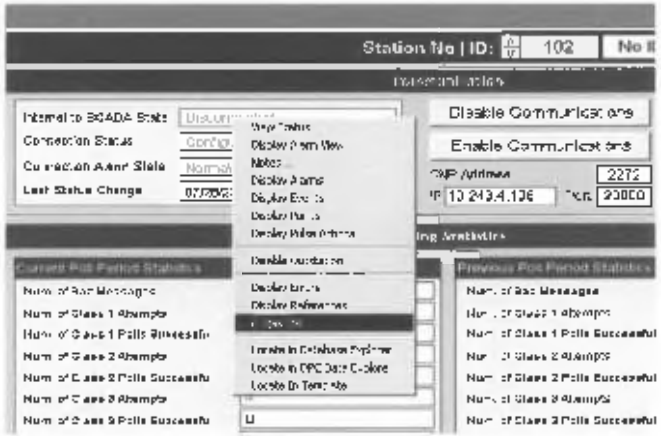
- All your station sites have been preconfigured.
- There are a few configuration things that need to be checked and done to bring a station online.

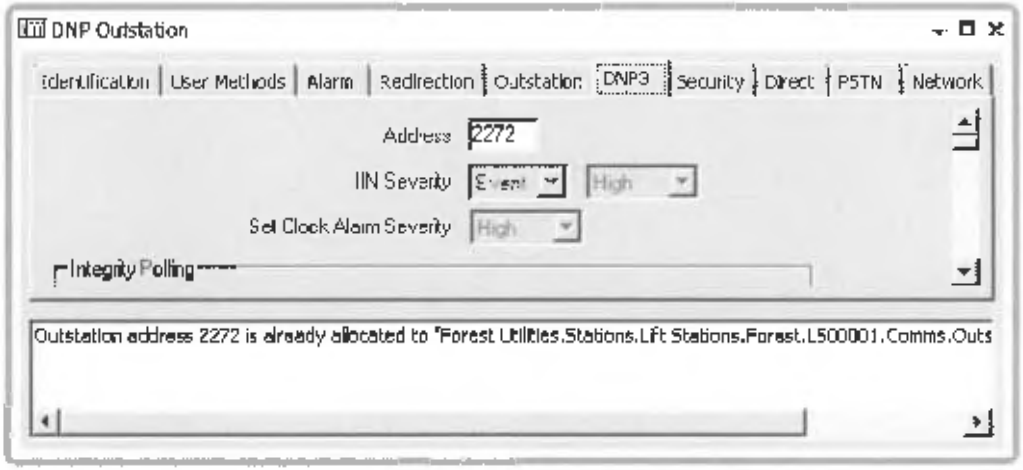
Com Stats/Diag screen.

The Disable and Enable Communications buttons are used to turn off and on communications to the site.

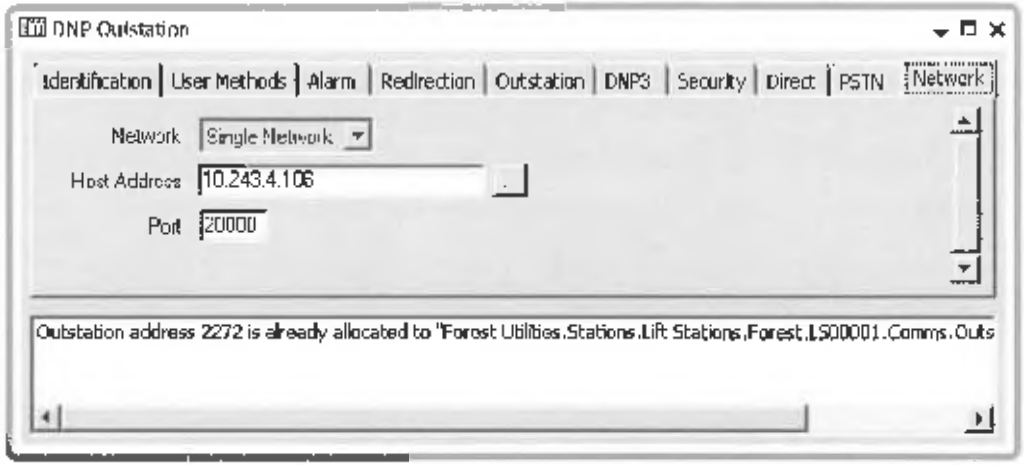


From Site's "Com Stats/Diag" screen the site's IP address and DNP Address can be set by right Clicking on the "Internal to SCADA State Value and then selecting the Properties option form the menu that is displayed. Change the address field in the properties screen that is displayed and then select the Network Tab. Change the IP address and then save the changes. Lastly close the properties window.





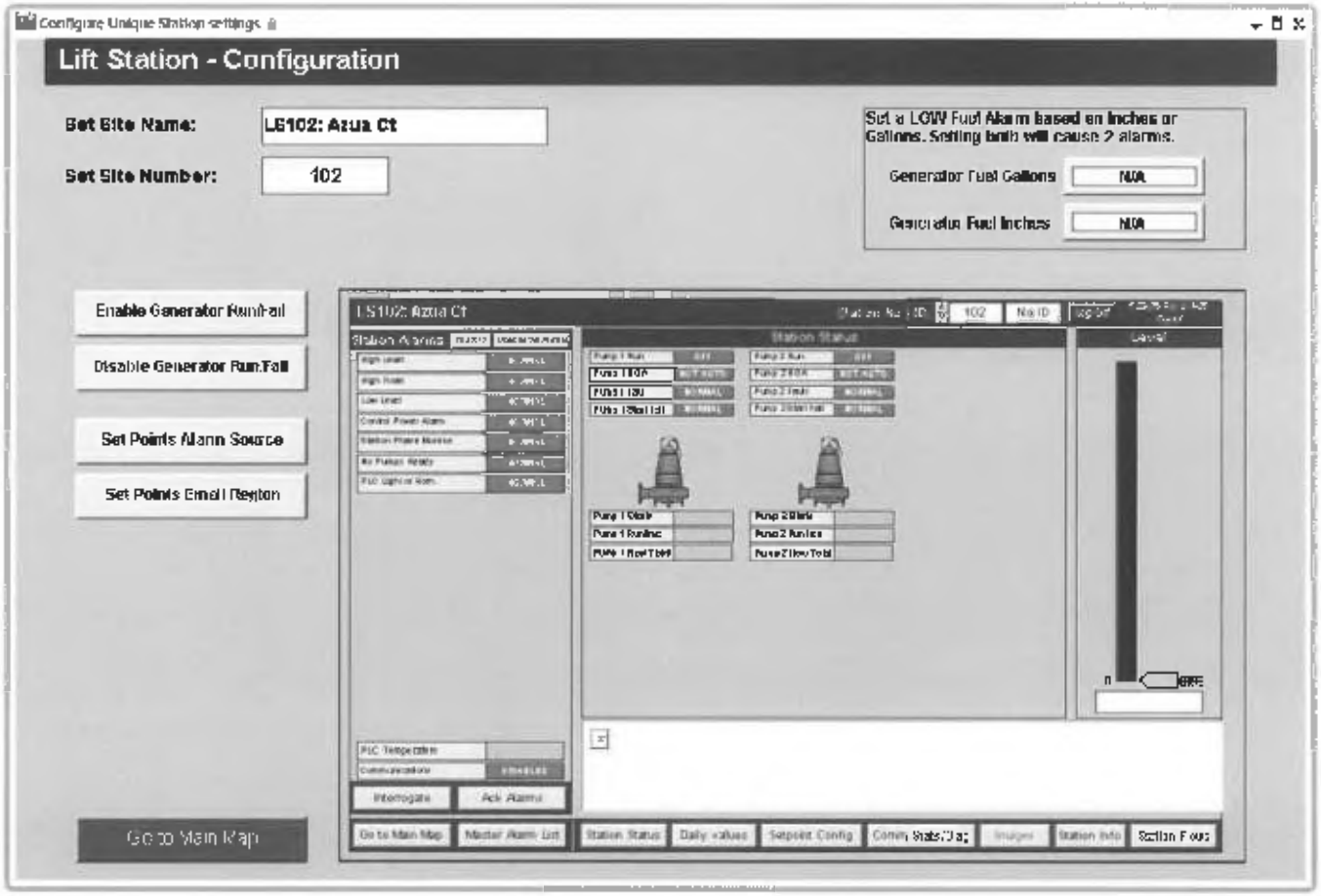
when a site is first being configured to communicate



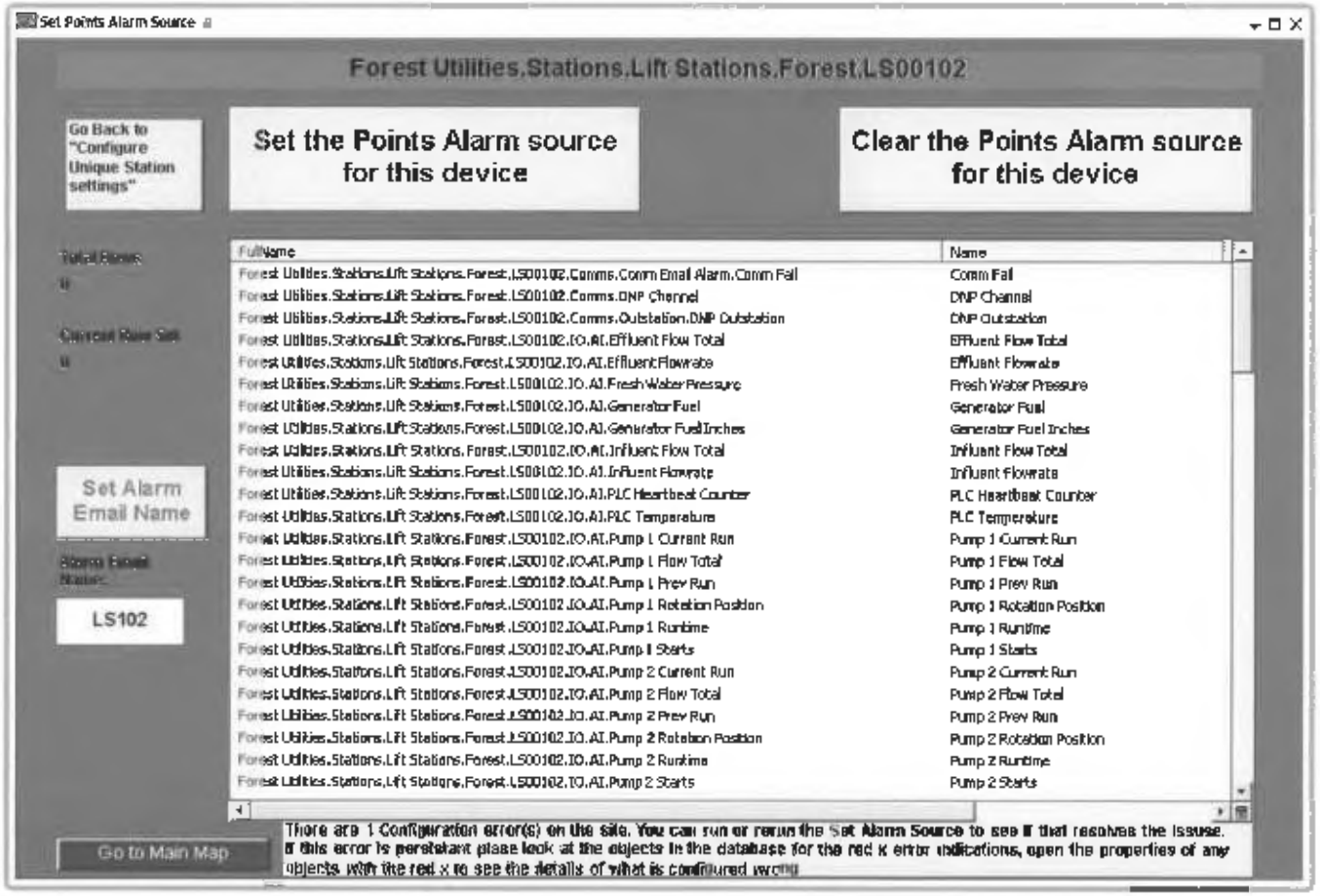
There is a section of configuration settings that has already been set for the stations the main one is Configure Unique station settings screen

- In the database tree go to the site to be edited and open the “Configure Unique Station settings screen.”
- For example LS 102 is located in Forest Utilities> Stations> Lift Stations> Forest> LS00102> Graphics> Instance Configuration> Double Click on “Configure Unique Station settings” to display the settings window

Configure Unique station settings

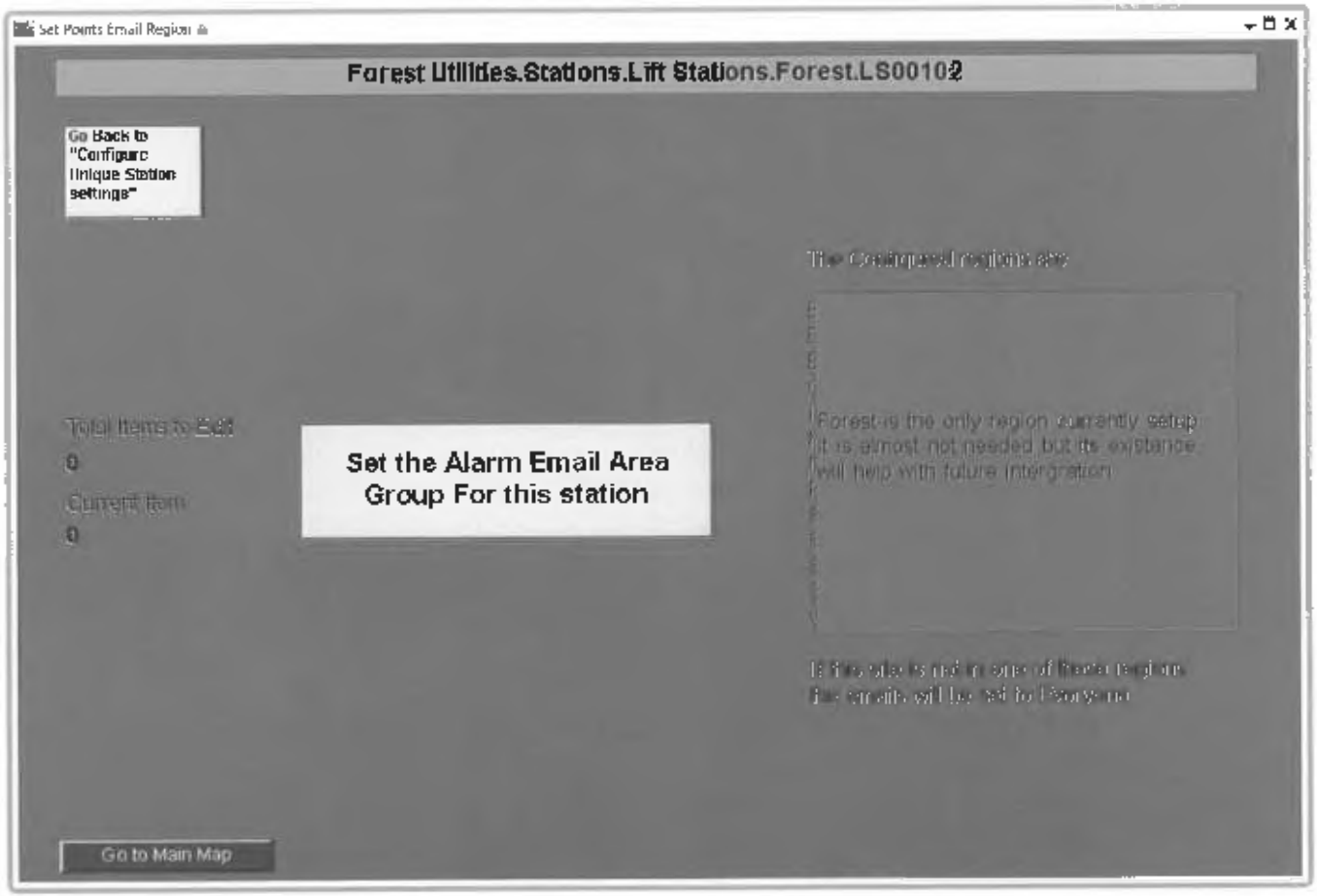


Set the Alarm Source screen



This screen is used for setting the alarm source description for the points so that the description is shorter and more readable than the default Alarm source description. Also for setting the liftstation Email Name.

Set the Alarm Email Area Group screen



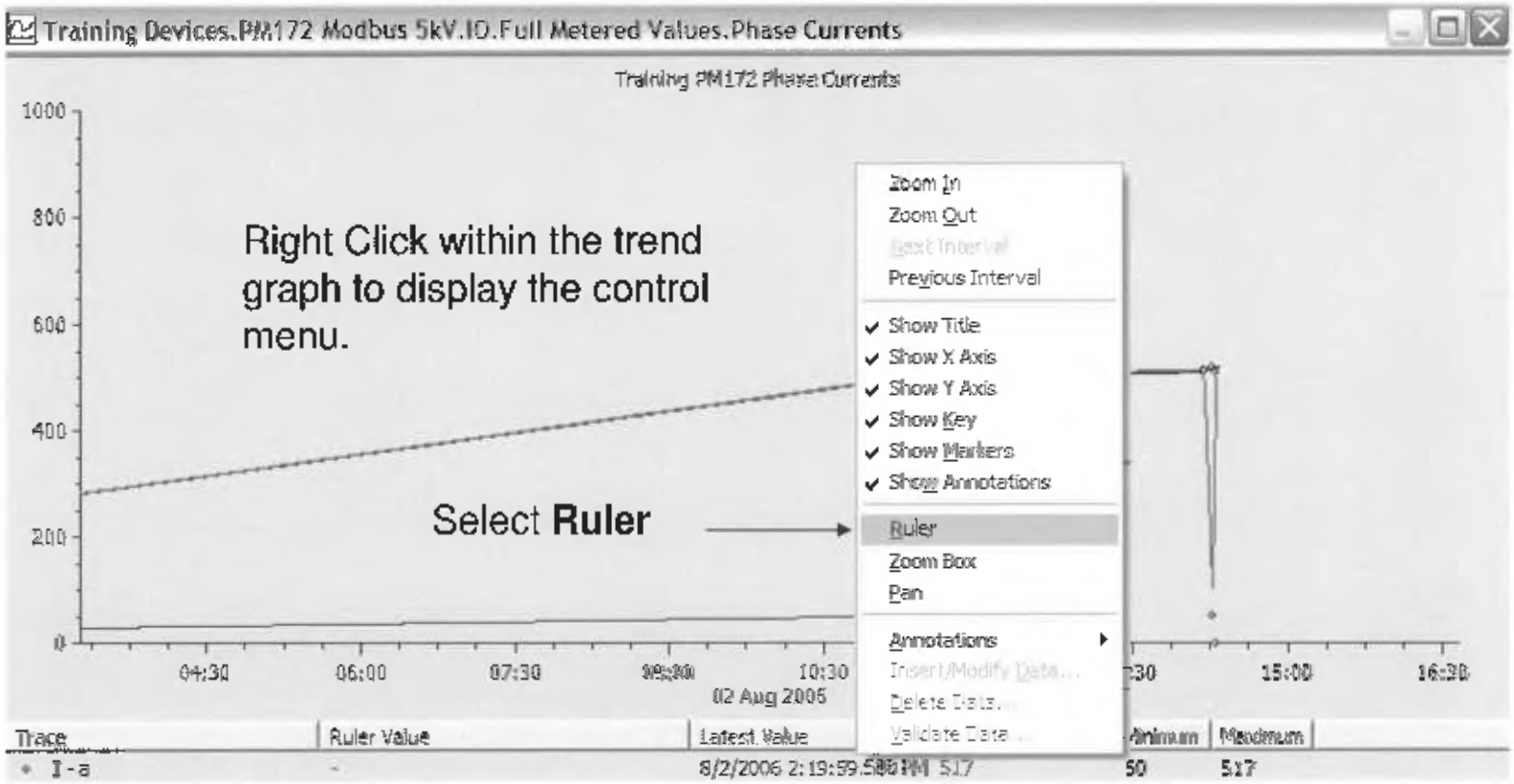
Using the Trends, Alarms, and Events

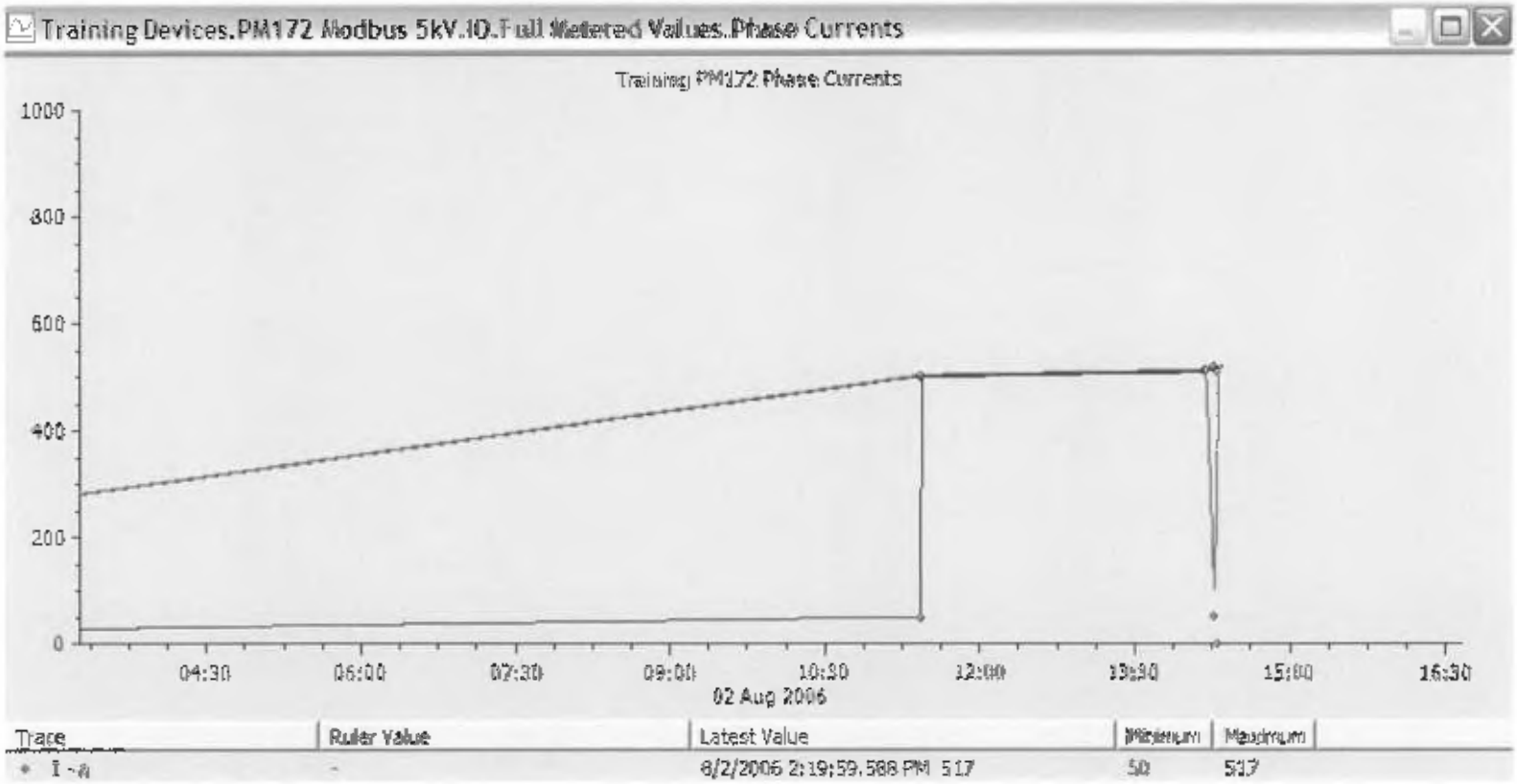
The following pages may repeat some of what has already been covered. The trends Alarms and events screen functionalities are covered in depth and are not necessary for most users to know.

Some of these screens are not from your system, but the information covered is still relevant.

Also depending on a user's rights some options may not be available to them.

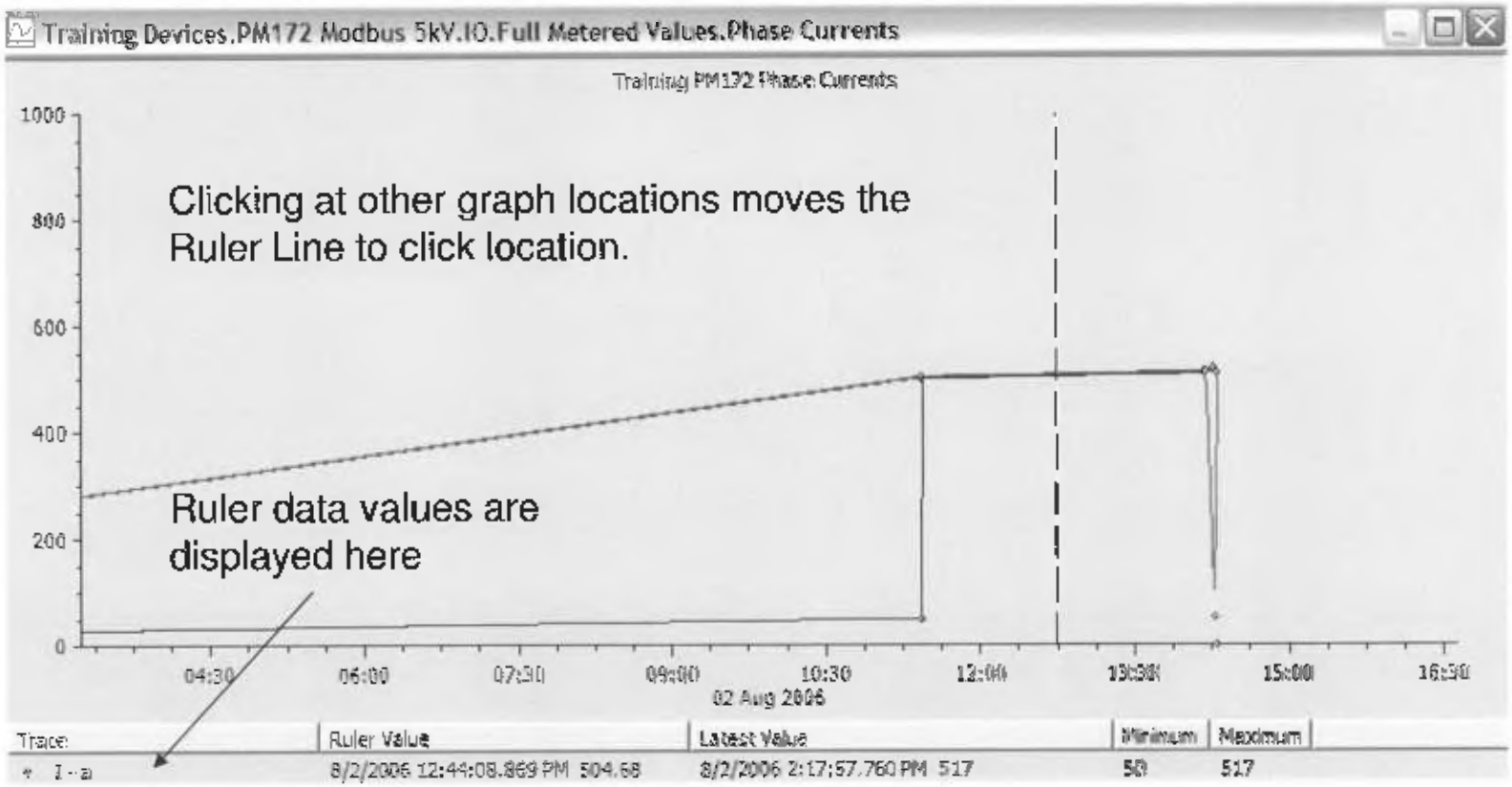
Trend Screen Overview





The Cursor will now look like this. ↔

Clicking in the trend graph places the ruler line at the click point.

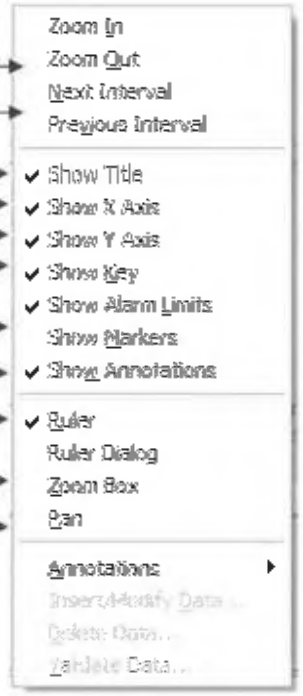

Training Devices.PM172 Modbus 5kV.IO.Full Metered Values.Phase Currents
Training PM172 Phase Currents
1000
800
600
400
200
0
Clicking at other graph locations moves the Ruler Line to click location.
Ruler data values are displayed here
04:30
06:00
07:30
09:00
10:30
12:00
13:30
15:00
16:30
02 Aug 2006
Trace
Ruler Value
Latest Value
Minimum
Maximum
I - a
8/2/2006 12:44:08.869 PM 504.68
8/2/2006 2:17:57.760 PM 517
50
517

Use the Control Menu to change how the trends are displayed.

- **Zoom in** and **Out**: Decrease and increase the time interval. (X Axis)
- **Previous Interval** and **Next Interval**: Scroll back and forward in time.

Click on the following items to turn on and off the following items:

- **Show Title**:
- **Show X axis**:
- **Show Y axis**:
- **Show Key**: The section beneath the trend that displays values
- **Show Markers**: Green dots show where a point value changed
- **Show Annotations:** Notes.
- Select and use the **Ruler**
- **Zoom Box:** Zooms in on the X axis of a selected section of the trend.
- **Pan**: Drags the Trend forward and backwards in time.



NOTE: These settings will be reset to default when the Trend window is closed.

Control Menu – Annotations: Use to manage notes on the trend.

Selecting one of these opens a form

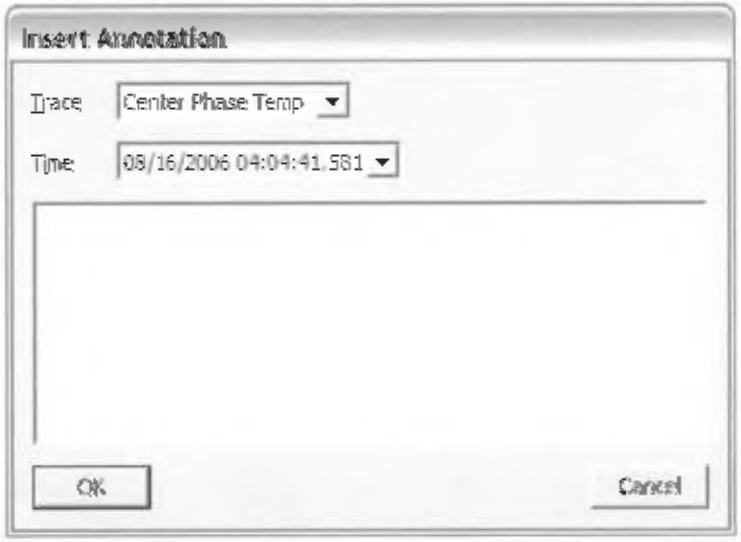


Annotations:

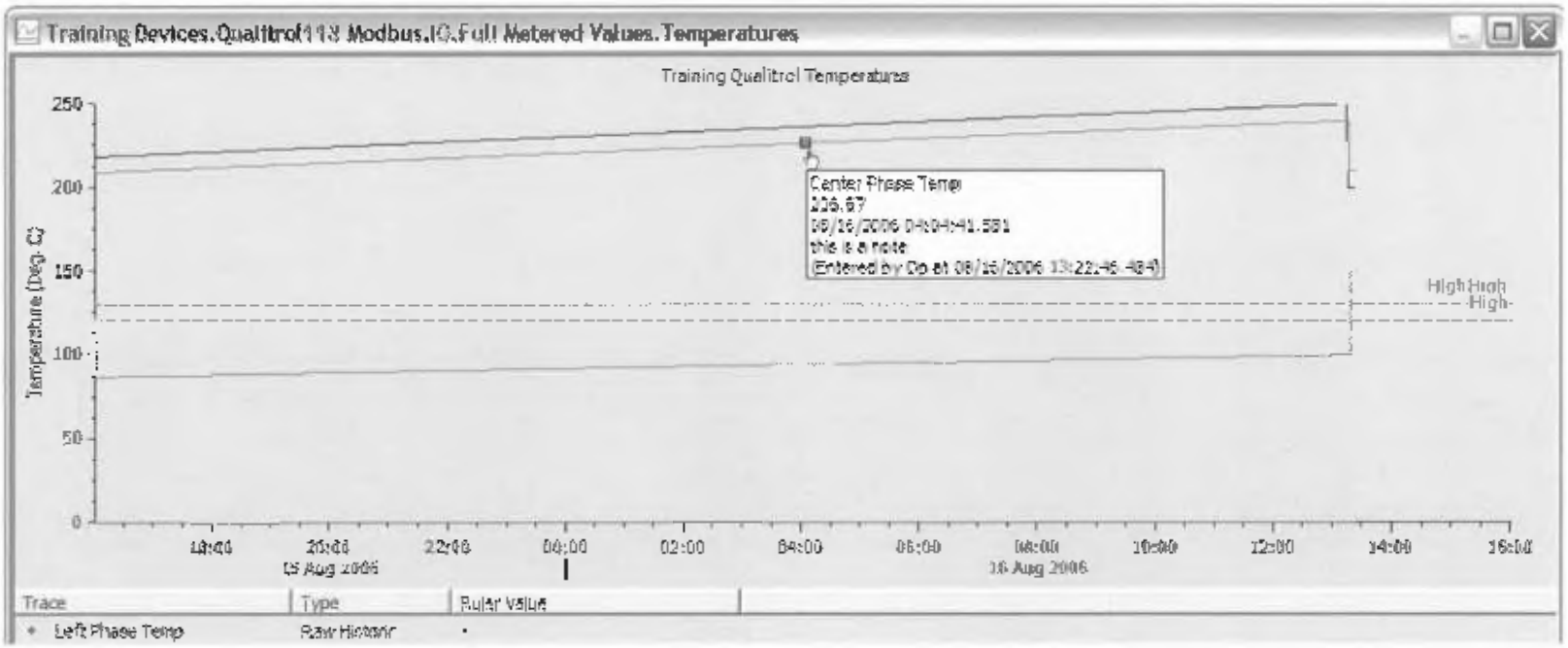
- **View**... Displays all annotations of the trend within the current view of the trend for the selected Trace
- **Insert**... Add a note to the trend. Annotations can only be added at a time earlier than the most recent change in value.
- **Modify**... Change an existing annotation
- **Delete**... An annotation

Insert Annotation

- Select which trace the note is about and the time. The time is the location on the trace that the note should appear
- Type the Note using less than 125 characters, and click OK.

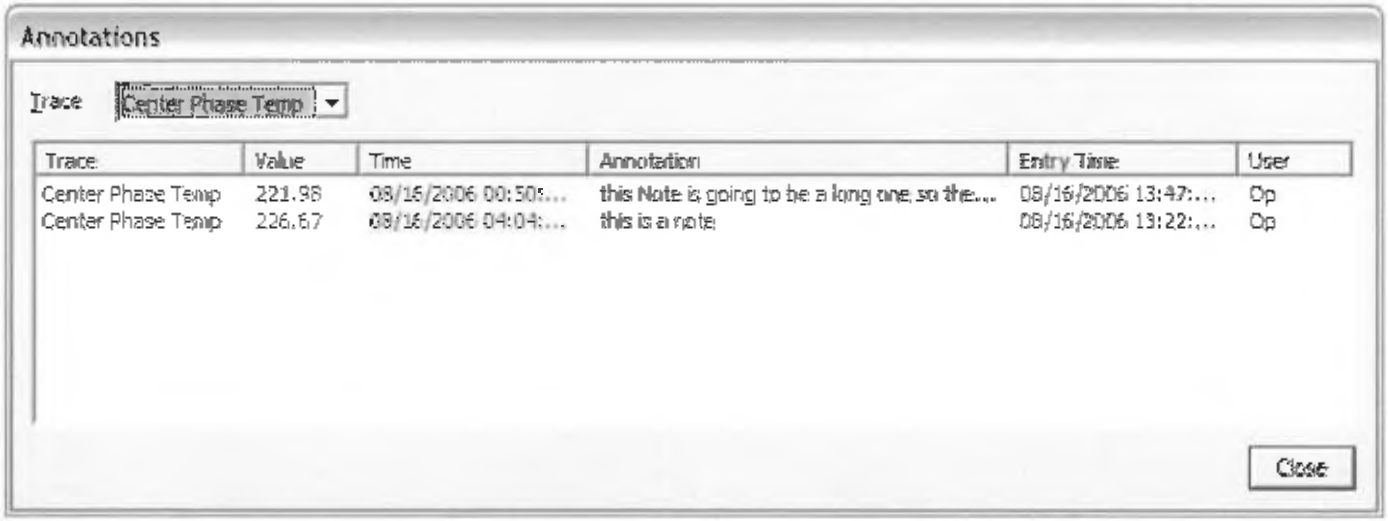


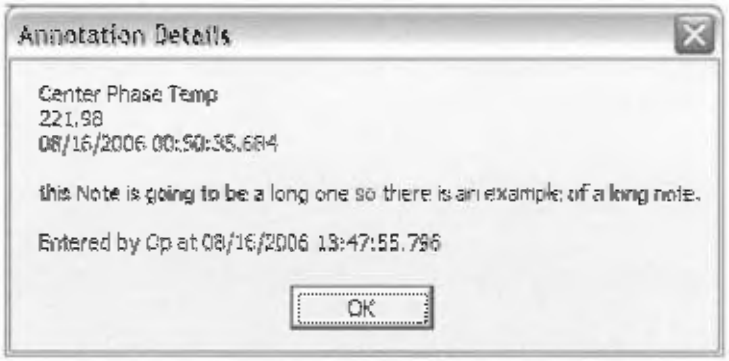
Annotations show on the trend as blue squares. Annotation details appear in a text balloon next to the square.



View Annotation

- To view the annotations of a trace, select it from the trace drop down list. Placing the cursor over a blue block also displays the detail.
- Double click on the annotation to display it in detail.





The first annotation has these details

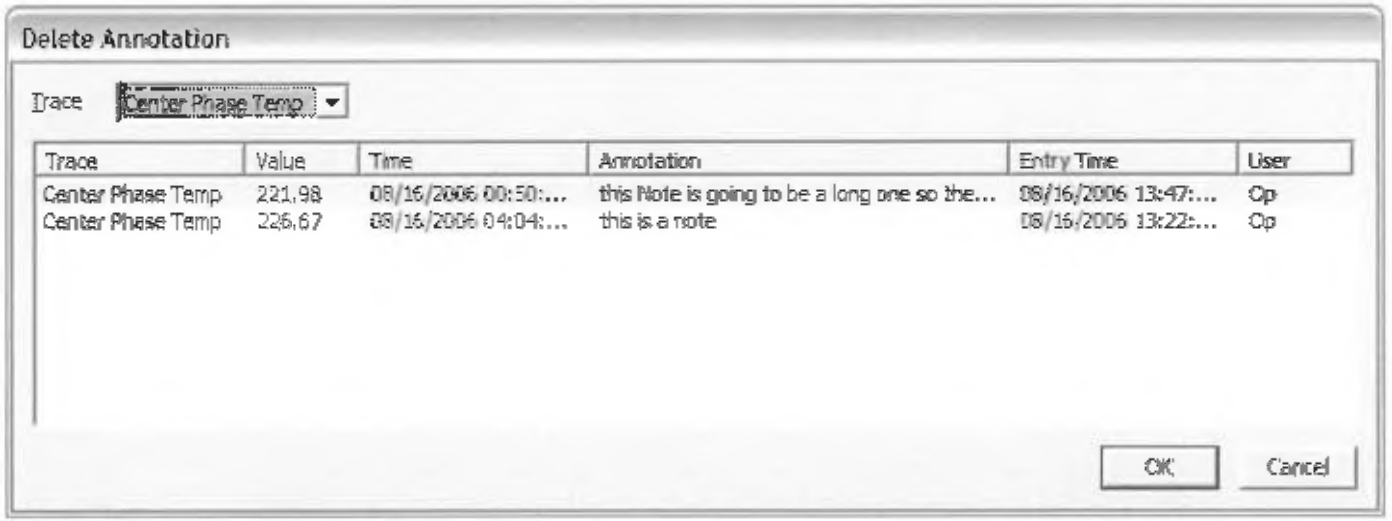
Modify Annotation

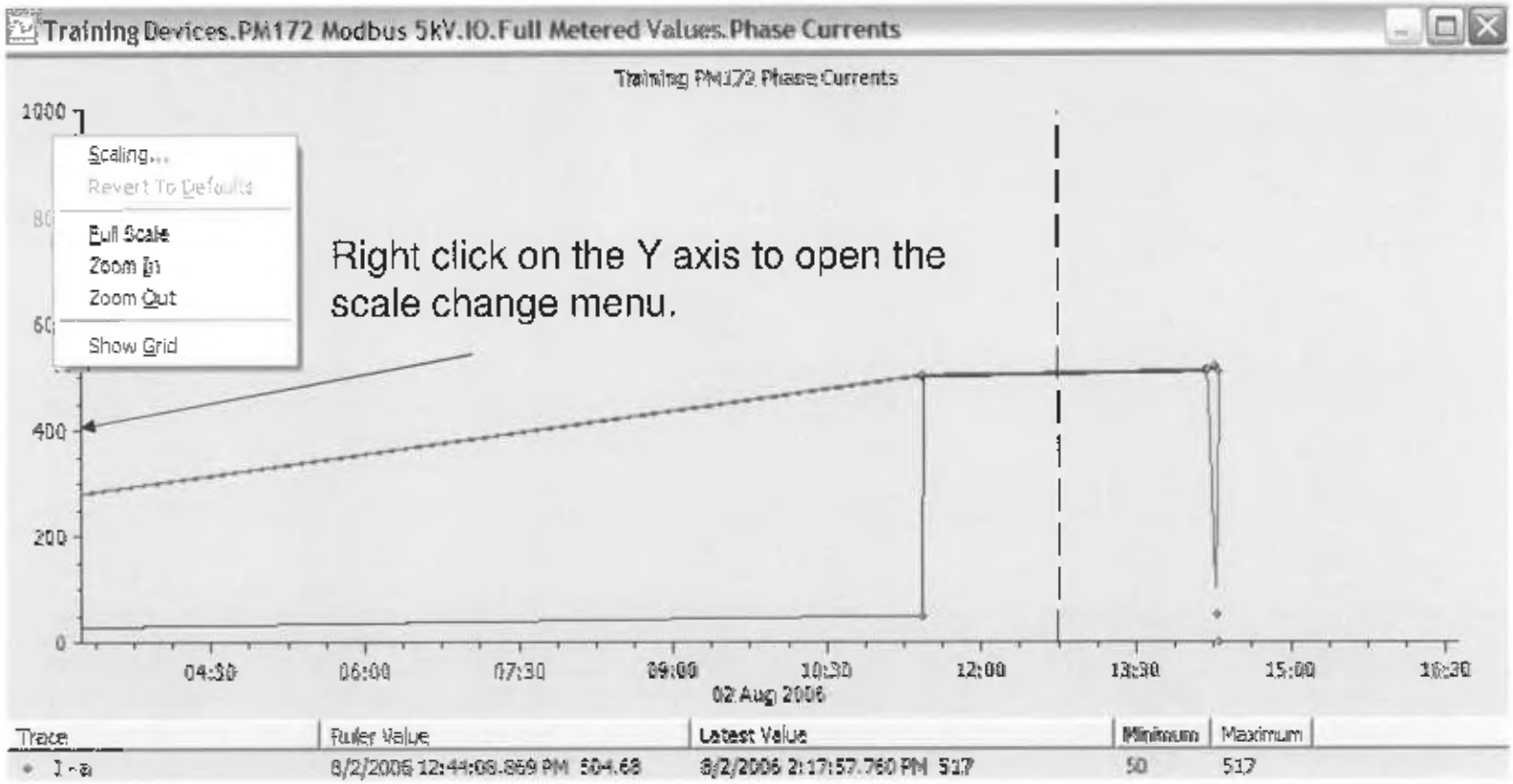
- To view the annotations of a trace select it from the trace drop down
- Select the annotation to be modified and edit the text in the lower portion of the form. Enter less than 125 characters.
- Click the OK button to save the changes

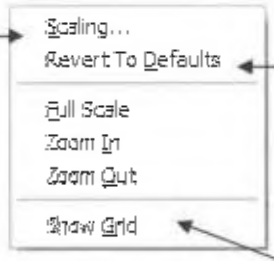


Delete Annotation

- To view trace annotations select a traced from the trace drop down menu.
- Select the annotation to be deleted and Press the OK button




Training Devices.PM172 Modbus 5kV.IO.Full Metered Values.Phase Currents
Training PM172 Phase Currents
1000
800
600
400
200
0
Scaling...
Revert To Defaults
Full Scale
Zoom In
Zoom Out
Show Grid
Right click on the Y axis to open the scale change menu.
04:30
06:00
07:30
09:00
10:30
12:00
13:30
15:00
16:30
02 Aug 2006
Trace
Ruler Value
Latest Value
Minimum
Maximum
I - a
8/2/2006 12:44:08.869 PM 504.68
8/2/2006 2:17:57.760 PM 517
50
517

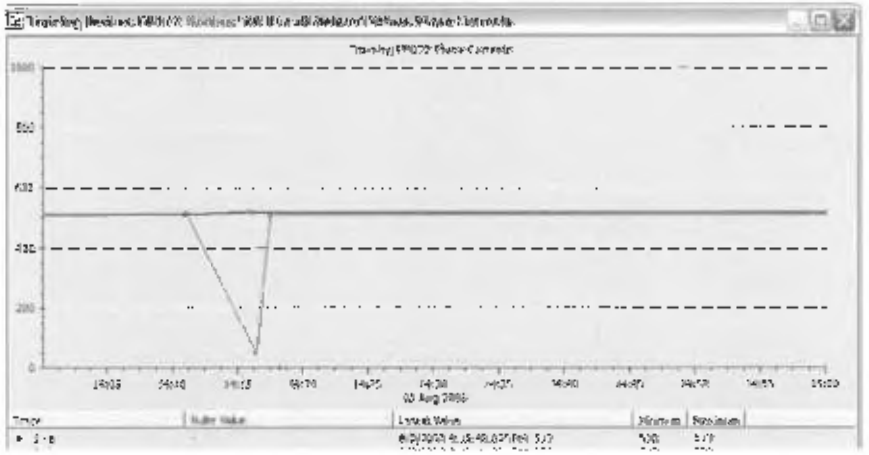


Select **Scaling...** To open this menu.

Revert to Defaults – Resets All changes to the Y axis.

Show Grid: Show dashed lines.

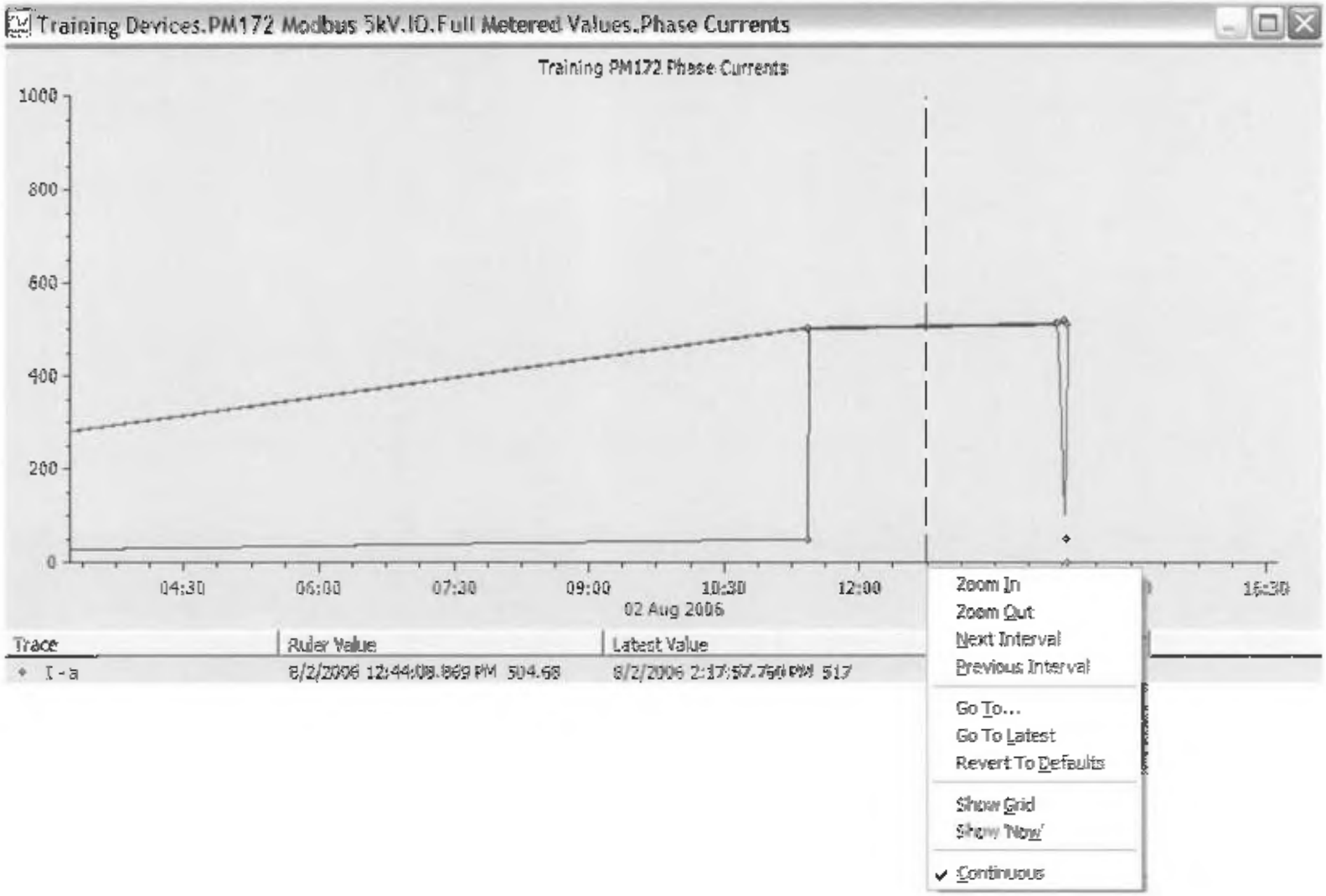




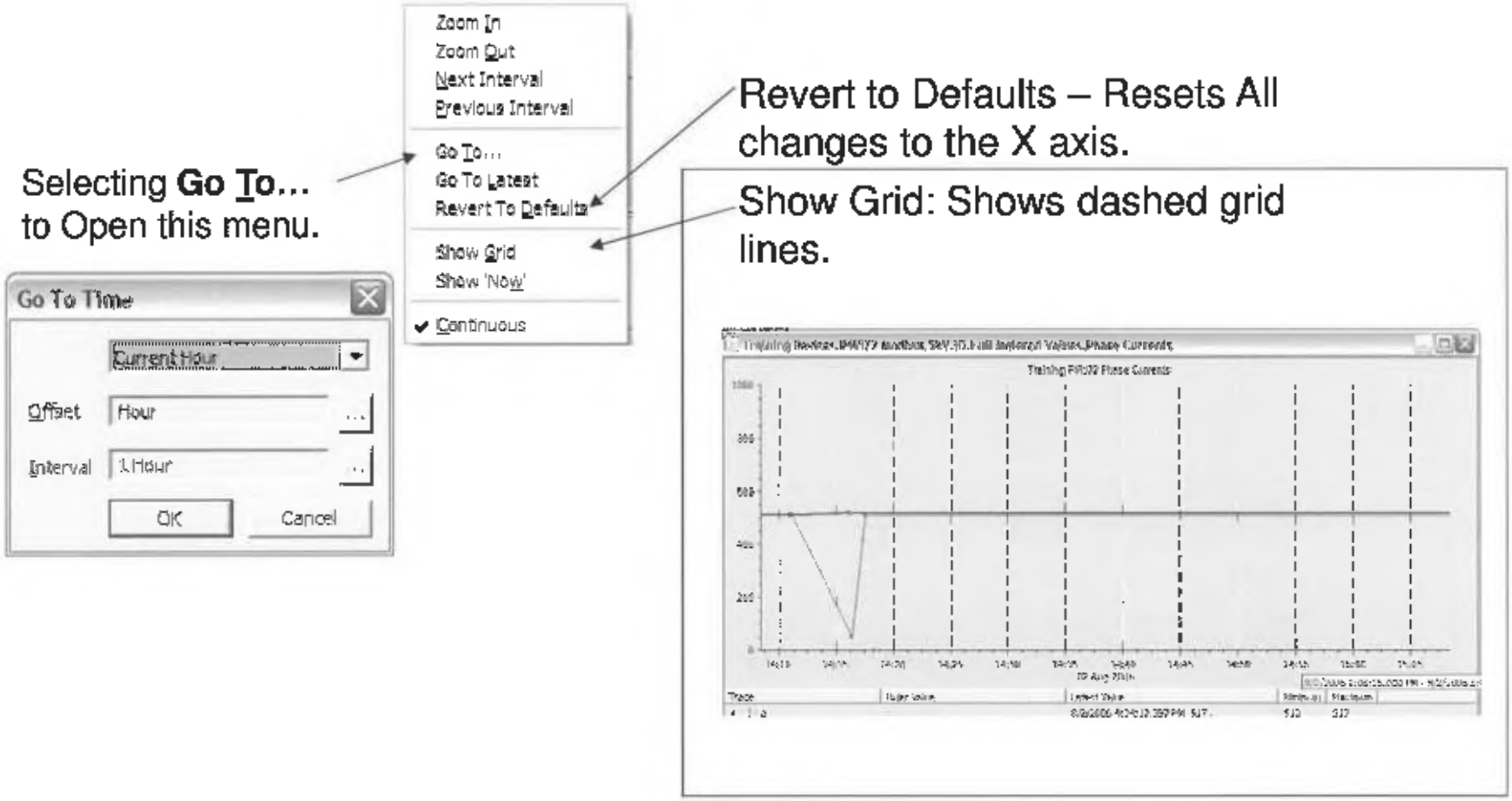
Mode:

- **Manual** - user specified.
- **Range** - default range.
- **Automatic** - system changes the Y axis scale depending on the range of the current data being viewed.
- **Inverted**: Puts the minimum at the to and the maximum at the bottom of the scale.
- **Logarithmic**: Make strait line changes gradual curves.

NOTE: These will be reset to defaults when the Trend window is closed.

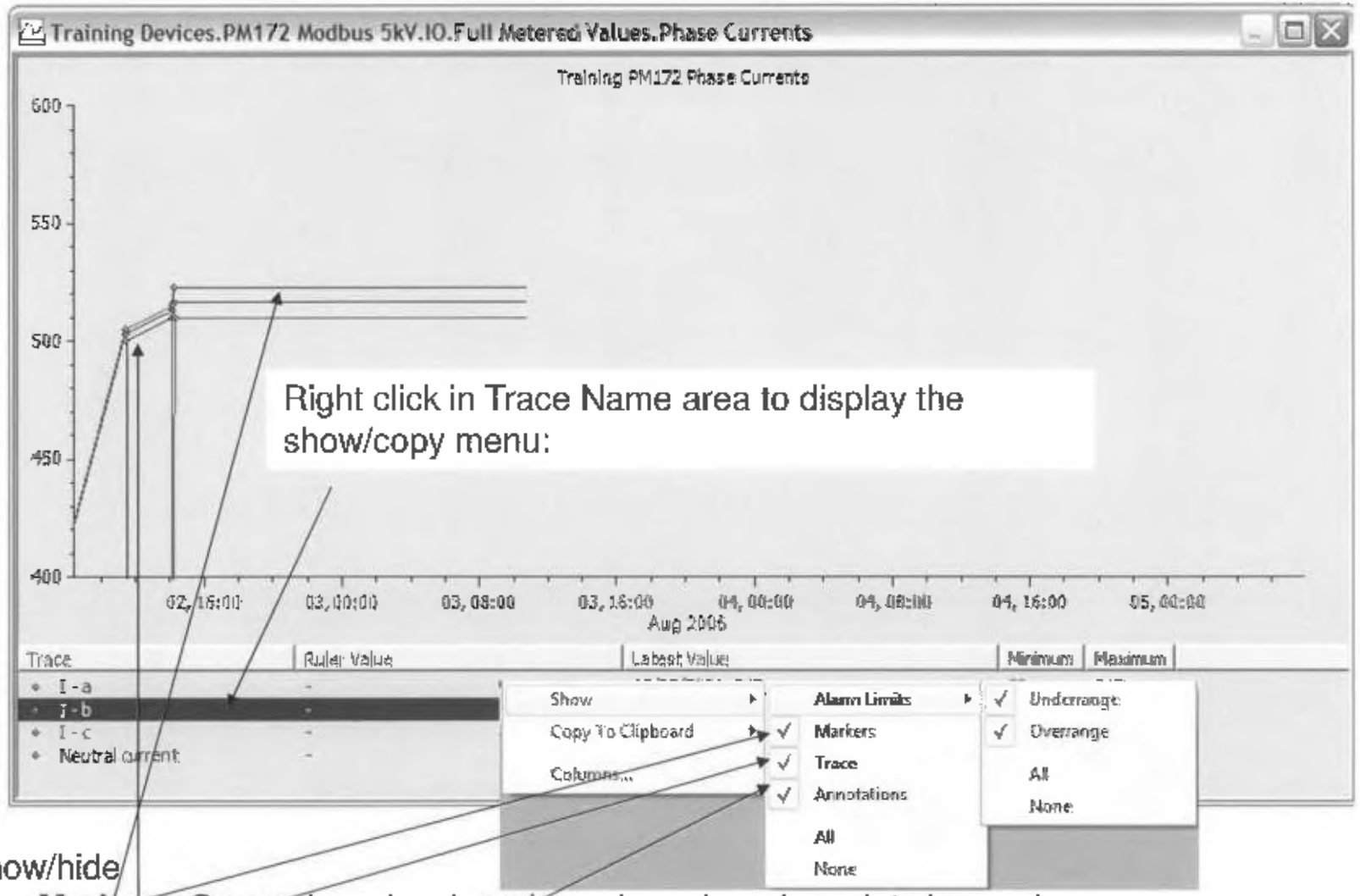


Right click below the X axis to zoom the time scale in and out.



This menu allows you to go to specific times in the trend.

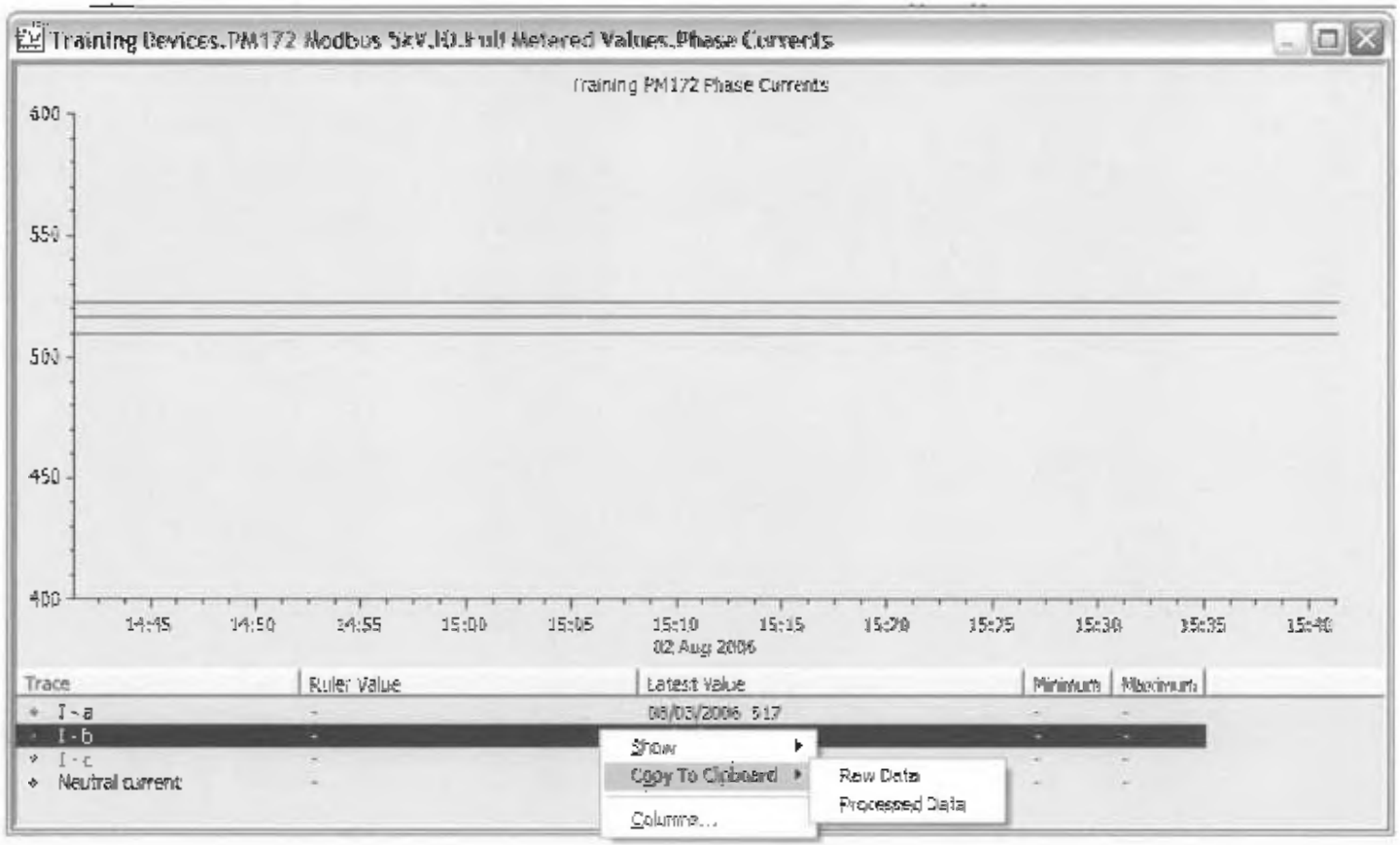
NOTE: These will be reset to default when the Trend window is closed and reopened.



Show/hide

- **Markers**: Green dots showing where the value of a point changed
- **Trace**: Hides the line for the selected value. In this case the blue line
- **Annotations**: Notes
- **Alarm Limits:** Show/hide a horizontal dashed line indicating where and alarm limit is.

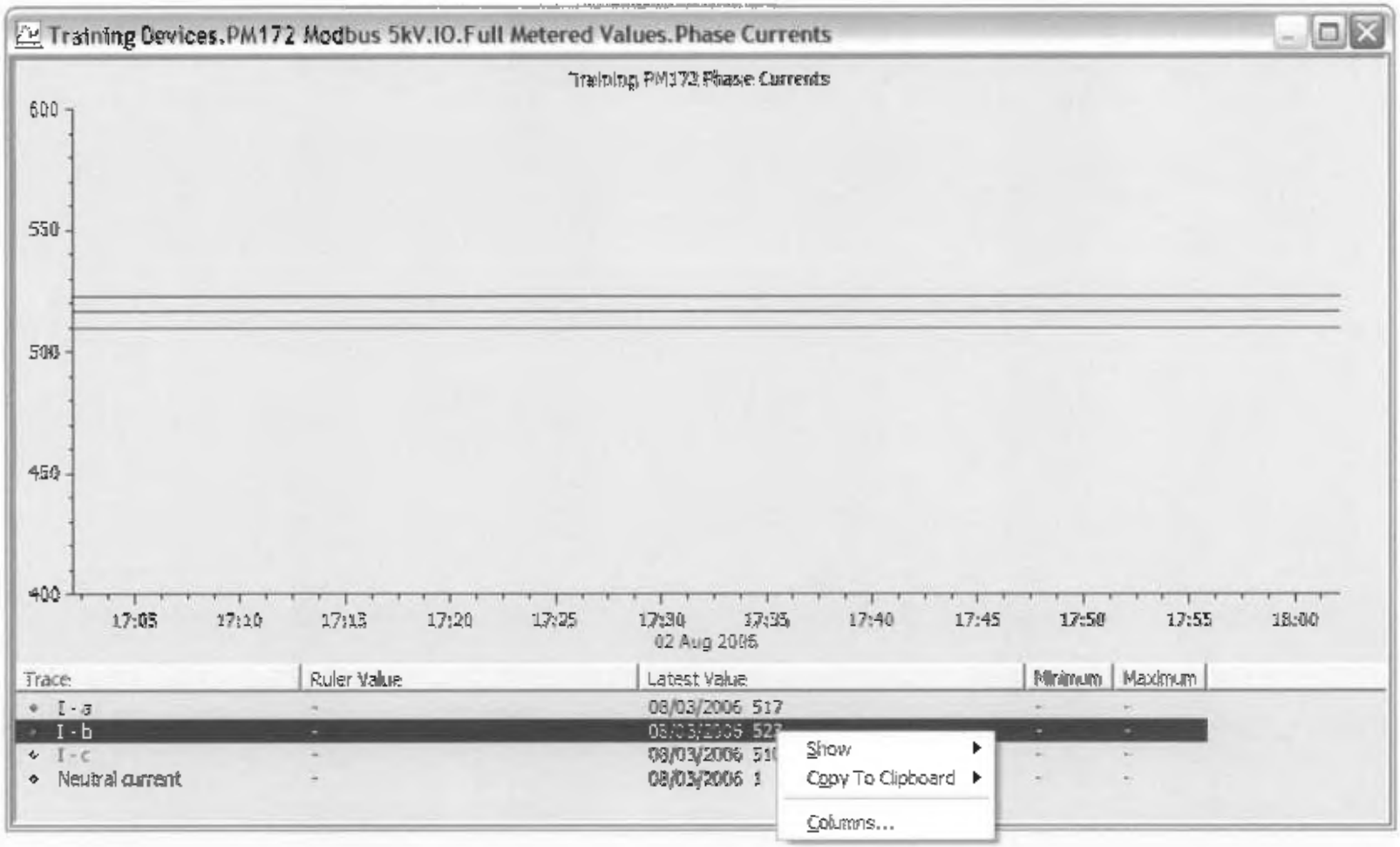
NOTE: These will be reset to default when the Trend window is closed and reopened.



Copy to Clipboard:

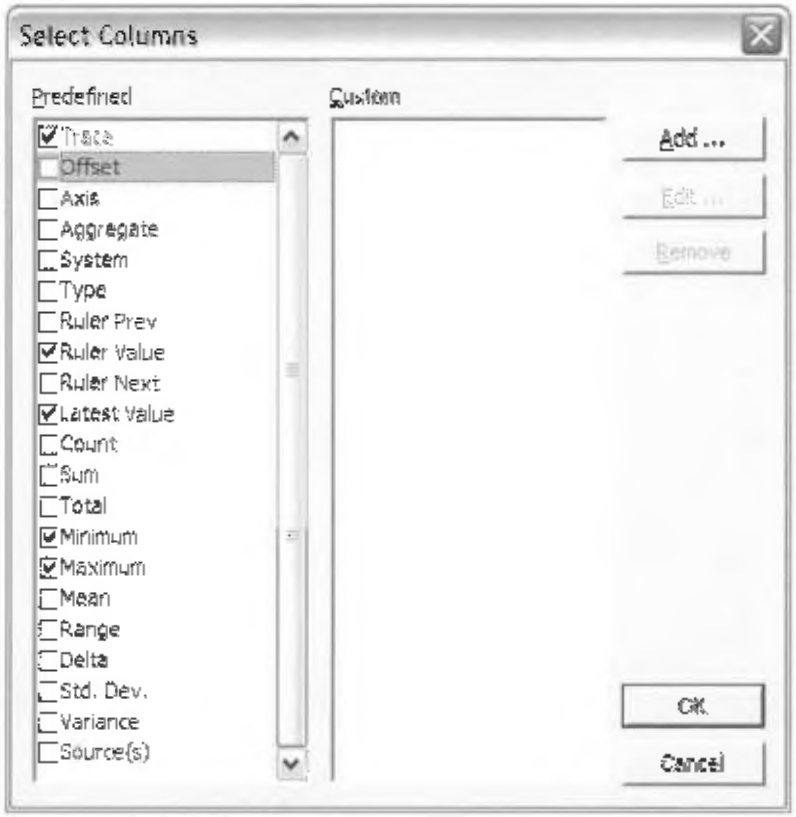
- **Raw Data** copies the Historic data to the clipboard.
- **Processed Data**: copies the Historic data plus calculated values between the actual recorded Historic values to the clipboard.

After copying to the Clipboard, the data for this point can then be pasted into another application such as Excel. The graph displays Processed Data.



Selecting Columns allows the user to change the columns being displayed in this section.

NOTE: These will be reset to default when the Trend window is closed and reopened.

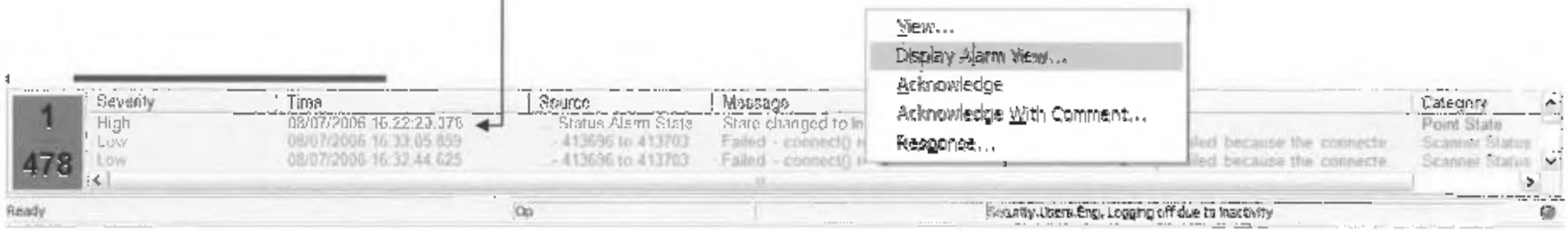


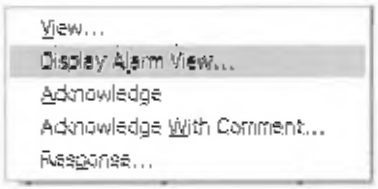
This is a list of Columns that can be selected. Trace is required. All others such as the current columns Ruler Value, Latest Value, Minimum, and Maximum can be selected or deselected.

NOTE: These will be reset to default when the Trend window is closed.

An alarm shows up below as a red entry, and the alarm bell will sound.

Right click on an alarm to view this menu.





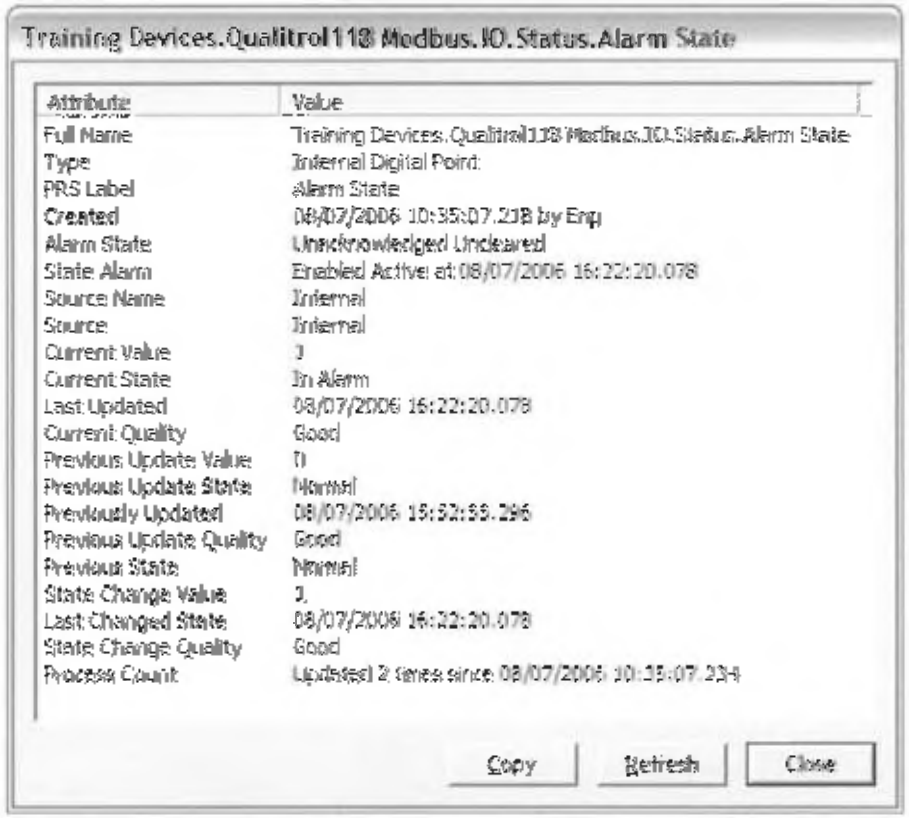
Display Alarm View: will be Shown later in the presentation.

Acknowledge: Changes the state to on and acknowledged.

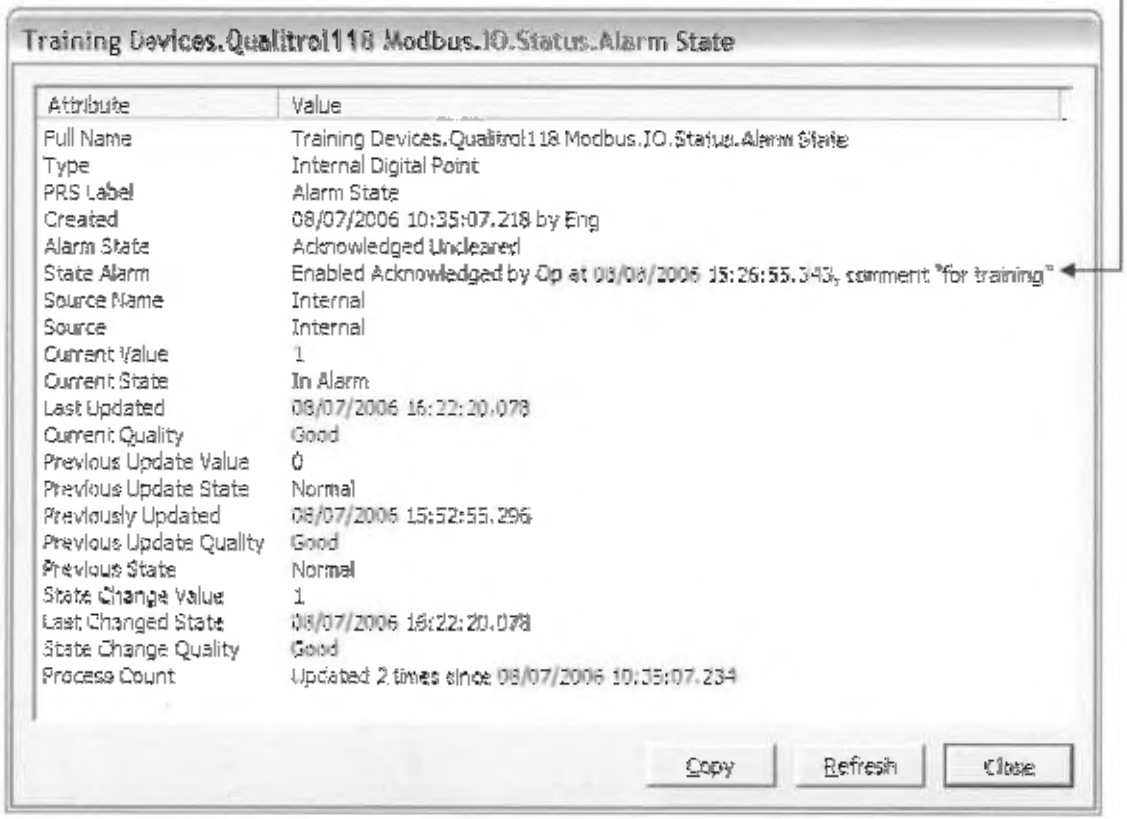
Acknowledge with comment: Allows the user to add a comment about the alarm and changes the state to on and acknowledged.

Response: allows the user to add a comment about the alarm.

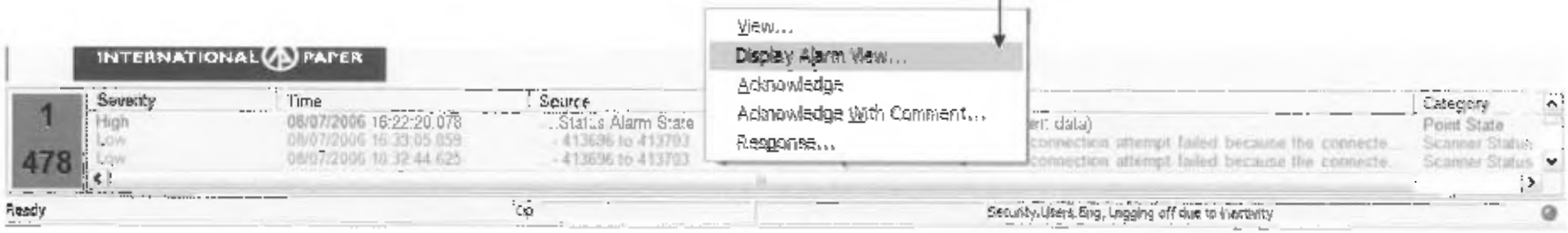
View: shows the details of the point that is in alarm.

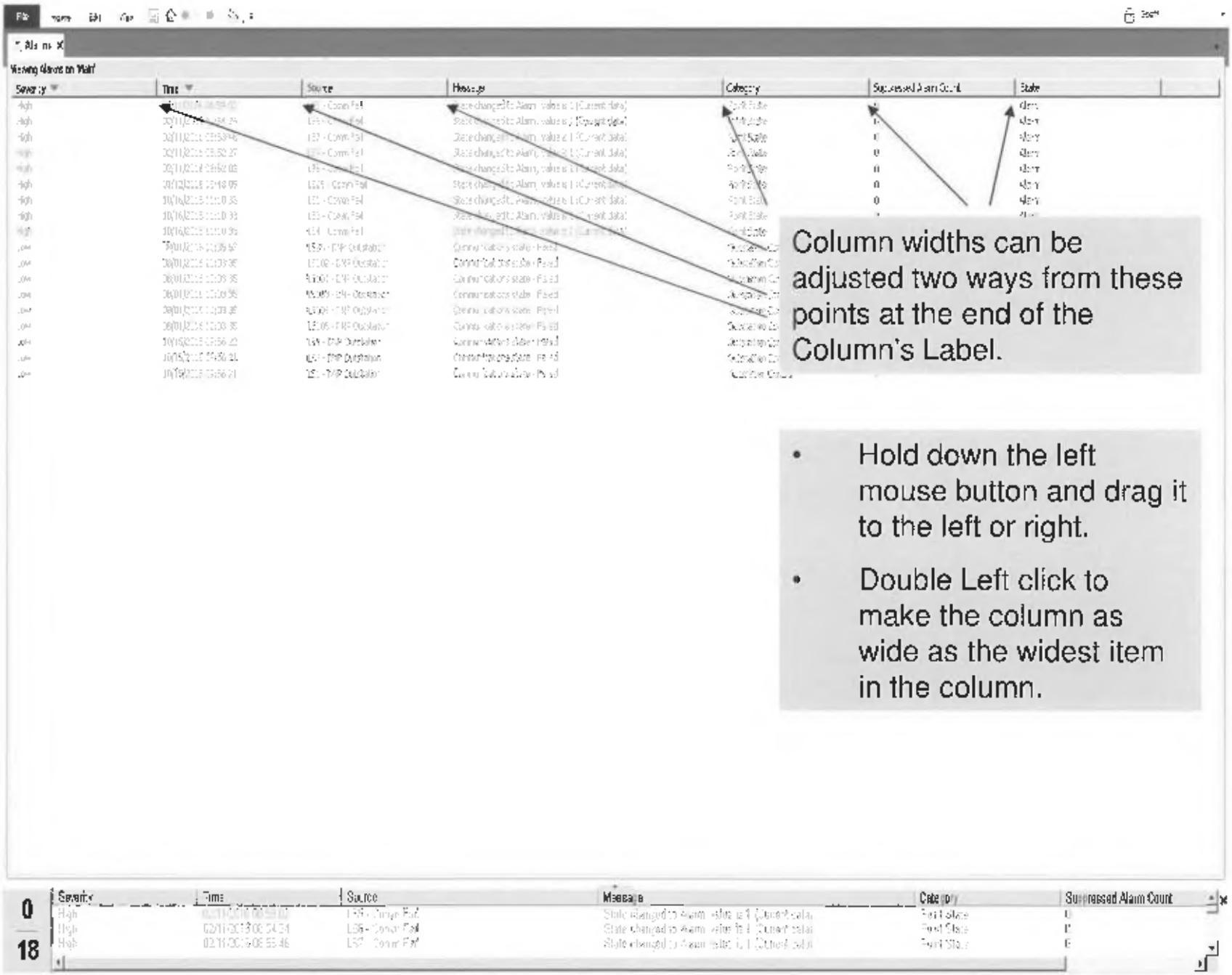


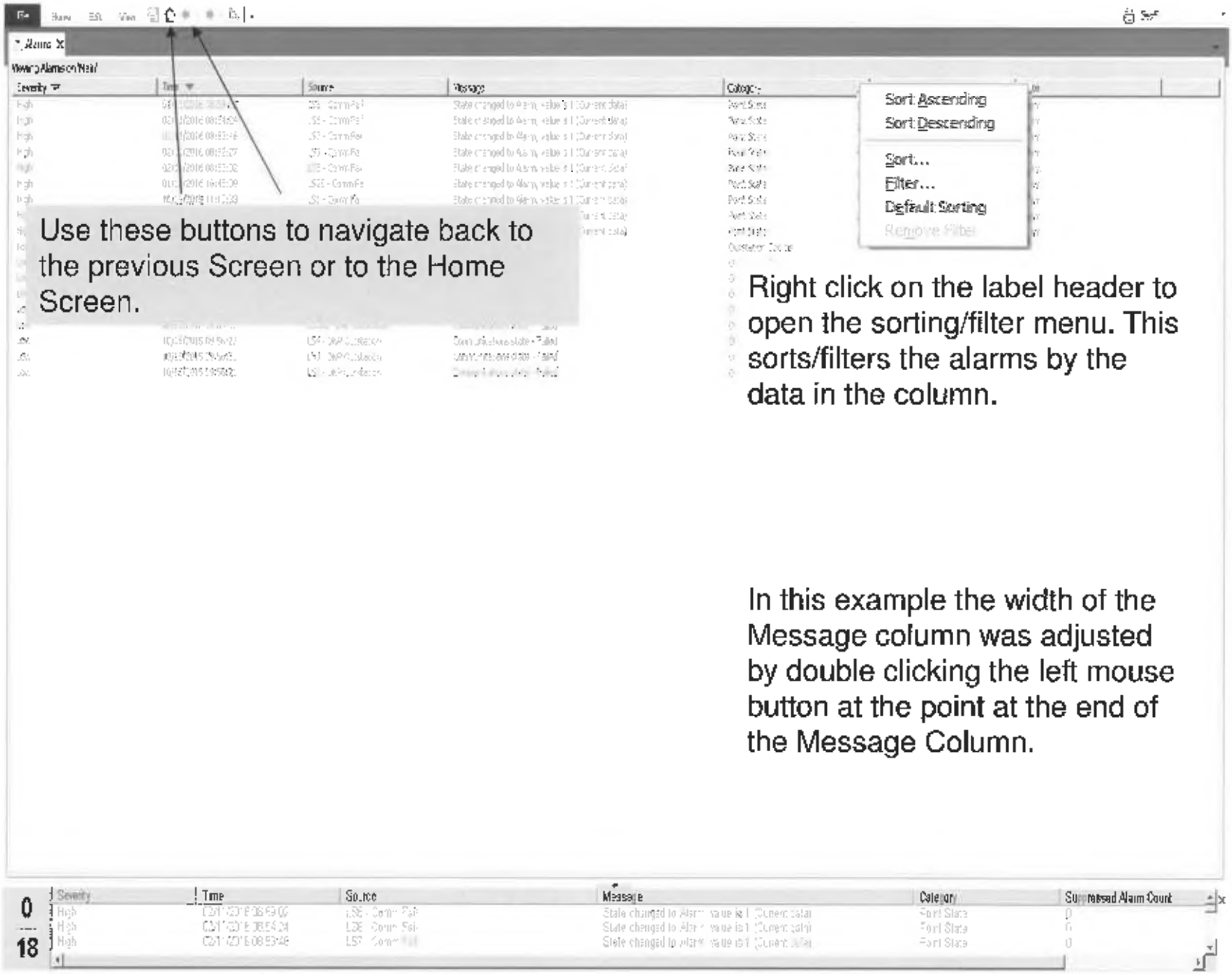
Comments and responses written for an alarm are displayed when "**View**" is selected for that alarm. In the following example, the "**for training**" comment was entered when user **Op** Acknowledged the alarm.



Select **Display alarm view** to navigate to the screen that contains the the alarming device.




Viewing Alarms on Main
Severity
Time
Source
Message
Category
Suppressed Alarm Count
State
Column widths can be adjusted two ways from these points at the end of the Column's Label.
Hold down the left mouse button and drag it to the left or right.
Double Left click to make the column as wide as the widest item in the column.
0
18
Severity
Time
Source
Message
Category
Suppressed Alarm Count


Use these buttons to navigate back to the previous Screen or to the Home Screen.
Sort Ascending
Sort Descending
Sort...
Filter...
Default Sorting
Remove Filter
Right click on the label header to open the sorting/filter menu. This sorts/filters the alarms by the data in the column.
In this example the width of the Message column was adjusted by double clicking the left mouse button at the point at the end of the Message Column.
0
18
Severity
Time
Source
Message
Category
Suppressed Alarm Count



Use **Sort Ascending** or **Sort Descending** to sort by the current column in Ascending or Descending order either numerically or alphabetically.

Sort... : Allows the user to select specific columns for sorting. The primary sort is through the top column listed followed by those beneath it. Each column can be sorted in Ascending or Descending order.

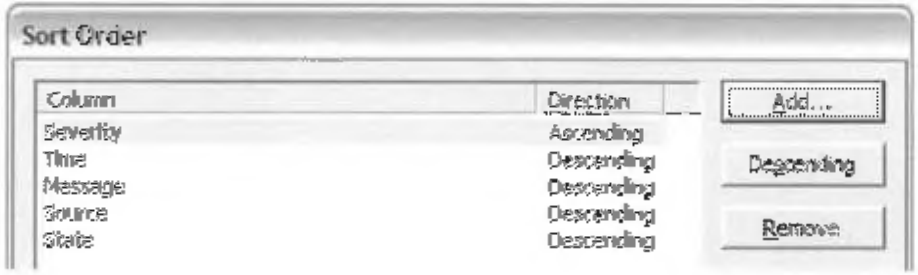
Add: lets the user add a column to the sort.

Ascending: Changes the sort order from descending to ascending. The button label changes to Descending to change the sort order from ascending to descending.

Remove: Allows the user to remove a column from the sort.

Move Up and **Move Down**: Allows the user to select a column and move its sort priority. An example would be moving severity below time so the information is sorted by time, then severity, etc.

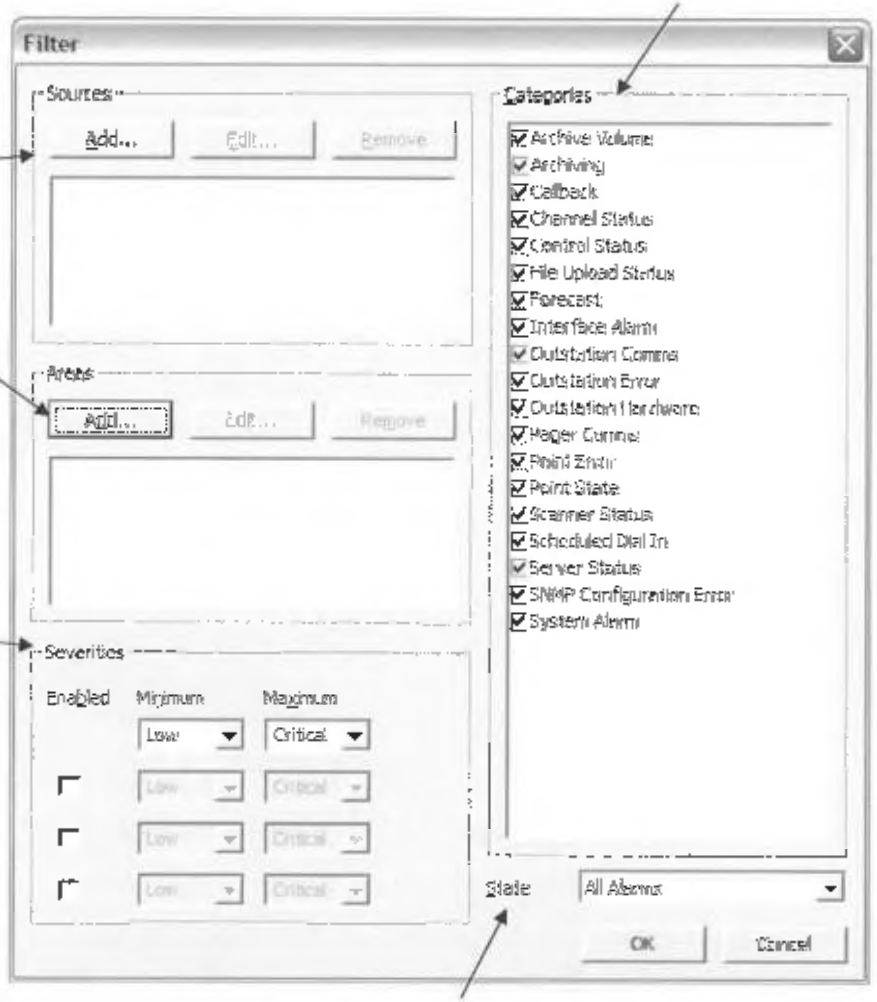






Filter allows the user to filter out alarms they do not wish to see.

Categories: Un-checking the boxes will hide alarms these category descriptions.



Adding Sources: Select alarm tags to hide.

Adding Areas: Select Groups and hide their alarms. For example, a substation group could be selected and all alarms from it will not be displayed.

Severities: Specify which severities to view. The choices are low, medium, high, and critical.

Display specific severities by setting the minimum and maximum values a row equal to each other. Setting the first row minimum and maximum to low will display low severities only. Enabling a second row and setting minimum and maximum to high will also display high severity alarms.

State: Select certain alarm states to view. The choices are All Alarms, Acknowledged, Cleared, Unacknowledged, Uncleared, or Unacknowledged Uncleared.



Default Sorting clears filtered sorts.

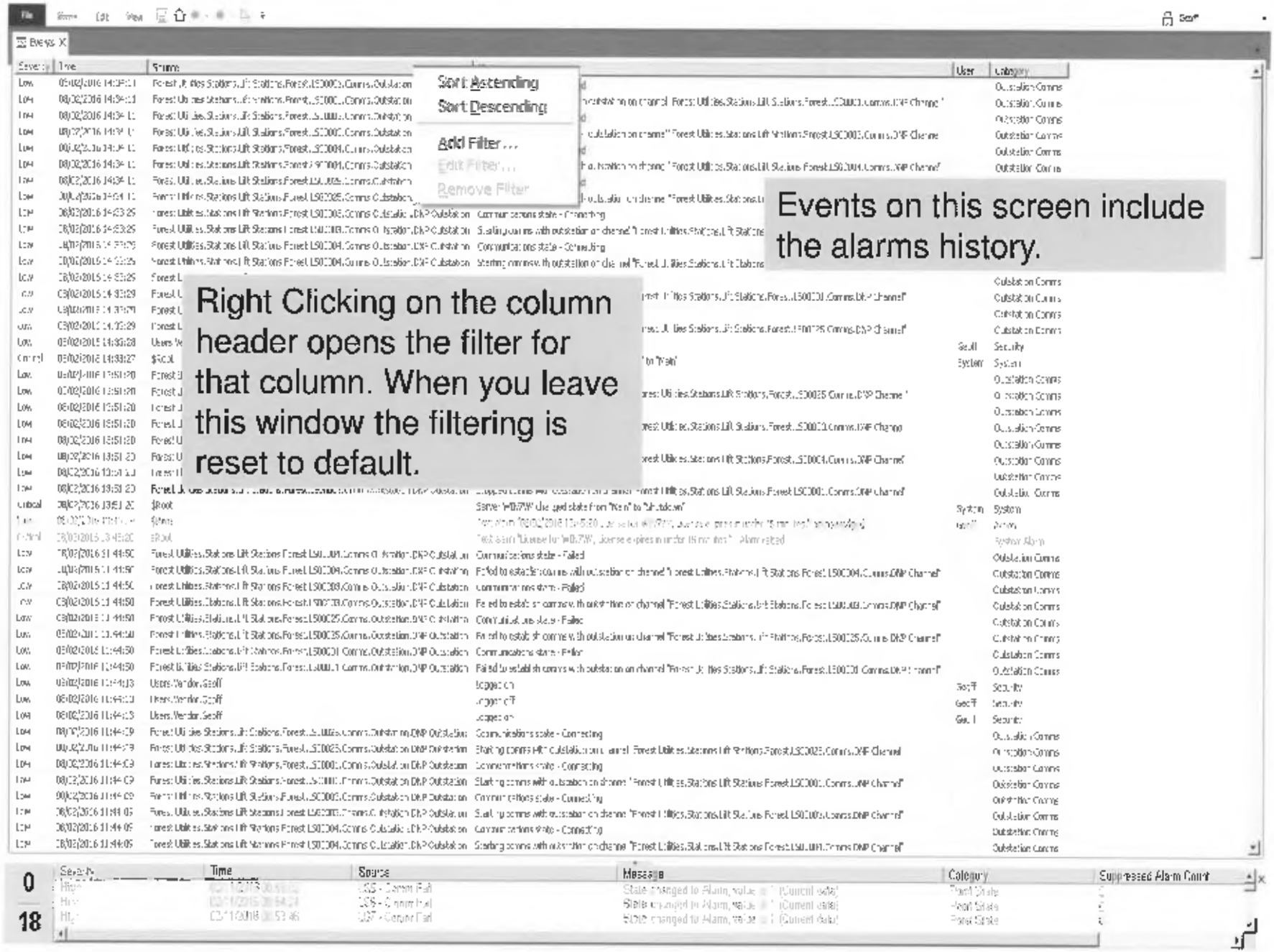
Remove Filters

Navigating to another screen and returns Sorts and Filters to their default state. Column width changes will not change.



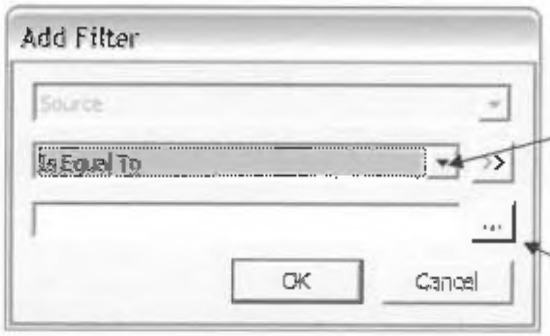
Clicking the Events button navigates to the Events page.

The Events are currently only configured to be viewable from the ViewX Clients not the WebX Clients


Sort Ascending
Sort Descending
Add Filter...
Edit Filter...
Remove Filter
Events on this screen include the alarms history.
Right Clicking on the column header opens the filter for that column. When you leave this window the filtering is reset to default.
0
18

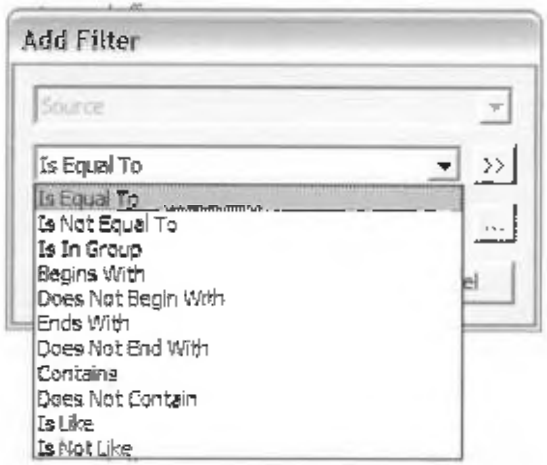


Filtering applies to the right clicked column. In this example the user clicked on the Source column.



To select how to filter, left click the drop down menu arrow.

The filter criteria can be any group or specific tag to which the user wishes to apply the filter.

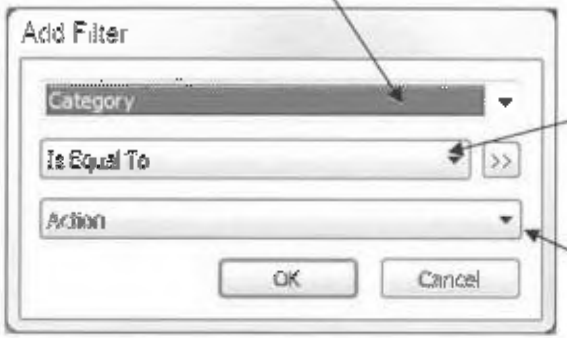




Right Clicking in the Events list and selecting Filter opens a more advanced Filter option where you can add multiple filters from different column categories here.



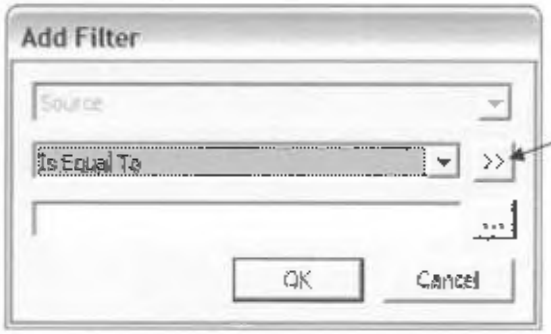
Pressing the Add button Brings up the same Add Filter Menu but allows the column to be filtered on to be selected.



To select how to filter, left click the drop down menu arrow.

The filter criteria field changes depending on the column category selected, the options are generally self explanatory.

If it is just a field you type in then the filter is base on a word or number that is relevant to the column. Letters are case sensitive.



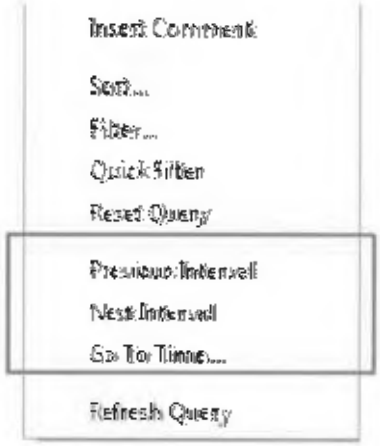
Apply multiple filters in the column category by clicking this button to extend the form.



The group ~PRS was selected and the Add button was pressed. Next the Group Comms was selected and the Add button was pressed.

In this example the items to be filtered are to begin with ~PRS and Comms. This means anything in those groups will be displayed

If the user navigates to another screen and the returns to the events screen it will be displayed in its default display. This means any filters or sorts that were applied will be cleared when they navigate away from the events screen.



Selecting Pervious and Next move back in time or forwards in time. It your Current time interval is 24 hour then it display the previous or next 24 hours.

Selecting Go To Time lets you change the time range you are viewing.



This Menu is use to quickly go to a specific point in time. It has preset options such as the Current Hour, Yesterday, Last week, Etc., and you can also chose a Specific date and time to go to.
To select the various range options Click the Dropdown box and select the one you want.

Create 2-Pump DNP Lift Station

Right Click on the Forest Folder located at "Forest Utilities.Stations.Lift Stations" In the Database tree

- Go Create instance... ➲ Expand the + Lee County Utilities Training ➲ Expand the + ~Config ➲ Select "Lift Station – 2 Pump DNP" then press the Ok button

  (It will create a folder which needs to be named whatever LS number is example: LS00123)

- Open LS00123 Folder ➲ Go to Graphics ➲ Instance Configuration ➲ Configure Unique Station Setting
  - Put in the site name ➲ example: 123 Fox Road
  - Enter the site number ➲ example: 123
  - If there is a generator select the Enable Generator Run/Fail
  - If there is a generator and a fuel level alarm is desired set it by selecting the button and entering in the alarm value
  - Press the set points alarm pushbutton
    - Click the set the points alarm source for this device button (will create alarm source names) when it is done if there is a yellow error message at the bottom of the screen press the button again.
  - press the back button to go back to the Configure Unique Station Setting screen
    - ➲ Press the Set Points Email Region
    - Press the Button "Set the Alarm Area Group For this station"

      When it is finished close the screen

- Go to the Comms Folder ➲ Outstation ➲ Open DNP Outstation
  - Go to DNP tab and put address in the box ➲ example: 123
  - Go to the Network tab ➲ need to change IP Address to the supplied IP Address
  - Go to Outstation tab and make sure In Service is checked
  - Press save button and close

- Under Lee County Utilities Training folder ➲ Graphics ➲ Open up Map where the lift station is to be located
  - Go back to my station with Graphic open ➲ click on map symbol under LS00123 folder ➲ left click on map symbol and drag into graphic ➲ select embedded mimic and drag to location on screen where you want it located ➲ click save

❖ This is the Save, Home, Back, Forward, Design Mode buttons



The design mode button switches between edit mode and run mode on the editable screens.

OPERATION & MAINTENANCE PERFORMANCE REPORT

of

FOREST UTILITIES, INC. WASTEWATER TREATMENT FACILITIES

Located in Lee County, Florida
GMS ID #5236P00059

FDEP Permit No.: FLA014478-012
Issued 06/05/16 Expires 06/04/21

October 2020

Prepared for

FOREST UTILITIES
6000 Forest Boulevard
Fort Myers, Florida 33908
Ph.: (239) 482-5333
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Prepared by

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ATTACHMENTS

Attachment No. 1 - Class 1 Reliability Evaluation
Attachment No. 2 - Facility Maintenance Schedule
Attachment No. 3 - Historical Facility Operating Data
Attachment No. 4 - O & M Inspection Checklist
Attachment No. 5 - Inflow/Infiltration Program

CERTIFICATIONS

Permittee:

The undersigned, a duly elected officer of Forest Utilities, Inc. hereby certifies that this document has been reviewed by the corporation and that said corporation is fully aware of and understands the contents herein and does intend to comply with any recommendations and/or schedule included herein.

Date: 10-21-20 Certified Wade L. Moser by:

Signature

Phone: (239) 481-5333

Wade Moser, General Manager
Forest Utilities, Inc.
6000 Forest Boulevard
Fort Myers, FL 33908

Lead Operator:

The undersigned, the duly appointed lead operator for Forest Utilities, Inc., hereby certifies that this document has been reviewed and he is fully aware of recommendations and schedules included herein.

Date: _____ Signed by:

Signature

Operator Certification #: C-3040

Phone: (239) 481-5333

Wade Moser, Lead Operator
Forest Utilities, Inc.
6341 Deer Run Road, SW
Fort Myers, FL 33908

Engineer:

The undersigned, a Registered Professional Engineer in the State of Florida, does hereby certify that this report has been prepared under my direction; and to the best of my knowledge, the statements and information herein contained are true and correct and has been prepared utilizing sound engineering principles and judgment. The contents of this document have been reviewed by, and all recommendations and schedules discussed with the Deputy Director of Lee County Utilities.

Certified by:

James P. Elliott, P.E.
Florida Registration No.: 48221
Source, Inc. (FL Eng. Business No. 34338)
1334 Lafayette Street
Cape Coral, FL 33904
Phone: (239) 549-2345

JAMES P. ELLIOTT LICENSE No. 21022 STATE OF FLORIDA PROFESSIONAL ENGINEER

Signature

Date: October 22, 2020

(Engineer's Seal)

CERTIFICATIONS

Permittee:

The undersigned, a duly elected officer of Forest Utilities, Inc. hereby certifies that this document has been reviewed by the corporation and that said corporation is fully aware of and understands the contents herein and does intend to comply with any recommendations and/or schedule included herein.

Date: _____ Certified by:

_____

Signature

Phone: (239) 481-5333

Wade Moser, General Manager
Forest Utilities, Inc.
6000 Forest Boulevard
Fort Myers, FL 33908

Lead Operator:

The undersigned, the duly appointed lead operator for Forest Utilities, Inc., hereby certifies that this document has been reviewed and he is fully aware of recommendations and schedules included herein.

Date: _____ Signed by:

_____

Signature

Operator Certification #: C-3040

Phone: (239) 481-5333

Wade Moser, Lead Operator
Forest Utilities, Inc.
6341 Deer Run Road, SW
Fort Myers, FL 33908

Engineer:

The undersigned, a Registered Professional Engineer in the State of Florida, does hereby certify that this report has been prepared under my direction; and to the best of my knowledge, the statements and information herein contained are true and correct and has been prepared utilizing sound engineering principles and judgment. The contents of this document have been reviewed by, and all recommendations and schedules discussed with the Deputy Director of Lee County Utilities.

Certified by:

James P. Elliott, P.E.
Florida Registration No.: 48221
Source, Inc. (FL Eng. Business No. 34338)
1334 Lafayette Street
Cape Coral, FL 33904

_____
Signature

Date: _____

(Engineer's Seal)

Phone: (239) 549-2345

CHAPTER 1
INTRODUCTION

The purpose of this report is to evaluate the existing wastewater treatment facility regarding process performance, general condition of process tankage and equipment and overall facility operation and maintenance.

The wastewater treatment facility is an extended aeration activated sludge treatment process with structures constructed of "poured-in-place" reinforced concrete. The facility has a permitted rated capacity of 800,000 gallons per day. The initial treatment facilities were constructed throughout the 1980's. The treatment facilities processed flow received at an average daily rate of 0.232 MGD (ADF) during the year of 2014, or at approximately 29% of total plant design capacity. The maximum monthly daily flow for the past 12 months (September, 2014 through August, 2015) was 0.628 MGD (72.50% of design capacity), which occurred in July, 2015. The highest three-month average daily flow for the last 12 months was 0.352 MGD (42.9% of design capacity), recorded for September through August of 2015. Treated (high level disinfection) effluent leaving the Forest WWTF is utilized for irrigation at the nearby Forest golf courses. Table No. 1 is a listing of component volumes and design criteria and Exhibit No. 1 diagrams the plant flow processes. Table No. 2 lists equipment installed for the flow equalization, aeration and digester processes.

The treatment facilities are presently providing treatment using extended aeration process utilizing a combination of aeration tanks with a total aeration capacity of 692,788 gallons. Residuals are processed and thickened in anaerobic digester tanks having a total capacity of 218,800 gallons. Effluent is further treated through the automatic backwash traveling bridge filters and chlorine contact tanks prior to utilization as an irrigation source for the golf courses.

This wastewater treatment facility was permitted on January 11, 1989 to operate with a 0.500 MGD complete mix activated sludge process wastewater treatment facility with filtered reclaimed water to a spray irrigation system located on the Forest golf course. A construction permit (DC36-198397) to construct two additional sludge holding tanks to achieve a process to significantly reduce pathogens (PSRP) providing a Class B residual stabilization classification was issued on September 9, 1991; a modification to the operation permit (DO36-173553) was issued on September 16, 1992, which incorporated the specific conditions of the construction permit (DC36-198397) and identified the agricultural use plan sites where the residuals generated by the treatment facilities may be land applied for disposal.

Permit FLA014478 was issued August 2, 2006 for expansion of the Forest Wastewater Treatment Facilities to 800,000 gpd ADF. The expansion was completed October 8, 2008, and placed into service. Forest Utilities, Inc. has contracted with Karle Enviro-Organic Recycling, Inc. for residuals treatment, hauling and disposal.

Plant flow records show the plant experiencing seasonal flow increases during the months of October through March. These increases in flow to the facility have been graphically depicted and are included as exhibits to this report. The flow exhibit is shown on:

Figure 2-1
- That includes: Recorded Average Daily Flow (ADF)
- Three-month Average Daily Flow (3-ADF)
- Annual Average Daily Flow (AADF)
- Monthly Maximum Daily Flow (MMDF)

Figure 2-1
Forest Utilities WWTP - Historical Flows

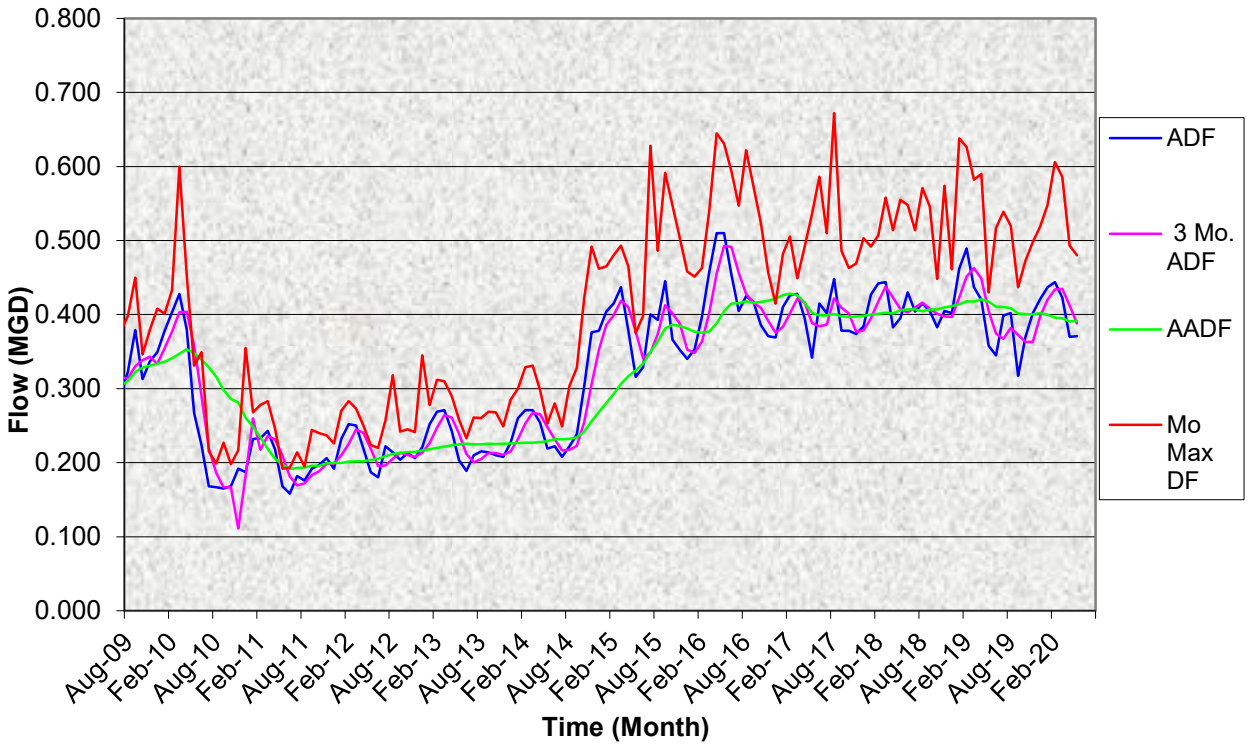


TABLE NO. 1
TREATMENT COMPONENTS SIZING & DESIGN CRITERIA

A. FLOW EQUALIZATION

Avg. Daily Flow ADF	800,000 gpd
Equalized Flow to Aeration	555.56 gpm
Peak Daily Flow PDF	2,000,000 gpd
Min. Storage Provided	520,000 gpd
Max % of Storage Provided	65%
Avg. Detention Time in Flow Equalization Tanks	16.0 hours
Peaking Factor to Process	1.60
Flow Equalization Basin SWF	10.0’
Operating Depth Over Diffusers	9.0’
Air Requirements: 1.25 cfm/1,000 gal.	575 cfm
Air Pressure Required at Max Water Depth over Diffuser	3.90 psig

B. AERATION BASIN CALCULATION SUMMARY

1. Aeration Basin Standards (Extended Aeration Process)

Min. Detention Time	18.0 hours
Max Organic Loading Rate	15.0# BOD_5/1,000 cfd
Design Organic Loading Rate	12.0# BOD_5/1,000 cfd
Min. Air Requirement	2,600 cf/# BOD_5

2. Tank Capacity Requirements

Avg. Daily Flow ADF	800,000 gpd
BOD_5 Reduction in Flow EQ	5%
Influent BOD_5 to Aeration	170.0 mgl
Effluent BOD_5 Required	5.0 mgl
Delta BOD_5 in EA Process	165.0 mgl
Design MLSS Concentration in Aeration	4,750 mgl
Design Sludge Age	30 days
Req’d Min. Aeration Capacity @ 18hr Retention Time	600,000 gal
Aeration Basin Capacity Provided:	
a. Existing Basins	392,789 gal
b. New Basins	299,999 gal
c. Total	692,788 gal
Aeration Detention Time	20.7 hrs+
Aeration Side Water Depth	11’ - 6”
Operation Depth Over Diffusers	10’ - 6”

3. Air Requirements

Air Required for BOD_5 Reduction	2,317 cfm
Diffuser Efficiency	4.0%
Total Air Required, say	2,320 cfm
Air Flow per Diffuser	4.0 cfm
Number of Diffusers Required	580
Pressure Required @ 0.433 psi/ft Over Header	4.555 psig
Provide Three Centrifugal Blowers w/ one additional Blower as Standby, Multiple Aeration Basins Provided With Multiple Drop Pipe/Diffuser Assembles per Basin	776 scfm @ 4.6 psig

C. FINAL CLARIFIER TANK DESIGN CALCULATION SUMMARY

1. Clarifier Standards for (Extended Aeration Process)

Max Surface Settling Rate @ ADF	170 g/d/sf
Max Surface Settling Rate @ PDF	1,000 g/d/sf
Weir Overflow Rate @ ADF	20,000 g/d/ft
Weir Overflow Rate @ PDF	20,000 g/d/ft
Sludge Return Rate	150%
Minimum Retention Time @ ADF	12 hours

2. Clarifier Capacity Requirements

Average Daily Flow, ADF	800,000 gpd
Clarifier Design Peak Factor	1.6
Real Flow to Clarifier	1,280,000 gpd
Clarifier Type Circular Center Feed	1,280.0 sf
Mechanical Sludge Collector Unit Surface Area Required by Max Surface Settling Rate @ PDF	
Weir Length Required	64.0 feet
Volume Required	400,000 gallons
Select 45’ Dia. Clarifier Unit Surface Area Provided	1,385.44 sf
Weir Length	131.94’
Side Water Depth	10.0’
Surface Settling Rate Provided @ ADF	577.43 g/d/sf
Surface Settling Rate Provided @ PDF	9,238.94 g/d/sf
Weir Overflow Rate Provided @ ADF	6,063.36 g/d/ft
Weir Overflow Rate Provided @ PDF	9,701.38 g/d/ft

3. Return Activated Sludge (RAS) / Waste Activated Sludge (WAS) Design

Sludge Return Rate	150% ADF
RAS/WAS Flow from Clarifier @ ADF	833.34 gpm

Size of WAS/RAS Pumps as Solids Handling Centrifugal Units:
Three Pumps @ 450 gpm at 35’ TDH (One Standby) w/ VFD Controllers

D. EFFLUENT POLISH FILTER DESIGN SUMMARY

1. Design Requirements for TSS Control Inflow Parameters

ADF	800,000 gpd (555.56 gpm)
Peak factor	1.6
PDF	1,280,000 gpd (888.89 gpm)
Average Filter Influent TSS	15 mgl
Peak Filter Influent TSS	20 mgl

2. Filter Provided Type – Automatic Backwash Filter (ABW) w/Traveling Bridge

Filter Bed Width	9.0’
Filter Bed Length	32.0’
Multi Cell Sand Media	11’ deep
@ 800,000 gpd Loading Rate	2.0 gpm/sf
@1,280,000 gpd Peak Loading Rate	3.09 gpm/sf
Typical Backwashes Per Day	3 @ ADF
Backwash Rate	23 gpm/sf
Backwash Discharge to Plant Site LS	138 gpm
Installed HP Total	6.25 HP
Backwash Pump	3.0 HP
Wash Water Pump	3.0 HP
Carriage Drive	¼ HP
Head Loss Through Filter	2” to 12”

E. CHLORINE CONTACT TANK DESIGN SUMMARY

1. Chlorine Tank Requirements:

ADF	800,000 gpd (555.56 gpm)
PDF	1,280,000 gpd (888.89 gpm)
Peak actor to Chlorine Tank	1.6
Required Tank Volume	13,333.35 gal 1,782.3 cf

NOTE: Multiple chlorine tanks required for Class I Reliability. With largest tank out of service, 50% of PDF to provide 15 minute contact time. Required detention time at PDF, 15 minute, with sufficient baffles to prevent short circuit flow.

2. Chlorine Contact Sizing:

a. Existing tank No. 1	
Inside Dimension: 12’ wide x 30’ long x 5’ SWD	1,800 cf
Capacity:	13,465 gal
b. Existing tank No. 2	
Inside Dimension: 12’ wide x 25’ long x 5’ SWD	1,500 cf

Capacity:	11,221.5 gal
@ 50% PDF Contact Time	25.25 minutes

3. Chlorine Requirements:
   (Use Gas Chlorination System)

Required Dosage	8 mgl
# of Chlorine Required/day @ ADF of 800,000 gpd	53.2 #/day
	19,418 #/yr
# of Chlorine / # of Chem	0.70 #/lb
	76#/day

F. ANEROBIC/AEROBIC DIGESTER BASIN DESIGN SUMMARY

1. Tank Capacity Requirement:

Average Daily Flow, ADF	800,000 gpd
Volume Req'd - Extended Aeration Activated Sludge	3.0 cf/capita
@ 100 gal / capita	8,000 people
Volume Req'd: 3 x 8,000	24,000 people
Add'l 20% Req'd for Supernatant Separation	4,800 cf
Total tank Volume Required:	28,800 cf

2. Initial Aerobic Digester Tank Capacity Provided:

One Tank Compartment	1,532.48 cf
One Tank Compartment	2,605.61 cf
One Tank Compartment	5,072.19 cf
Total Initial Capacity	9,210.28 cf

3. New Aerobic Digester Tank Capacity Provided:

Two Tank Compartments: 2(25' x 19.17' x 11'LL)	11,077.86 cf
One New Tank 30'-10" dia. X 12' LLD	8,960.49 cf
Total New Capacity	20,038.35 cf
Combined Total Digester Capacity	29,248.63 cf
Digester Side Water Depth	11.0'
Operating Depth Over Diffusers	10.0'
Freeboard	2.5'

4. Equipment Description:

   Each digester tank and compartment contain a telescoping valve for supernatant draw-off to the plant yard drain system. Supernatant is pumped from the plant site lift station to the surge tank. Submersible solids handling pumps are provided in the existing digester tanks to transfer thickened sludge to larger tanks or to the sludge drying beds. Tank drain piping is interconnected to the sludge drying beds.

G. SLUDGE DRYING BED DESCRIPTION

Four drying bed sections are provided with a total area equal to 5,534 square feet. The loading depth is equal to 8 feet. Sludge volume applied equals 3,689.34 cf, or New dry sludge storage facilities to be provided having a floor area of (17' x 60') 3,389.34 cf. Wall height of the storage bin is 6 feet. Storage slab is to be drained to the plant site lift station. Dry sludge storage bed is to be covered. Thickened/dried sludge is hauled to an off-site treatment facility.

H. EMERGENCY POWER & STANDBY EQUIPMENT PROVISIONS

An emergency engine generator is provided with base-mounted double-walled diesel fuel tank. The fuel tanks is of sufficient capacity to power the process treatment system and provide power for critical lighting and ventilation for a minimum 48-hr. continuous operation period. An automatic transfer switch is provided to initiate engine generator startup after power outages of 10 to 15 minutes duration. A time delay device is provided to protect the auxiliary power equipment upon startup or shutdown.

I. CONTINUOUS ON-LINE MONITORING EQUIPMENT

The Forest WWTF is equipped with a continuous on-line chlorine residual monitor/recorder and a continuous on-line turbidity monitor/recorder. The monitoring equipment also provides a default signal for operation of motorized valves for automatic diversion to substandard effluent storage. Backup chlorine and turbidity monitoring equipment is maintained in storage at the plant office.

J. EFFLUENT STORAGE FACILITIES DESCRIPTION

Substandard effluent storage is provided in a reinforced concrete tank having a capacity of 800,000 gallons. Storage capacity is 24 hrs. at ADF. Standard effluent is stored in an existing unlined pond having a capacity of 1.55 mg. An additional pond is provided within the Forest golf course that provides an additional 1.65 million gallons. Total capacity = 3.2 mg. Effluent storage is available for approximately four (4) days retention.

TABLE NO. 2

PROCESS PUMPING AND AERATION EQUIPMENT

A. FLOW EQUALIZATION (THREE CELLS)

1. Blower Equipment	Two (2) Garner-Denver fka as Lamson Regenerative Blower Unit, 40 hp, 4500 rpm, 230V, 3-phase, 60 Hertz
2. Pumping Units	Three (3) HOMA Model AV446FM, submersible, 10 hp, 480V, 3 ⌀, 60 Hz, Variable Frequency Driver (VFD) Design point 500 gpm @ 26' TDH

B. TREATMENT PROCESS

1. Blower Equipment	Four (4) Spencer 40 hp, 460V, 3 ⌀, 60 Hz Centrifugal blowers Size: 6" x 6" Model 5040-HMOD, VFD Drive Air output: 800 cfm @ 14.7 psi
2. RAS/WAS Pumping Units	Two (2) WEMCO 15 hp 480V, 3-phase 60 Hz Size: 4 x 115 Model E, VFD Drive Design Point 800 gpm @30' TDH

NOTE: Aeration blower system serving flow equalization and treatment process are not interconnected.

CHAPTER 2
PHYSICIAL CONDITION

This section of the report addresses the physical condition for each treatment process component and the equipment necessary for or related to each particular process component. In that the Forest WWTF has been constructed in phases as common wall treatment process compartments, this evaluation has been broken down as follows:

1. Influent Pumping/Screenings Facility
   Influent from the tributary collection system flows through force mains collecting in a wet well along with a force main from the plant site lift station. The influent flow is pumped to an aluminum plate box containing a double channel, manually cleaned bar screens. Screenings are collected, dried and placed in enclosed containers for disposal. Flow continues to the equalization basins.

2. Equalization Basins
   The equalization basins are divided into three units and are constructed of poured-in-place, common wall, reinforced concrete. The structure appears to be sound, having no noticeable areas of leakage and/or deterioration of the concrete. Piping, valves and equipment also appear to be in sound condition and properly maintained. The surge pumping units appear to be in good condition. The equalization basins air blowers have the capability/capacity to provide the complete air supply needed for tank volumes. At the time of our visits to the facility, the equalization basins blowers appeared to be adequately serviced, including the intake filters. The equalization basins blowers appear to be in satisfactory operating condition. Air header piping located along the top of the basin walls is corroded and needs to be replaced.

3. Process Treatment Units
   As stated in Chapter 1, the process treatment components have been constructed of poured-in-place, common wall, reinforced concrete. Included within the tankage are two (2) anoxic compartments, five (5) aeration compartments, two (2) hopper bottom clarifiers, one (1) sludge draw-off tank, two (2) aerobic digestion tanks and two (2) anaerobic digestion/ sludge holding tanks. The plant structure appears to be sound, having no noticeable areas of leakage and/or deterioration of the concrete. Piping, valves and equipment also appear to be in sound condition and properly maintained. The sludge transfer pumping units within the sludge draw-off tank are submersible pumps and visual observation of each unit's condition was not possible. Based on each of the units' operational performance, as observed, each of the pumps appear to be in good condition. Four (4) process air blowers have been furnished for the treatment plant. The blowers are manually alternated. At the time of our visit to the facility, each blower appeared to be adequately serviced, including the intake filters and each blower appears to be in satisfactory operating condition.

   Additional tanks are provided, constructed of glass-fused, circular bolted steel tanks. One tank provides sludge holding/anerobic treatment. The second tank is used as a clarifier and is provided with a center feed well and sludge/scum scraper mechanism with an electrical gear drive. The additional tank structures appear to be in good condition, having no noticeable areas of leakage. Mixed liquor from the aeration process flows by gravity to the clarifier unit. Sludge pumps are provided for the return/waste activated sludge return that

"draw" from the clarifier bottom trough. RAS/WAS pumping units appear to be in good working order.

4. ABW Polishing Filters
   The effluent discharges from the clarifiers by connecting piping to two (2) automatic backwash traveling bridge sand filter units. One unit has a rated capacity of 500,000 gpd and the second unit has a rated capacity of 800,000 gpd both at a processing rate of 2.0 gallons per minutes per square foot. The drive motors, axles and gear mechanism all appear to be adequately serviced and in good condition. The observed filter media area appeared to be at the manufacturer's recommended depths for both filter units. The newer 800,000 gpd rated ABW filter appeared to be in excellent condition. The 500,000 gpd filter factory-coated steel tank shell is in adequate condition, showing some signs of minor corrosion near the top structural members and beneath the bridge rails.

5. Chlorine Contact Tanks, Flow Metering/Recording and Effluent Pumping
   Two chlorine contact tanks are provided, constructed of reinforced concrete. Tank No. 1 is 12' wide x 25' long x 5' side wall depth, providing 11,221.5 gallons volume. Tank No. 2 is 12' wide x 30' long x 5' side wall depth, providing a volume of 13,465 gallons. The structures appear to be in good condition, showing no evidence of leakage or spalling of concrete. The effluent from the ABW filters flows to the chlorine contact tanks. The plant flow meter/recorder has been installed at the control weir within Tank No. 1. Effluent flow Tank No. 2 discharges to the metering chamber of Tank No. 1 where total flow is measured. The bubbler-type level measuring flow meter and recording device appear to be in good working order. Effluent from the chlorine contact tanks discharges to a pumping station that provides re-circulation capability for substandard water quality. The effluent pumps appear to be properly serviced and in good working order.

6. Chlorination System
   The chlorination system is housed in a separate structure of wood frame construction located near the chlorine contact tank. This structure shelters the 150 lb. chlorine gas cylinders and chlorinator. The structure is kept clean and the pumping units appear to be properly serviced. Both the cylinders in use and as stored spares are properly anchored and the structure properly secured. Gas safety equipment and leak repair parts and equipment are readily accessible. Adequate ventilation has been provided to keep air circulating and temperatures lowered.

7. Substandard Effluent Storage Tank
   A reinforced concrete substandard effluent storage compartment is provided within the flow equalization, head works and influent pumping station structure. The total volume of the substandard effluent storage compartment is 800,000 gallons, assuming maximum liquid level depth of 12 feet. This reinforced concrete structure appears to be in sound condition, showing no signs of deterioration or leaking.

8. Effluent Storage Ponds
   The treated effluent from the Forest WWTP flows via gravity to an existing 1.3 million gallon storage pond located north of the plant site. A pumping station located at this pond within the Bear golf course pumps into the golf course irrigation pumping station wet well when the irrigation pumps are on. Additional pumps transfer the effluent to a second storage pond located within the Bobcat golf course east of the plant site. This pond has a storage capacity of 1.65 million gallons. All reclaimed effluent is utilized through both golf courses irrigation systems. Additional irrigation water is provided through augmentation wells located near the

storage pond. Inspection of the effluent storage ponds was conducted on October 3, 2020. Pond berms were in good condition with no signs of erosion or leakage.

9. Site Inspection
   At the time of our visit to the facility, there were no signs or evidence of either hydraulic or biological overloading of the treatment units. In general, the treatment facility appears to be operating within the proper design parameters. There are no noticeable signs that this facility should not be able to continue to operate properly for the requested permit period.

CHAPTER 3
TREATMENT EFFICIENCY

The Forest wastewater treatment facility utilizes an extended aeration process. Table No. 1 included in Chapter 1 of this report lists each treatment unit's component design criteria and tank sizing. Historical records regarding hydraulic flow and organic loading indicate that the treatment units have operated within design parameters set and the efficiency requirements established by Rule 62-600.300(4), F.A.C.

Historic influent testing records were not available on this facility before August of 1995. Therefore, the ability to track individual treatment process components efficiencies and loading trends throughout the previous years was not possible. Since the influent testing records have been recorded for the past fourteen years or more, the $CBOD_5$ and TSS process components have been evaluated and appear to be well within the efficiency parameters for this facility. The receipt of future historical data will confirm this conclusion of the facility's efficiency.

Figures 2-2 and 2-3 attached are graphs depicting effluent parameters (TSS and CBODs) leaving the plant. These reported loadings do not appear to exceed parameters established and/or permitted for this facility. In addition, there have been no indications of biological or hydraulic overloading occurring at the facility.

FIGURE 2-2
Forest Utilities WWTP
$CBOD_5$ Reduction Graph

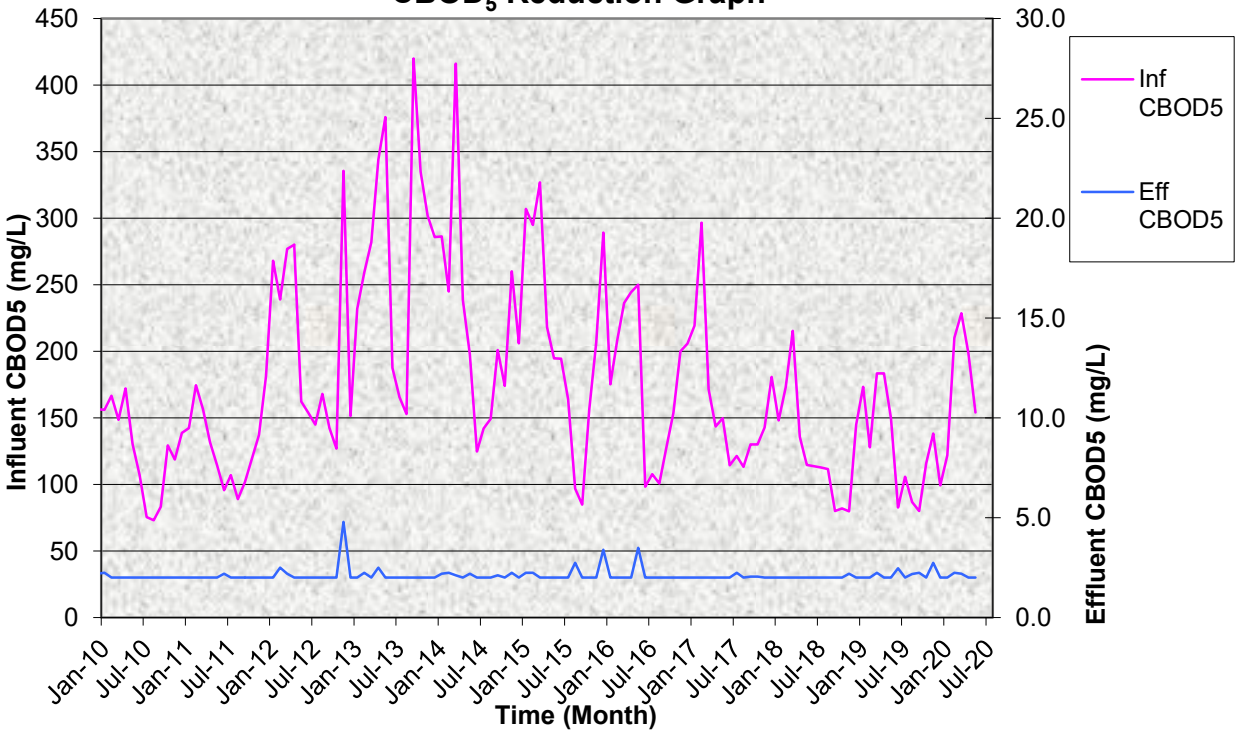
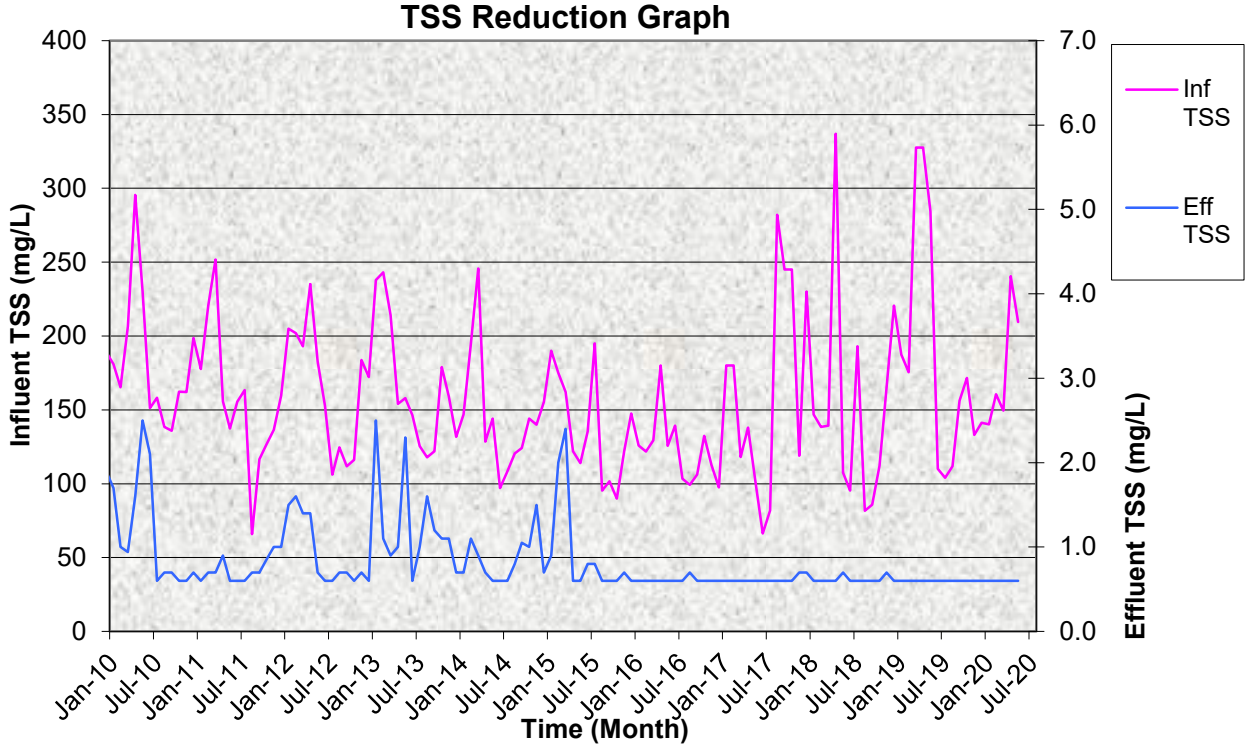


FIGURE 2-3
Forest Utilities WWTP
TSS Reduction Graph



CHAPTER 4
PERFORMANCE TRENDS

Records of testing from which historical trending of influent biological loadings at this facility could be determined are available. Dating from March, 1994, historically the influent loadings at this facility are approximately $CBOD_5$ = 210 ppm ± and TSS = 170 ppm ±.

Figures 2-2 and 2-3 graphically depict the various loading trends in the facility's effluent pumped to the golf course. These graphs do not appear to show significant increase or decrease of loadings contained in the effluent. It is not anticipated that a significant change in effluent quality will be experienced during the duration of the facility's operating permit period.

As shown in Figure No. 2-1 included in Chapter 1, the three-month average daily flows received at the Forest Utilities, Inc. wastewater treatment facilities are seldom in excess of 50% of the facility's permitted flow rate. The utility has been looking at options for upgrading or up-sizing this facility and other possible options as necessary, in order to provide ongoing high quality treatment to the service area. It is not anticipated that the decision as to the upgrading/expansion will need to be finalized in the near future because the franchise area is approaching build-out, a capacity increase may not be necessary and, therefore, no engineering plans for an expansion have begun.

In general, records maintained for the treatment facility do not indicate any signs of either hydraulic or biological overloading. These records also do not indicate any occurrences of bypassed untreated flows, significant substandard discharges or plant overflows.

CHAPTER 5
OPERATION AND MAINTENANCE PROGRAM

The utility company has established and maintained a written Operations and Maintenance program. The Operation and Maintenance program includes criteria and regular scheduling for equipment lubrication and normal maintenance. Equipment repairs are accomplished on an as-needed basis utilizing the standard company purchase order system. Records for individual equipment maintenance and repair are maintained on file.

The individual aspects for proper system operation and maintenance are addressed as follows:

1. Record Drawings
   A. Treatment Facilities
      Copies of Record Drawings of treatment units are maintained at the Forest Utilities, Inc. offices at 6341 Deer Run, S.W., Fort Myers, FL.
   B. Collection/transmission System
      Record Drawings and Base Map for the wastewater collection and transmission system are also maintained at the Forest Utilities, Inc. offices.

2. Operation and Maintenance Manual
   The Company maintains O & M Manuals on the various equipment items in the system along with various Operation and Maintenance Manuals "customized" to the various components within the system. These O & M Manuals are maintained at the Forest Utilities, Inc. offices.

3. Operation and Maintenance Log
   An operation and maintenance log book is maintained at the wastewater treatment facility as required by Rule 62-602.368(1)(e), F.A.C.

The facility appears to be adequately utilizing both a lead and part-time State-certified operator along with an operator trainee. The lead operator and his respective certification number is as follows:

- Wade Moser (C0003040) Lead Operator
- Neil Harden (B0014895) Day-Shift Operator
- Adrian Carlton (A00148995) Shift Operator

Effluent quality samples taken for this facility are analyzed by an independent State-certified testing laboratory. Facilities and equipment for performance of testing necessary for maintaining efficient operation of the treatment facility are available to the plant operators.

A formal operational protocol has been prepared for this facility and was filed with applications for renewal of this facility's Permit to Operate. The Operational Protocol will meet requirements of 62-610.463, F.A.C.

The wastewater flows treated at the Forest wastewater treatment facility are indicative of normal domestic wastewater flows. There are no known industrial wastes received from within this system.

Effluent from the treatment flows directly to a 1.3 million gallon storage pond located north of the plant site, within the Bear golf course. Effluent from this pond is transferred to the irrigation pumping station wet well. Additional transfer pumps located at the Bear golf course pumping station wet well direct flow to a second pond having a storage capacity of 1.65 million gallons, located east of the plant site within the Bobcat golf course that supplies the irrigation pumping station for this golf course. These facilities are managed by the reclaimed water customer, The Forest Golf Course Association.

CHAPTER 6
COLLECTION SYSTEM EVALUATION

The contributory basin area for the Forest wastewater treatment facility consists of approximately 127,800± linear feet of gravity sewer, 40 wastewater pumping stations and approximately 55,300± linear feet of wastewater transmission mains. Much of the original gravity sewer was installed utilizing clay pipe. Portions of gravity sewers of this age in nearby utility systems have experienced some inflow/infiltration problems. The utility has an ongoing program of monitoring the flows generated in those areas of the system and has been successful in locating and eliminating various minor infiltration problems. The utility fully intends to continue its present program of monitoring the system and, when appropriate, will proceed with any necessary repairs.

The system lift stations are duplex submersible type pumping stations. The station panels are equipped with pumping and alarm lights as well as an audible alarm should problems occur. The stations are checked on the minimum of twice per week with one of the visits being a thorough checkout of pumps, lights and electrical components of the 105 pumping stations, 3 are privately owned though Forest Utilities maintains all tributary stations. SCADA systems have been installed on 98 utility owned stations that provide monitoring remotely from the Forest wastewater treatment plant operation center office. The SCADA monitoring/display data includes real time and historical station alarm status, wet well level, pump status, i.e. run times as well as control set points. Plans for installation of SCADA systems on the remaining Forest Utilities pumping stations are scheduled for completion in year 2021. Certain spare parts for both pumps and panels are maintained in stock and the utility has facilities for removing any pumps requiring repair. A factory-authorized repair shop for the submersible pumps is available locally, and most replacement parts necessary for the panels are also available locally, lessening requirements for maintaining a sizable stockpile of spare parts.

Forest Utilities has instituted a formal inflow/infiltration program to monitor the collection systems. This program is provided as Attachment No. 5 to this report.

CHAPTER 7
PROBLEMS, DEFICIENCIES AND CORRECTIVE ACTIONS

This Chapter lists any noted problems and/or deficiencies at the treatment facility and provides recommendations for corrective actions necessary in eliminating these deficiencies. The noted problems and/or deficiencies listed by Chapter, where addressed, is as follows:

CHAPTER 2 - PHYSICAL CONDITION

No significant problems or deficiencies were noted. Continue to maintain and upkeep the various facilities. Color code or label the various exposed piping and valving. Sections of railing bases have rusted, weakening their supporting anchorage. Sleeves should be installed to repair these weakened areas. Replace or rehabilitate by removing scale/rust and applying protective coatings on sections of steel air header piping where leaks occur from corrosion and replace air drop pipes on a routine schedule.

CHAPTER 3 - TREATMENT EFFICIENCY

No significant problems or deficiencies were noted.

CHAPTER 4 - PERFORMANCE TRENDS

No significant problems or deficiencies were noted.

CHAPTER 5 - OPERATION AND MAINTENANCE

An Operation and Maintenance Manual customized for this treatment facility including copies of permits, record drawings, equipment O & M Manuals, explanation of process and standard testing procedures, etc., has been provided, and is available at the Forest WWTP office.

CHAPTER 6 - COLLECTION SYSTEM EVALUATION

Continue to maintain program for minimizing of inflow/infiltration within the collection system.

ATTACHMENT NO. 5

INFLOW/INFILTRATION PROGRAM

FOREST UTILITIES, INC.
INFLOW/INFILTRATION PROGRAM - 2010

In accordance with Forest Utilities, Inc.'s (FUI) Wastewater Treatment Facility Operating Permit issued by the Florida Department of Environmental Protection (FDEP), FUI has formally adopted the following program to prevent excessive inflow and infiltration (I & I) of storm and ground water into its sewer system. Through the implementation of standard industry sewer system monitoring practices, this program is intended to minimize the following occurrences:

1. Hydraulic overloading of the transmission system.
2. Hydraulic and inorganic overloading of the treatment facility.
3. Sanitary sewer overflows.
4. Treatment facility upsets.

These monitoring practices include, but are not limited to, twice weekly pumping station inspections and pump usage recording, visual inspection of manholes and invert flows, smoke testing and video inspection of sewer gravity mains and service laterals and sewer system inspection during significant rain events.

These monitoring practices are also performed at the collection systems of satellite communities connected to FUI's central sewage system. These communities own and maintain the sewer collection/transmission systems located within their respective communities and transport sewage to FUI's sewage collection/transmission system via pumping stations. The sewage is then pumped to FUI's wastewater treatment facility for treatment and disposal. Although FUI does not own these systems, they are a critical component of its sewer transmission system and treatment process and, therefore, require FUI's personnel to perform the same preliminary I & I monitoring as performed on the FUI sewer system. These communities are bound by the requirements of the FUI Sewer Service Agreement(s) and various regulatory agencies to properly maintain and operate the sewer systems in a manner so as to function as they were originally intended and in a manner to prevent excessive I & I flows and sanitary sewer overflows.

Upon becoming aware of a satellite community sewer system I & I problem(s), FUI will issue a letter of excessive I & I notification, staring both the evidence of I & I and the requirement for timely repair. The community will be given a ten-day response period in order to determine the appropriate corrective measures to be implement; however, should the community fail to respond or respond to but not perform the repairs in a timely manner, or perform repairs that do not produce the results necessary to conform to federal, state and local saws, or codes, ordinances, rules and regulations and/or the proper biologic operation of FUI's wastewater treatment plant, FUI may issue a sewer service disconnect notice or take such other action to secure compliance as FUI deems appropriate under the circumstances, including the requirement that the satellite system correct these excessive I & I issues which occur in such satellite systems. This notice will also be provided to the FDEP and the Lee County Health Department.

In an effort to aid in the implementation of this I & I program, FUI has made capital expenditures to acquire the necessary video and recording equipment, sewer main cleaning equipment and other miscellaneous purchases and will continue to make additional purchases in the future. This program may be modified as necessary and is an integral part of FUI's Operating Protocol.

Prepared: 05/2010; Revised: 01/2011

ATTACHMENT 2

FIELD EVALUATION FORM FOR OPERATION AND MAINTENANCE PERFORMANCE REPORTS FOR DOMESTIC WASTEWATER FACILITIES

Florida Department of Environmental Regulation

July 1992

FIELD EVALUATION FORM FOR
OPERATION AND MAINTENANCE PERFORMANCE REPORTS FOR
DOMESTIC WASTEWATER FACILITIES

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PHYSICAL CONDITION

Hydraulic and Organic Overloading

1. Is there evidence of past spills at the plant or through nearby (upstream) manholes? (Discoloration of the ground or a strong smell may indicate past spills at the plant.) ( ) yes (X) no

2. Are raw sewage pumping stations, influent lines, overflow weirs, or other structures surcharged? (X) yes ( ) no

3. Is there flow through bypass channels? ( ) yes (X) no

4. Are there old high water lines or are the weirs on the clarifier flooded? ( ) yes (X) no

5. Are there overflows at alternative discharge points, channels, or other areas? ( ) yes (X) no

6. Are there any open-ended pipes that appear to originate in a process or storage area and periodically contain flows to the ground or to surface water? (Although these pipes have been disconnected from a closed system or otherwise removed from service, they can still be connected to a discharge source.) ( ) yes (X) no

7. Is the facility receiving excessive septage dumping from septic tanks? ( ) yes (X) no

8. Are checks for overflows performed routinely? (X) yes ( ) no

General Condition

1. Is there evidence of corrosion problems at the treatment plant and in the collection system? ( ) yes (X) no

2. Do any of the units or associated equipment show signs of excessive wear? ( ) yes (X) no

Rule Requirements

1. Does each component, system, or process meet the applicable reliability standards required by Rule 17-600.400(1)(b), F.A.C.? (X) yes ( ) no

2. Does the facility have adequate alarm systems for power or equipment failures as recommended by standard design references? (X) yes ( ) no

   Are they working properly? (X) yes ( ) no

3. Is standby power or other equivalent provisions provided for all components, systems, and processes as recommended by standard design references? (X) yes ( ) no

4. Are there adverse effects resulting from odors, noise, aerosol drift, and lighting at the facility? ( ) yes (X) no

5. Are there piles of collected screenings, slurries, residuals, or by-products of treatment? (Their disposal, including run-off of any water, must be such that none enters surface waters or their tributaries.) ( ) yes (X) no

Operating Problems

1. Are all components, systems, or processes (including associated equipment such as pumps, blowers, air compressors, oxygen systems, scum collection systems, residuals collection systems, diffusers, mechanical aerators, mechanical drives, mechanical mixers, motors, residuals heater, feed systems, backwash systems, control systems, flow measurement devices, automatic valves, ventilation fans, and other miscellaneous equipment) operating properly? (X) yes ( ) no

   If no, explain.

   _____
   _____
   _____
   _____
   _____

2. Are any components, systems, or processes out of service? ( ) yes (X) no

   If yes, complete the following table for each component, system, or process that is not operating.

Name	Date Out of Service	Type of Failure	Expected Date to Return to Service

3. Are there excessive noises associated with any component, system, or process? ( ) yes (X) no

4. Is there any unusual equipment intended to correct operational problems (e.g. special pumps, floating aerators in diffused air systems, chemical feeders, temporary construction or structures, or any improvised systems)? ( ) yes (X) no

5. Are all components, systems, and processes expected to continue to operate properly for the permit period? (X) yes ( ) no

If no, explain. _____

Safety Features

1. Are proper safety precautions used for each component, system, and process? (X) yes ( ) no

If no, explain. _____

2. Is a written set of safety rules available to all employees? (X) yes ( ) no

3. Is the plant generally clean and free from open trash areas? (X) yes ( ) no

4. Is the plant site enclosed with a fence or otherwise designed with appropriate features that discourage the entry of animals or unauthorized persons? (X) yes ( ) no

5. Are wastewater pipes clearly distinguished from product pipes? (X) yes ( ) no

6. Are there any cross connections between a potable water supply and non-potable source? ( ) yes (X) no

7. Does the plant have the following recommended safety equipment?

   a. Portable air blower (gas motor or electric motor operated) ( ) yes (X) no

   b. Electric explosion-proof lantern (X) yes ( ) no

   c. Safety harness ( ) yes (X) no

   d. Hose mask with hand blower and 50-foot hose ( ) yes (X) no

   e. Self contained breathing apparatus for plants using chlorine (X) yes ( ) no ( ) not applicable

   f. Explosion and oxygen meters ( ) yes (X) no

8. Is personal protective clothing provided (safety helmets, ear protectors, goggles, gloves, rubber boots with steel toes, etc.)? (X) yes ( ) no

9. Are portable hoists available for equipment removal? (X) yes ( ) no

10. Are ladders provided to enter manholes of wetwells (fiberglass or wooden for electrical work)? (X) yes ( ) no

11. Are life preservers and throwlines provided adjacent to all basins, ponds, and lagoons? ( ) yes (X) no

12. Are handrails provided and in-place around all basins and openings? (X) yes ( ) no

13. Are all stairs, walkways, and platforms free of grease, oil, and debris and are nonskid surfaces used when needed? (X) yes ( ) no

14. Is adequate lighting provided? (X) yes ( ) no

15. Are all components, systems, and processes adequately ventilated? (X) yes ( ) no

16. Are protective guards provided and in-place on all rotating machinery? (X) yes ( ) no

17. Is all electrical circuitry enclosed and identified? (X) yes ( ) no

18. Are appropriate warning signs posted (no smoking, high voltage, non-potable water, chlorine hazard, toxic and flammable gases, etc.)? (X) yes ( ) no

19. Are emergency shower and eye wash facilities provided where needed? (X) yes ( ) no

20. Are appropriate fire extinguishers provided where needed? (X) yes ( ) no

21. Is instrumentation provided and operational for the detection of toxic and flammable gases and low oxygen levels? (X) yes ( ) no

22. Do pressure vessels operate within their design rating and have a functional pressure relief? ( ) yes ( ) no (X) not applicable

23. Are chemicals stored properly? (X) yes ( ) no

24. Are undiked oil/chemical storage tanks used at the facility? ( ) yes ( ) no (X) not applicable

25. Are chemical storage tanks designed to handle the particular chemical? ( ) yes ( ) no (X) not applicable

26. Are storage bins provided with dust collectors and vents? ( ) yes ( ) no (X) not applicable

27. Are storage bins large enough to avoid continuous filling which requires the presence of an operator all the time? ( ) yes ( ) no (X) not applicable

28. Are access points for sampling dry points which can be reached safely? (X) yes ( ) no

OPERATION AND MAINTENANCE PROGRAM

Staffing

1. Is the facility adequately staffed with certified operators in accordance with the requirements of Rule 17-602, F.A.C.? (X) yes ( ) no

Maintenance Management

1. Is there an identification system to locate and identify all items of equipment? (X) yes ( ) no

2. Does the facility maintain a records system which includes the following?

   a. Preventive and corrective maintenance work performed (X) yes ( )no

   b. Maintenance man-hours (X) yes ( ) no

   c. Spare parts used in the repair (X) yes ( ) no

   d. Name of the person performing the work (X) yes ( ) no

   e. Maintenance related costs (X) yes ( ) no

3. Is routine and preventive maintenance scheduled and performed on time? (X) yes ( ) no

4. Are adequate spare parts and supply inventories maintained for each component, system, and process? (X) yes ( ) no

5. Is the maintenance program adequate? (X) yes ( ) no

   If no, explain. _____

Records Keeping

1. Are records required by the permit maintained for a period of five years? (X) yes ( ) no

2. Is the information required by the permit available, complete, and current? (X) yes ( ) no

3. Are analytical results consistent with the data reported in the following?

   a. Monthly operating report (X) yes ( ) no

   b. Limited wet weather discharge report (X) yes ( ) no

c. Ground water monitoring report (X) yes ( ) no

d. Reclaimed water or effluent analysis report (X) yes ( ) no

4. Do sampling and analyses data include the following?

a. Dates, times, and location of the sampling (X) yes ( ) no

b. The name of the individual performing the sampling (X) yes ( ) no

c. The analytical methods and techniques used (X) yes ( ) no

d. The results of the analyses and calibration (X) yes ( ) no

e. The dates of the analyses (X) yes ( ) no

f. The name of the person performing the analyses (X) yes ( ) no

g. The instantaneous flow at the grab sample station (X) yes ( ) no

5. Do monitoring records include records for all parameters that must be monitored in accordance with the permit? (X) yes ( ) no

6. Are flow meter calibration records available? (X) yes ( ) no

7. Are laboratory equipment calibration and maintenance records adequate? (X) yes ( ) no

8. Are plant records adequate and do they include the following?

a. A copy of the Department permit (X) yes ( ) no

b. An up-to-date operation and maintenance manual (X) yes ( ) no

c. Record drawings (X) yes ( ) no

d. Schedules and dates of equipment maintenance repairs (X) yes ( ) no

e. Equipment suppliers manual (X) yes ( ) no

f. Equipment data cards or equal (X) yes ( ) no

9. Are operating records adequate? (X) yes ( ) no

10. Have all untreated bypasses and discharges or overflows been reported to the Department? (X) yes ( ) no

If no, explain. _____

Sampling

1. Are samples taken at the sites specified in the permit? (X) yes ( ) no

2. Is sampling and analysis completed for each parameter specified by the permit? (X) yes ( ) no

3. Is the frequency of sampling in accordance with the permit? (X) yes ( ) no

4. Is the method of sample collection (grab or composite) in accordance with the permit? (X) yes ( ) no

5. Are sample collection procedures in accordance with the approved test procedures referenced in Rule 17-601.400(1)(a), F.A.C.? (X) yes ( ) no

6. For flows of 100,000 gallons per day or greater, are recording flow meters and totalizers used? (X) yes ( ) no ( ) not applicable

7. Are flow recording devices calibrated at least annually? (X) yes ( ) no

Laboratory Analysis

1. Are all laboratory tests required by Department rules performed by a laboratory that has been certified by HRS, or, for on-site tests for dissolved oxygen, pH, and total chlorine residual, are all tests performed by a certified laboratory or under the direction of an operator certified in accordance with Chapter 17-602, F.A.C.? (X) yes ( ) no

INDIVIDUAL COMPONENTS, SYSTEMS, AND PROCESSES

PUMPING

Raw Wastewater

1. What is the location of the pump station? PS #1- SW corner of entry road

2. What are the design flows to the pump station? _____ gpm average
_____ gpm peak

3. What are the actual flows to the pump station? _____ gpm average
_____ gpm peak

4. What type of pump control system is used?
( ) variable speed (X) constant speed

5. If the control system is variable speed, what type of controller is used?
_____ (X) not applicable

6. If multiple pumps are used, how is each unit operated?
( ) about 15-20% apart (X) equally ( ) not alternated
( ) not applicable

Is the system remotely monitored? (X) yes ( ) no ( ) not applicable

7. Does the pump station have a bypass? ( ) yes (X) no

If yes, can the bypass flow be disinfected?
( ) yes ( ) no (X) not applicable

8. Can the wet well be isolated into a minimum of two separate basins for maintenance? ( ) yes (X) no

9. If one wet well basin is down for maintenance, how many pumps are operable?
N/A

10. Does the wet well design provide for equal division of flow to each of the pumps? (X) yes ( ) no

11. What is the condition of the sump pump?
( ) good ( ) fair ( ) poor (X) not applicable

12. What is the condition of the water seal systems?
( ) good ( ) fair ( ) poor (X) not applicable

13. How often is the pump station checked? (X) daily ( ) other
_____

14. What is the downtime of the pumps? Pumps alternate

15. What is the frequency of maintenance inspections by plant personnel?
52 /year

16. If the pump station is constant speed, do sudden surges affect the operation of the treatment facility when each pump is activated?
( ) yes ( ) no (X) not applicable

17. What is the general condition of the raw wastewater pump station?
(X) good ( ) fair ( ) poor

18. What are the most common problems that the operator has had with the pump station? If there are problems with the screens, use the section on screens.
Grease build-up

PUMPING

Residuals

1. What is the design residuals pumping rate? _____ gallons/day

2. What is the actual residuals pumping rate? _____ gallons/day

3. What types of residuals are pumped? ( ) primary
   (X) return activated sludge (X) waste activated sludge
   ( ) other _____

4. How are residuals pumped? ( ) manually (X) automatically

5. How often do the residuals pumps run? RAS - 24/7

6. What is the frequency of maintenance inspections by plant personnel?
   52 /year

7. What is the general condition of the residuals pump station?
   (X) good ( ) fair ( ) poor

8. What are the most common problems that the operator has had with the pump station? None

FLOW MEASUREMENT

1. What type of flow meter is used? ( ) propeller meter
   (X) magnetic meter ( ) venturi tube ( ) flow tube
   ( ) positive displacement ( ) diaphragm meter ( ) weir
   ( ) Parshall flume ( ) rotameter ( ) other _____

2. What is the design capacity of the flow measurement device?
   _____ mgd

3. What is the present wastewater flow measured? _____ mgd

4. Where is the flow meter located? On the combined influent line

5. Are the flow measurement device and associated instruments (totalizers, recorders, etc.) properly installed? (X) yes ( ) no

6. Is there adequate straight length of pipe or channel before and after the flowmeter? (X) yes ( ) no

7. Is the flow entering the flume reasonably well-distributed across the channel and free of turbulence, boils, or other disturbances?
   (X) yes ( ) no ( ) not applicable

8. Is the flow measurement system capable of measuring the entire range of wastewater flow? (X) yes ( ) no

9. Are flow measurements being properly made by plant personnel?
   (X) yes ( ) no

10. Are flow records properly kept? (X) yes ( ) no

11. Are sharp drops or increases in flow records accounted for?
    (X) yes ( ) no

12. Does the flow chart exhibit uniform flow? (X) yes ( ) no

13. Do any plant return flows discharge upstream from the meter?
    ( ) yes (X) no

14. Are float and bubble wells clean and free of grease and debris?
    ( ) yes ( ) no (X) not applicable

15. Are weirs free of debris? (X) yes ( ) no ( ) not applicable

16. Are weirs or flumes broken or cracked?
    ( ) yes (X) no ( ) not applicable

17. Are weir plates corroded or damaged, not sharp edged ($\leq$ 1/8"), or not level? ( ) yes ( ) no (X) not applicable

18. Are stilling wells clogged or broken?
    ( ) yes ( ) no (X) not applicable

19. What is the frequency of calibration of the flow meter?
_____/month

20. What date was the flow meter last calibrated? _____

21. Who performed the calibration? _____

22. What is the frequency of routine inspections for proper operation?
_____ /day

23. What is the frequency of maintenance inspections by plant personnel?
_____ /year

24. What is the general condition of the flow measurement facilities?
(X) good ( ) fair ( ) poor

25. What are the most common problems that the operator has had with the flow meter? None

PRELIMINARY TREATMENT

Screens

1. What is the design flows of the screens? 0.800 mgd average
   2.0 mgd peak

2. What is the actual plant flow? _____ mgd average
   _____ mgd peak

3. What type of screens are used? (X) manual ( ) mechanical

4. How many screens are there? 3

5. What is the capacity of each screen? 2.0 mgd

6. How large are the screen openings? 25 millimeters

7. What are the dimensions of the channels? _____

8. What is the total daily volume of screenings? 1.5± cubic feet

9. What is the unit volume of screenings?
   2-3 cubic feet/million gallons

10. Is there excessive screen clogging or build-up of debris against the screens? ( ) yes (X) no

11. Is there a bypass channel? ( ) yes (X) no

    Does the bypass channel have a screen?
    ( ) yes ( ) no (X) not applicable

12. Does the influent channel design provide equal division of flow to each screen? (X) yes ( ) no

13. How are screenings disposed? Sanitary Landfill

14. What is the frequency of routine inspections for proper operation?
    Once /day

15. What is the frequency of maintenance inspections by plant personnel?
    365 /year

16. What is the downtime of the screens? Zero

17. What is the general condition of the screening facilities?
    (X) good ( ) fair ( ) poor

18. What are the most common problems that the operator has had with the screening facilities? None

PRELIMINARY TREATMENT

Shredding and Grinding (Comminution) Not Applicable

1. How many shredding and grinding units are there? _____

2. What is the design capacity of each unit? _____ mgd

3. What is the actual flow to each unit? _____ mgd average
   _____ mgd peak

4. If multiple units are used, is the flow evenly distributed?
   ( ) yes ( ) no

5. What are the dimensions of the channels? _____

6. Is there a bypass channel? ( ) yes ( ) no

7. What is the general condition of the shredding and grinding facilities? ( ) good ( ) fair ( ) poor

8. What is the frequency of routine inspections for proper operation?
   _____ /day

9. What is the frequency of maintenance inspections by plant personnel?
   _____ /year

10. What is the downtime of the shredding and grinding facilities?
    _____

11. What are the most common problems that the operator has had with the shredding and grinding facilities? _____
    _____
    _____
    _____

PRELIMINARY TREATMENT

Grit Removal **Not Applicable**

1. What is the design capacity of the grit removal system?
   _____ mgd average _____ mgd peak

2. What is the actual plant flow? _____ mgd average
   _____ mgd peak

3. What type of grit removal system is used? ( ) velocity controlled
   ( ) aerated ( ) constant head ( ) other _____

4. How many grit removal units are there? _____

5. What is the capacity of each unit? _____

6. What are the dimensions of the unit? _____cubic feet

7. What is the daily volume of grit? _____ cubic feet

8. What is the unit volume of grit? _____ cubic feet/million gallons

9. How is the grit collection equipment operated?
   ( ) manually ( ) time clock ( ) continuous duty

10. Is the grit system clogged? ( ) yes ( ) no

11. Is the grit system subject to odors? ( ) yes ( ) no

12. Is the organic content of the grit excessive? ( ) yes ( ) no

13. Is there a bypass channel? ( ) yes ( ) no

14. Does the influent channel design provide equal division of flows to each grit removal unit? ( ) yes ( ) no

15. How is the grit disposed? _____

16. What is the frequency of routine inspections for proper operation?
    _____ /day

17. What is the frequency of maintenance inspections by plant personnel?
    _____ /year

18. What are the most common problems that the operator has had with the grit removal facilities? _____
    _____
    _____
    _____

BIOLOGICAL TREATMENT

Activated Sludge

1. How many aeration basins are there? 5

2. What is the design capacity of each basin? _____ mgd

3. What is the actual flow to each basin? _____ mgd average
   _____ mgd peak

4. What is the flow regime? (X) conventional ( ) step aeration
   ( ) complete mix ( ) pure oxygen ( ) other _____

5. What type of aeration equipment is used?
   (X) diffused air ( ) mechanical aerators ( ) other _____

6. What are the dimensions of each aeration basin? See plans

7. What is the color of the activated sludge? ( ) black (X) dark brown
   ( ) light brown ( ) other _____

8. What is the odor of the activated sludge? ( ) septic (X) earthy
   ( ) none ( ) other _____

9. What characteristics most accurately describe the foam?
   (X) light, crisp ( ) thick, dark ( ) heavy, white ( ) other _____

10. Are the tank contents mixed thoroughly? (X) yes ( ) no

11. Are there excessive air leaks in the compressed air piping?
    ( ) yes (X) no ( ) not applicable

12. Is the dissolved oxygen level in the aeration tank low (<1.0 mg/l)?
    ( ) yes (X) no

13. Does mixing appear excessive? ( ) yes (X) no

14. Does air rise in clumps? ( ) yes (X) no

15. Do there appear to be dead spots in the aeration basin?
    ( ) yes (X) no

    If yes, at what location? _____

16. What is the depth of the sand and grit layer? 1± feet

17. What is the active capacity of the aeration basin?
    _____cubic feet

18. Is the process operating in its design mode? (X) yes ( ) no

    If no, explain. _____

19. Are the return activated sludge pumps operating? (X) yes ( ) no

If no, what is the reason? _____

20. Are there flow measurement devices for the return activated sludge and waste activated sludge systems? (X) yes ( ) no

21. Does the aeration basin have a foam control system? ( ) yes (X) no

22. If multiple basins are operating, is the flow distributed equally? (X) yes ( ) no ( ) not applicable

How is it distributed? Through weirs & channels

23. Are the characteristics of the basin contents different in the various units? ( ) yes (X) no ( ) not applicable

24. How is the system operated? (X) manually ( ) semi-automatically ( ) automatically ( ) computer-controlled ( ) other _____

25. What is the frequency of routine inspections for proper operation? 6 hours /day

26. What is the frequency of maintenance inspections by plant personnel? 52 /year

27. What is the general condition of the activated sludge facilities? (X) good ( ) fair ( ) poor

28. What are the most common problems that the operator has had with the activated sludge system? None

BIOLOGICAL TREATMENT

Trickling Filters Not Applicable

1. How many trickling filter units are there? _____

2. What is the design capacity of each unit? _____ mgd

3. What is the actual flow to each unit? _____ mgd average
_____ mgd peak

4. What is the recycle flow? _____ mgd

5. How is the flow recycled? ( ) continuously ( ) intermittently

6. What is the filter classification? ( )low rate
( ) intermediate rate ( ) high rate ( ) super-high rate

7. What type of media is used? _____

8. What is the depth of the media? _____ feet

9. What is the diameter of each unit? _____ feet

10. What is the color of the filter? ( ) black ( ) dark brown
( ) light brown ( ) other _____

11. What is the odor of the filter? ( ) septic ( ) earthy ( ) none
( ) other _____

12. Is there evidence of uneven flow distribution from the trickling filter arms or on the trickling filter surface? ( ) yes ( ) no

13. Is there clogging of the trickling filter distribution arm orifices?
( ) yes ( ) no

14. Is there evidence of filter clogging (e.g., ponding)?
( ) yes ( ) no

If yes, explain. _____

15. Is there evidence of filter flies? ( ) yes ( ) no

Is there evidence of snails? ( ) yes ( ) no

Is there evidence of roaches? ( ) yes ( ) no

16. Is there a leak at the center column of the trickling filter distribution arms? ( ) yes ( ) no

17. Is there restricted rotation of the distribution arms?
( ) yes ( ) no

18. Is there grass or other vegetative material growing on the filter?
( ) yes ( ) no

If yes, what? _____

19. Are there flow measurement devices for the recirculation flow?
( ) yes ( ) no

20. Are the recirculation pumps operating? ( ) yes ( ) no

If no, why? _____
_____

21. If multiple filters are operating, is the flow distributed equally?
( ) yes ( ) no ( ) not applicable

How is it distributed? _____

22. Are the characteristics of the filter contents different in the various units? ( ) yes ( ) no ( ) not applicable

If yes, describe. _____
_____

23. How is the system operated? ( ) manually ( ) semi-automatically
( ) automatically ( ) computer-controlled ( ) other _____

24. What is the frequency of routine inspections for proper operation?
_____ /day

25. What is the frequency of maintenance inspections by plant personnel?
_____ /year

26. What is the general condition of the trickling filter facilities?
( ) good ( ) fair ( ) poor

27. What are the most common problems that the operator has had with the trickling filter system? _____
_____
_____
_____

BIOLOGICAL TREATMENT

Rotating Biological Contactors (RBCs) Not Applicable

1. How many RBC units (shafts) are there? _____

2. What is the design capacity of each unit? _____ mgd

3. What is the actual flow to each unit? _____ mgd average
   _____ mgd peak

4. What type of RBC media is used? _____

5. What type of RBC drive is used? _____

6. What is the surface area of each unit? _____

7. What is the color of the biomass? ( ) black ( ) dark brown
   ( ) light brown ( ) other _____

8. What is the odor of the unit? ( ) septic ( ) earthy ( ) none
   ( ) other _____

9. Is there excessive breakage of rotating disks or shafts?
   ( ) yes ( ) no

10. Is rotation of the media uniform? ( ) yes ( ) no

11. Is the flow distributed equally to parallel shafts? ( ) yes ( ) no

    How is it distributed? _____

12. Are the characteristics of the tank contents different in the various units? ( ) yes ( ) no ( ) not applicable

    If yes, describe. _____

13. Are RBC units housed in a building? ( ) yes ( ) no

    Or does each unit have a cover? ( ) yes ( ) no

14. What is the frequency of routine inspections for proper operation?
    _____ /day

15. What is the frequency of maintenance inspections by plant personnel?
    _____ /year

16. What is the general condition of the RBC facilities?
    ( ) good ( ) fair ( ) poor

17. What are the most common problems that the operator has had with the RBC system? _____

NITROGEN REMOVAL

Suspended Growth Nitrification **Not Applicable**

1. How many aeration basins are there? _____

2. What is the design capacity of each basin? _____ mgd

3. What is the actual flow to each basin? _____ mgd average
   _____ mgd peak

4. How many stages does the nitrification system have? _____

   What type of flow regime (e.g., conventional) does each stage have?
   _____

5. What type of aeration equipment (e.g., diffused air or mechanical aerators) does each stage have? _____
   _____

6. What are the aeration basin(s) dimensions? _____

7. Characteristics of the Carbonaceous Oxidation Basin:

   What is the color of the activated sludge? ( ) black ( ) dark brown
   ( ) light brown ( ) other _____

   What is the odor of the activated sludge? ( ) septic ( ) earthy
   ( ) none ( ) other _____

   What characteristics most accurately describe the foam?
   ( ) light, crisp ( ) dark, thick ( ) heavy, white
   ( ) other _____

8. Characteristics of the Nitrification Basin:

   What is the color of the activated sludge? ( ) black ( ) dark brown
   ( ) light brown ( ) other _____

   What is the odor of the activated sludge? ( ) septic ( ) earthy
   ( ) none ( ) other _____

   What characteristics most accurately describe the foam?
   ( ) light, crisp ( ) dark, thick ( ) heavy, white
   ( ) other _____

9. Are the tank(s) contents mixed thoroughly? ( ) yes ( ) no

10. Are there excessive air leaks in the compressed air piping?
    ( ) yes ( ) no ( ) not applicable

11. Is the dissolved oxygen level in the aeration tank(s) low
    ($\leq$1.0 mg/l)? ( ) yes ( ) no

12. Does mixing appear excessive? ( ) yes ( ) no

13. Does air rise in clumps? ( ) yes ( ) no

14. Do there appear to be dead spots in tank(s)? ( ) yes ( ) no

    If yes, at what location? _____

15. What is the depth of the sand and grit layer? _____ feet

16. What is the active capacity of the aeration basin?
    _____ cubic feet

17. Is the process operating in its design mode? ( ) yes ( ) no

    If no, explain _____

18. Are the RAS pumps operating? ( ) yes ( ) no

    If no, what is the reason? _____

19. Are there flow measurement devices for the RAS and WAS systems?
    ( ) yes ( ) no

20. Does the aeration basin(s) have a foam control system?
    ( ) yes ( ) no

21. If multiple basins for each step are operating, is the flow distributed equally? ( ) yes ( ) no ( ) not applicable

    How is it distributed? _____

22. Are the characteristics of the basin contents for each step different?
    ( ) yes ( ) no

    If yes, describe. _____
    _____

23. Is there an alkaline buffer added? ( ) yes ( ) no

    If yes, what is it? _____

    If yes, what is the dose? _____

24. How is the system operated? ( ) manually ( ) semi-automatically
    ( ) automatically ( ) computer-controlled ( ) other _____

25. What is the frequency of routine inspections for proper operation?
    _____ /day

26. What is the frequency of maintenance inspections by plant personnel?
    _____ /year

27. What is the general condition of the nitrification facilities?
( ) good ( ) fair ( ) poor

28. What are the most common problems that the operator has had with the nitrification system? _____

_____

_____

NITROGEN REMOVAL

Nitrifying Trickling Filters **Not Applicable**

1. How many stages does the nitrification system have? _____

2. How many trickling filter units are there in each stage? _____

3. What is the design capacity of each unit? _____ mgd

4. What is the actual flow to each unit? _____ mgd average
   _____ mgd peak

5. What is the recycle flow to each stage? _____

   How is the flow recycled? ( ) continuously ( ) intermittently

6. What type of media is used? _____

7. What is the depth of the media? _____ feet

8. What is the diameter of each unit? _____

9. Characteristics of the Oxidation Tower:

   What is the color of the filter? ( ) black ( ) dark brown
   ( ) light brown ( ) other _____

   What is the odor of the filter? ( ) septic ( ) earthy
   ( ) none ( ) other _____

10. Characteristics of the Nitrification Tower:

    What is the color of the filter? ( ) black ( ) dark brown
    ( ) light brown ( ) other _____

    What is the odor of the filter? ( ) septic ( ) earthy
    ( ) none ( ) other _____

11. Is there evidence of uneven flow distribution from the trickling filter arms or on the trickling filter surface? ( ) yes ( ) no

12. Is there clogging of the trickling filter distribution arm orifices?
    ( ) yes ( ) no

13. Is there evidence of filter clogging (e.g., ponding)?
    ( ) yes ( ) no

    If yes, explain. _____

14. Is there evidence of filter flies? ( ) yes ( ) no

    Is there evidence of snails? ( ) yes ( ) no

    Is there evidence of roaches? ( ) yes ( ) no

15. Is there a leak at the center column of the trickling filter distribution arms? ( ) yes ( ) no

16. Is there restricted rotation of the distribution arms? ( ) yes ( ) no

17. Is there grass or other vegetative material growing on the filter? ( ) yes ( ) no

    If yes, what? _____

18. Are there flow measurement devices for the recirculation flow? ( ) yes ( ) no

19. Are the recirculation pumps operating? ( ) yes ( ) no

    If no, why? _____

    _____

20. If multiple filters are operating for each stage, is the flow distributed equally? ( ) yes ( ) no ( ) not applicable

    How is it distributed? _____

21. Are the characteristics of the filter contents different in the various units of each stage? ( ) yes ( ) no ( ) not applicable

    If yes, describe. _____

    _____

22. How is the system operated? ( ) manually ( ) semi-automatically ( ) automatically ( ) computer-controlled ( ) other _____

23. Is there an alkaline buffer added? ( ) yes ( ) no

    If yes, what is it? _____

    If yes, what is the dose? _____

24. What is the frequency of routine inspections for proper operation? _____ /day

25. What is the frequency of maintenance inspections by plant personnel? _____ /year

26. What is the general condition of the nitrification facilities? ( ) good ( ) fair ( ) poor

27. What are the most common problems that the operator has had with the nitrification facilities? _____

_____

_____

_____

NITROGEN REMOVAL

Nitrifying Rotating Biological Contactors Not Applicable

1. How many stages does the nitrification system have? _____

2. How many RBC units (shafts) are there in each stage? _____

3. What is the design capacity of each unit? _____ mgd

4. What is the actual flow to each unit? _____ mgd average
   _____ mgd peak

5. What type of RBC media is used? _____

6. What type of RBC drive is used? _____

7. What is the surface area of each unit? _____

8. What is the color of the biomass? ( ) black ( ) dark brown
   ( ) light brown ( ) other _____

9. What is the odor of the unit? ( ) septic ( ) earthy ( ) none
   ( ) other _____

10. Is there excessive breakage of rotating disks or shafts?
    ( ) yes ( ) no

11. Is rotation of the media uniform? ( ) yes ( ) no

12. Is the flow distributed equally to parallel shafts? ( ) yes ( ) no

    How is it distributed? _____

13. Are the characteristics of the tank contents different in the various units? ( ) yes ( ) no ( ) not applicable

    If yes, describe. _____

14. Is there an alkaline buffer added? ( ) yes ( ) no

    If yes, what is it? _____

    If yes, what is the dose? _____

15. Are RBC units housed in a building? ( ) yes ( ) no

    Or does each unit have a cover? ( ) yes ( ) no

16. What is the frequency of routine inspections for proper operation?
    _____ /day

17. What is the frequency of maintenance inspections by plant personnel?
    _____ /year

18. What is the general condition of the nitrification facilities?
( ) good ( ) fair ( ) poor

19. What are the most common problems that the operator has had with the nitrification facilities? _____

_____

_____

_____

NITROGEN REMOVAL

Denitrification Not Applicable

1. How many denitrification units are there? _____

2. What is the design capacity of each unit? _____ mgd

3. What is the actual flow to each unit? _____ mgd average
   _____ mgd peak

4. What is the type of denitrification system? ( ) suspended growth
   ( ) attached growth ( ) other _____

5. What type of mixing equipment or media is used? _____

6. What are the tank (or column) dimensions? _____

7. Are the tank contents mixed thoroughly? ( ) yes ( ) no

8. Does mixing appear excessive so as to cause oxygenation?
   ( ) yes ( ) no

9. Do there appear to be dead spots in the tank? ( ) yes ( ) no

   If yes, at what location? _____

10. Is the process operating in its design mode? ( ) yes ( ) no

    If no, explain. _____

11. How is the system operated? ( ) manually ( ) semi-automatically
    ( ) automatically ( ) computer controlled ( ) other _____

12. Is the wastewater temperature below 15°C? ( ) yes ( ) no

13. Is the wastewater pH below 6.0 or above 8.0? ( ) yes ( ) no

14. Is there excessive methanol? ( ) yes ( ) no

15. What is the frequency of routine inspections for proper operation?
    _____ /day

16. What is the frequency of maintenance inspections by plant personnel?
    _____ /year

17. What is the general condition of the denitrification facilities?
    ( ) good ( ) fair ( ) poor

18. What are the most common problems that the operator has had with the
    denitrification facilities? _____
    _____
    _____
    _____

CHEMICAL TREATMENT

Chemical Feeding and Conditioning Not Applicable

This chemical feeding checklist relates to the liquid phase only. For the chemical feeds for residuals processing, refer to the individual residuals processes.

1. What are the actual plant flows? _____ mgd average _____ mgd peak

2. What chemicals are used? ( ) lime ( ) alum ( ) ferric chloride ( ) sodium hydroxide ( ) other _____

3. Where is the chemical added? ( ) primary sedimentation ( ) aeration basin ( ) secondary sedimentation ( ) chemical treatment facilities ( ) other _____

4. What is the chemical dose? _____ mg/l _____ lbs/mgd

5. What is the principal purpose of the chemical addition? _____

6. Is the chemical feed system automatically controlled? ( ) yes ( ) no

   If yes, what is the method of control? ( ) pH of the waste stream ( ) dose rate ( ) concentration per million gallons ( ) other _____

7. What type of feed system is used? ( ) volumetric ( ) belt gravimetric ( ) loss-in-weight gravimetric ( ) metering pump ( ) other

8. Is there a portion-measuring device at the feed unit? ( ) yes ( ) no

9. Is pH being measured at the pH adjustment tank? ( ) yes ( ) no

10. Are chemicals left in the open atmosphere? ( ) yes ( ) no

11. Are chemicals outdated? ( ) yes ( ) no

12. Are chemicals stored, moved, and handled properly? ( ) yes ( ) no

13. Is there evidence of chemical spills between the storage area and the feed units? ( ) yes ( ) no

14. Are empty chemical containers properly disposed of? ( ) yes ( ) no

15. Are there appropriately sized berms or dikes at the liquid chemical feed units and storage areas? ( ) yes ( ) no ( ) not applicable

16. Is chemical dust present at the feed unit area or storage and transfer areas? ( ) yes ( ) no ( ) not applicable

17. Is a reserve supply of chemicals maintained? ( ) yes ( ) no

How many days of supply is maintained? _____

18. What is the frequency of routine inspections for proper operation?
_____ /day

19. What is the frequency of maintenance inspections by plant personnel?
_____ /year

20. What is the general condition of the chemical feed facilities?
( ) good ( ) fair ( ) poor

21. What are the most common problems that the operator has had with the chemical feed systems? _____
_____
_____
_____
_____

CHEMICAL TREATMENT

Rapid Mix, Flocculation, and Chemical Clarification Not Applicable

1. What is the actual plant flow? _____ mgd average _____ mgd peak

2. What is the total flow through the chemical treatment system?
_____ mgd

3. How many units are there for each operation? _____
_____

4. What is the flow through each unit? _____ mgd

5. If multiple units are used, is the flow divided equally?
( ) yes ( ) no ( ) not applicable

   If no, what is the problem? _____

6. What type of rapid mixer is used? ( ) turbine ( ) propeller
( ) pneumatic ( ) other _____

7. What type of flocculator is used? ( ) turbine ( ) paddles
( ) other _____

8. What are the dimensions of the rapid mixing tank? _____

9. What are the dimensions of the flocculation tank? _____

10. What are the dimensions of the clarifier? _____

11. What is the depth of the sand and grit layer? _____ feet

12. What is the chemical coagulant? ( ) lime ( ) alum
( ) ferric chloride ( ) ferric sulfate
( ) other _____

13. What is the chemical dose? _____ mg/l

14. What is the detention time for rapid mixing? _____ seconds

    What is the detention time for flocculation? _____ minutes

    What is the detention time for clarification? _____ hours

15. What is the overflow rate of the clarifier? _____ gpd/ft^2

16. What is the volume of residuals pumped? _____ gallons/day

17. What is the solids concentration of the residuals pumped? _____ %

18. Is there an automatic chemical feed control system? ( ) yes ( ) no

If yes, what is the method of control? ( ) pH of waste stream
( ) dose rate ( ) concentration per million gallons ( ) other

19. What is the frequency of routine inspections for proper operation?
_____ /day

20. What is the frequency of maintenance inspections by plant personnel?
_____ /year

21. What is the general condition of the rapid mix, flocculation, and clarification facilities? ( ) good ( ) fair ( ) poor

22. What are the most common problems that the operator has had with the rapid mix, flocculation, and clarification facilities? _____

_____

_____

_____

_____

SEDIMENTATION

Primary Not Applicable

1. How many primary sedimentation basins are there? _____

2. What is the design capacity of each basin? _____ mgd average
   _____ mgd peak

3. What is the actual flow to each basin? _____ mgd average
   _____ mgd peak

4. What are the dimensions of the basins? _____

5. Is the wastewater black or odorous? ( ) yes ( ) no

6. Is there an excessive accumulation of scum, grease, foam, or floating residuals in the clarifier? ( ) yes ( ) no

7. Are there excessive gas bubbles on the surface of the clarifier? ( ) yes ( ) no

8. Is there scum overflow, lack of adequate scum disposal, or is the scum pit full? ( ) yes ( ) no

9. Does the tank surface indicate improper residuals withdrawal (i.e., excessive floating solids, gas, etc.)? ( ) yes ( ) no

10. What volume of residuals are pumped? _____ gallons/day

11. What is the solids concentration of the residuals? _____ %

12. Are there settleable solids in the effluent? ( ) yes ( ) no

13. How are residuals pumped? ( ) manually ( ) automatically

14. How often do residuals pumps run? _____ number of times each day

    How long do residuals pumps run? _____ number of minutes each time

15. Does the residuals collection system show any signs of mechanical failure? ( ) yes ( ) no

16. Are there excessive residuals on the bottom of the basin (i.e., inadequate residuals removal)? ( ) yes ( ) no

17. Are residuals withdrawal ports clogged? ( ) yes ( ) no

18. Does the influent baffle system accomplish its purpose? ( ) yes ( ) no

19. Does the effluent baffle system accomplish its purpose? ( ) yes ( ) no

20. Does the unit show signs of short circuiting and/or overloads?
( ) yes ( ) no

21. Are the effluent weirs level? ( ) yes ( ) no

22. Are the effluent weirs kept clean? ( ) yes ( ) no

23. If multiple units are used, is the flow distributed evenly?
( ) yes ( ) no ( ) not applicable

24. What is the frequency of routine inspections for proper operation?
_____ /day

25. What is the frequency of maintenance inspections by plant personnel?
_____ /year

26. What is the general condition of the primary sedimentation facilities?
( ) good ( ) fair ( ) poor

27. What are the most common problems that the operator has had with the primary sedimentation facilities? _____
_____
_____
_____
_____

SEDIMENTATION

Final

1. How many final sedimentation basins are there? 3

2. What is the design capacity of each basin? 0.800 mgd average
   1.6 mgd peak

3. What is the actual flow to each basin? _____ mgd average
   _____ mgd peak

4. What are the dimensions of the basins? See plans

5. Is chemical addition used to improve settling? ( ) yes (X) no

   If yes, what chemical(s) are added? _____

6. Is there an excessive accumulation of scum, grease foam, or floating residuals in the clarifier? ( ) yes (X) no

7. Are there excessive gas bubbles on the surface of the clarifier? ( ) yes (X) no

8. Is there scum overflow, lack of adequate scum disposal, or is the scum pit full? ( ) yes (X) no

9. Does the tank surface indicate improper residuals withdrawal (i.e., excessive floating solids, gas, etc.)? ( ) yes (X) no

10. What volume of residuals is pumped? _____ gpd total
    _____ gpd RAS ____ gpd WAS

11. What is the solids concentration of the residuals? _____ %

12. Are there settleable solids in the effluent? ( ) yes (X) no

13. How are residuals pumped? ( ) manually (X) automatically

14. How often do residuals pumps run? 24/7 number of times each day

    How long do residuals pumps run? RAS - 24/7 number of minutes each time

15. Does the residuals collection system show any signs of mechanical failure? ( ) yes (X) no

16. Is there excessive residuals on the bottom of the basin (i.e., inadequate residuals removal)? ( ) yes (X) no

17. Is there excessive solids build-up in the center well of the clarifier? ( ) yes (X) no

18. What is the depth of the sand and grit layer? <0.1 feet

19. Are residuals withdrawal ports clogged? ( ) yes (X) no

20. Is the residuals blanket too high? ( ) yes (X) no

21. Is there deflocculation in the clarifier? ( ) yes (X) no

22. Is there pin floc in the overflow? ( ) yes (X) no

23. Is there billowing sludge in the clarifier? ( ) yes (X) no

24. Does the influent baffle system accomplish its purpose?
(X) yes ( ) no

25. Does the effluent baffle system accomplish its purpose?
(X) yes ( ) no

26. Does the unit show signs of short circuiting and/or overloads?
( ) yes (X) no

27. Are the effluent weirs level? (X) yes ( ) no

28. Are the effluent weirs clean? (X) yes ( ) no

29. If multiple units are used, is the flow distributed evenly?
( ) yes ( ) no (X) not applicable

30. What is the frequency of routine inspections for proper operation?
6 hours /day

31. What is the frequency of maintenance inspections by plant personnel?
52 /year

32. What is the general condition of the final sedimentation facilities?
(X) good ( ) fair ( ) poor

33. What are the most common probleme that the operator has had with the final sedimentation facilities? None

FILTRATION

1. How many filter units are there? 2

2. What is the design capacity of each unit? 0.500 mgd average
   1.5 mgd peak

3. What is the actual flow to each unit? _____ mgd average
   _____ mgd peak

4. What type of filters are used? (X) gravity ( ) pressure

5. What type of filter media is used? (X) sand ( ) dual media
   ( ) mixed media ( ) multi-media ( ) diatomaceous earth
   ( ) other _____

6. What is the surface loading rate? 2 gpm/ft^2

7. What is the backwash rate? 5 gpm/ft^2

8. What is the surface wash rate? - gpm/ft^2

   What is the pressure of the surface wash? - psi

9. What type of control system is used? ( ) constant flow
   (X) headloss (X) time ( ) turbidity of effluent
   ( ) total gallons filtered ( ) other _____

10. Are the valves sequencing (opening and closing in order) correctly?
    (X) yes ( ) no

11. Is there a coagulant aid (filtration aid) system? ( ) yes (X) no

    If yes, what type? _____

12. What are the dimensions of the filter? See plans

13. How is the filter system operated? (X) automatically ( ) manually
    ( ) semi-automatically ( ) other _____

14. Is the filter surface clogged? ( ) yes (X) no

15. Is the filter run short? ( ) yes (X) no

16. Is there gravel displacement of the filter media? ( ) yes (X) no

17. Is there formation of mud balls in the filter media? ( ) yes (X) no

18. Is there air binding of the filter media? ( ) yes (X) no

19. Is there a loss of filter media during backwashing? ( ) yes (X) no

20. Is there recycled filter backwash water in excess of five percent of the wastewater flow treated? ( ) yes (X) no

21. What is the frequency of routine inspections for proper operation?
6 /day

22. What is the frequency of maintenance inspections by plant personnel?
52 /year

23. What is the general condition of the filtration facilities?
(X) good ( ) fair ( ) poor

24. What are the most common problems that the operator has had with the filtration facilities? None

DISINFECTION

Chlorination

1. How many chlorine contact basins are there? 2

2. What is the design capacity of each basin? 0.800 mgd average
   1.6 mgd peak hourly flow

3. What is the actual flow to each basin? _____ mgd average
   _____ mgd peak hourly flow

4. What are the dimensions of the basins? See plans

5. What is the detention time of each contact basin at peak hourly flow?
   15+ minutes

6. What chlorine dosage is applied? 15 mg/l

7. What is the normal level of chlorine residual in the basin effluent?
   3.0+ mg/l

8. Are disinfection standards being met? (X) yes ( ) no

9. What type of chlorination system is being used? (X) chlorine cylinders ( ) on-site sodium hypochlorite generation ( ) sodium hypochlorite solution ( ) calcium hypochlorite solution

10. What is the design capacity of the chlorination system?
    34± lbs/day

    What is the maximum capacity of the chlorination system?
    50 lbs/day

11. What is the configuration of the chlorine contact basin? ( ) round (X) rectangular ( ) other _____

12. Is the contact basin adequately baffled to minimize short-circuiting?
    (X) yes ( ) no

13. How is chlorine introduced into the wastewater entering the contact basin? (X) perforated diffusers ( ) injector with single entry point ( ) other _____

14. Are mechanical mixing provisions incorporated in the chlorine contact basins design? ( ) yes (X) no

15. Is there an adequate reserve supply of chlorine? (X) yes ( ) no

    How many days of supply is maintained? Min. 30

16. Are there high temperatures in the chlorination rooms?
    ( ) yes (X) no

17. Is there a build-up of residuals in the basin? ( ) yes (X) no

18. Are there gas bubbles in the basin? ( ) yes (X) no

19. Is there floating scum and/or solids in the basin? ( ) yes (X) no

20. Is there excessive foaming downstream? ( ) yes (X) no

21. Is there evidence of toxicity (dead fish, other dead organisms) downstream? ( ) yes (X) no

22. What is the frequency of routine inspections for proper operation?
6 hours /day

23. What is the frequency of maintenance inspections by plant personnel?
52 /year

24. What is the general condition of the chlorination facilities?
(X) good ( ) fair ( ) poor

25. What are the most common problems that the operator has had with the chlorination process? None

RESIDUALS TREATMENT

Chemical Conditioning Not Applicable

1. What is the actual volume of residuals conditioned?
   ____ gallons/day average

2. What is the design residuals volume?
   ____ gallons/day average

3. What type of residuals are conditioned? ( ) primary ( ) waste activated ( ) other _____

4. What type of chemical is used for conditioning? ( ) lime ( ) ferric chloride ( ) polymer ( ) other _____

5. What is the chemical dosage? _____ lbs/ton dry solids average

6. How are chemicals purchased? ( ) dry ( ) liquid

7. What chemical storage volume is provided? _____ days

8. How are the chemicals fed? ( ) automatically ( ) manually

9. If dry feeders are used, what type of feeder is used? ( ) volumetric ( ) gravimetric ( ) not applicable

10. Are chemical feeders automatically paced? ( ) yes ( ) no

11. If lime is used, how is the lime purchased? ( ) bags ( ) bulk ( ) not applicable

12. If lime feeding is used, is a vapor and dust collection system installed? ( ) yes ( ) no ( ) not applicable

13. Does the unit show signs of inadequate mixing? ( ) yes ( ) no

14. What is the frequency of routine inspections for proper operation?
    _____ /day

15. What is the frequency of maintenance inspections by plant personnel?
    _____ /year

16. What is the general condition of the residuals chemical conditioning facilities? ( ) good ( ) fair ( ) poor

17. What are the most common problems that the operator has had with the residuals chemical conditioning facilities? _____
    _____
    _____

RESIDUALS TREATMENT

Gravity Thickening **Not Applicable**

1. How many gravity thickeners are there? _____

2. What is the design influent flow to each thickener?
_____ gallons/day average

3. What is the actual influent flow to the thickener?
_____ gallons/day average

4. What type of residuals are fed to the thickener? ( ) primary
( ) waste activated ( ) other _____

5. What are the dimensions of the thickener(s)? _____

6. How much thickened residuals are pumped? _____ gallons/day average

7. What is the solids concentration in the influent residuals? _____ %

8. What is the solids loading rate? _____ lbs/day/sq ft

9. What is the solids concentration in the thickened residuals? _____ %

10. What is the settleable solids concentration in the supernatant?
_____ mg/l

11. How are the influent residuals fed? ( ) intermittently
( ) continuously

12. How are the thickened residuals pumped? ( ) manually
( ) automatically

13. How often do the thickened residuals pumps run? _____
minutes/hour

14. How much downtime is there? _____ days/year

15. What is the frequency of cleaning? _____ /year

16. Does the influent baffle system accomplish its purpose?
( ) yes ( ) no

17. Does the residuals collection system show any signs of mechanical failure? ( ) yes ( ) no

18. Does the tank surface indicate improper residuals withdrawal (i.e., excessive floating solids, gas, etc.)? ( ) yes ( ) no

19. Does the effluent baffle system accomplish its purpose?
( ) yes ( ) no

20. Are the effluent weirs level? ( ) yes ( ) no

21. Are surfaces and the effluent weirs clean? ( ) yes ( ) no

22. If multiple units are used, is the flow distributed evenly?
( ) yes ( ) no ( ) not applicable

23. Does the unit show signs of short circuiting and/or overloads?
( ) yes ( ) no

24. What is the frequency of routine inspections for proper operation?
_____ /day

25. What is the frequency of maintenance inspections by plant personnel?
_____ /year

26. What is the general condition of the gravity thickening facilities?
( ) good ( ) fair ( ) poor

27. What are the most common problems that the operator has had with the gravity thickening facilities? _____
_____
_____

RESIDUALS TREATMENT

Flotation Thickening Not Applicable

1. How many air flotation thickening units are there? _____

2. What is the design influent flow to each thickener?
_____ gallons/day average

3. What is the actual influent flow to each thickener?
_____ gallons/day average

4. What are the dimensions of the thickener(s)? _____

5. What shape are the flotation tanks? ( ) circular ( ) rectangular

6. What type of residuals are fed to the thickener? ( ) waste activated
( ) other _____

7. What is the volume of thickened residuals pumped?
_____ gallons/day

8. What is the solids concentration in the influent residuals? _____ %

9. What is the solids loading rate? _____ lb/hour/sq ft

10. What is the air solids ratio? _____

11. What is the hydraulic loading or overflow rate? _____ gpm/sq ft

12. What is the solids concentration in the thickened residuals? ____ %

13. What is the suspended solids concentration in the subnatant? ____ mg/l

14. What is the solids removal efficiency? ____ %

15. Are flotation aids used? ( ) yes ( ) no

If yes, what type? _____

16. What is the average dosage of flotation aid? _____ lbs/ton dry solids

17. What is the thickness of the floating residuals blanket? ____ inches

18. How are influent residuals fed? ( ) intermittently ( ) continuously

19. What is the effluent recycle ratio as a percentage of the influent
flow? _____

20. Are primary and secondary effluent readily available for auxiliary
recycle? ( ) yes ( ) no

21. How are thickened residuals pumped? ( ) manually ( ) automatically

22. How often do thickened residuals pumps run? _____ minutes/hour

23. How much downtime is there? _____ days/year

24. What is the frequency of cleaning? _____ /year

25. Does the influent baffle system accomplish its purpose?
( ) yes ( ) no

26. Do the residuals collection systems show any signs of mechanical failure? ( ) yes ( ) no

27. Does the effluent baffle system accomplish its purpose?
( ) yes ( ) no

28. Are the effluent weirs level? ( ) yes ( ) no

29. Are surfaces and the effluent weirs clean? ( ) yes ( ) no

30. If multiple units are used, is the flow distributed evenly?
( ) yes ( ) no ( ) not applicable

31. Does the unit show signs of short circuiting and/or overloads?
( ) yes ( ) no

32. What is the frequency of routine inspections for proper operation?
_____ /day

33. What is the frequency of maintenance inspections by plant personnel?
_____ /year

34. What is the general condition of the flotation thickening facilities?
( ) good ( ) fair ( ) poor

35. What are the most common problems that the operator has had with the flotation thickening facilities? _____
_____
_____
_____

RESIDUALS TREATMENT

Thermal Treatment **Not Applicable**

1. How many thermal treatment units are there? _____

2. What is the design residuals flow? _____ gpm
   What is the design temperature? _____ °F
   What is the design pressure? _____ lbs/sq in

3. What is the influent residuals flow? _____ gpm
   What is the operating temperature? _____ °F
   What is the operating pressure? _____ lb/sq in

4. What is the influent residuals solids concentration? _____ %

5. What is the volume of the treated residuals? _____ gal/day

6. What is the recycle liquor flow? _____ gal/day

7. What is the solids concentration of the treated residuals? _____ %

8. What is the BOD of the recycle liquor? _____ mg/l

9. What is the COD of the recycle liquor? _____ mg/l

10. What is the suspended solids concentration of the recycle liquor?
    _____ mg/l

11. How is the recycle or decant liquor treated? _____

12. Does treatment of the recycle liquor upset the plant?
    ( ) yes ( ) no

13. How are the off-gases handled? _____

14. Are excessive odors present from off-gases? ( ) yes ( ) no

15. How frequently is the system operated? _____ /day

    How long is the system operated each time? _____ hours

16. How frequently is the system acid washed? _____ /year

17. What is the frequency of scale build-up inspections for the following items?

    heat exchanger _____ /year
    reactor _____ /year
    piping _____ /year
    oxidized residuals decant tank _____ /year
    other _____ /year

18. What is the frequency of system pressure checks to insure the integrity of pressure piping and fittings? _____ /year

19. If multiple units are used, is the flow distributed evenly?
( ) yes ( ) no ( ) not applicable

20. Does the unit show signs of overload? ( ) yes ( ) no

21. Does the method of stabilization comply with either the Process to Further Reduce Pathogens (PFRP) or the Process to Significantly Reduce Pathogens (PSRP) as described in Title 40 Code of Federal Regulation's Part 257? ( ) yes ( ) no

If yes, which one? ( ) PFRP ( ) PSRP

If no, explain. _____
_____
_____

22. What is the downtime of the thermal treatment units? _____

23. What is the frequency of routine inspections for proper operation?
_____ /day

24. What is the frequency of maintenance inspections by plant personnel?
_____ /year

25. What is the general condition of the thermal treatment units?
( ) good ( ) fair ( ) poor

26. What are the most common problems that the operator has had with the thermal treatment units? _____
_____
_____

RESIDUALS TREATMENT

Anaerobic Stabilization

1. How many anaerobic digesters are there? 3 holding tanks

2. What is the design influent flow to each digester?
_____ gallons/day average

3. What is the actual influent flow to each digester?
_____ gallons/day average

4. What type of digester is used? ( ) high rate ( ) low rate
( ) primary tank (X) primary and secondary tank

5. What type of residuals are digested? ( ) primary
(X) waste activated ( ) other

6. What type of covers are used? ( ) fixed ( ) floating (X) none

7. What is the volume of the digester? See plans cubic feet

8. What is the influent solids concentration? _____ %

9. What is the volatile solids content of the influent residuals?
_____ %

10. What is the design volatile solids loading?
_____ lb/cu ft/day

11. How frequently do the residuals feed pumps run? a couple times per week

12. What is the duration of each run? 30 minutes each average

13. What is the depth of the scum blanket? _____ feet

14. What is the depth of the sand and grit layer? < 1 feet

15. What is the active capacity of the digester? _____ cubic feet

16. What is the actual volatile solids loading? _____ lb/cu ft/day

17. What is the hydraulic loading? _____ days

18. What is the gas production rate? _____ cu ft/lb VS destroyed

19. What is the average CO_2 content of the gas? _____ %

20. What is the average CH_4 (methane) content of the gas? _____ %

21. What is the average reduction in volatile solids? 40 %

22. What type of mixing is used in the primary tank? _____

23. What provisions are made for heating? _____

24. What is the solids concentration of the residuals withdrawn from the digester? _____ %

25. What is the average pH of the digester? 7.0

26. What is the average temperature? 78 °F

27. What is the average alkalinity? _____ mg/l

28. What is the average volatile acids content? _____ mg/l

29. At what point in the plant is the supernatant returned? surge tank

30. Is the supernatant treated before it is return to the plant?
( ) yes (X) no

31. Are there metering provisions for return of the supernatant?
( ) yes (X) no

32. What is the average return flow rate of the supernatant?
_____ gal/day

33. What is the average BOD of the supernatant? _____ mg/l

34. What is the average suspended solids content of the supernatant?
_____ mg/l

35. Are the floating covers tilting? ( ) yes ( ) no Not Applicable

36. Is gas production adequate? ( ) yes ( ) no Not Applicable

37. Is the gas burner burning? ( ) yes ( ) no Not Applicable

38. Is the supernatant exuding a sour odor from either the primary or the secondary digesters? ( ) yes ( ) no

39. How frequently is the tank cleaned? 4 years

40. Does the method of stabilization comply with either the Process to Further Reduce Pathogens (PFRP) or the Process to Significantly Reduce Pathogens (PSRP) as described in Title 40 Code of Federal Regulation's Part 257? (X) yes ( ) no

If yes, which one? ( ) PFRP (X) PSRP

If no, explain. _____

41. What is the frequency of routine inspections for proper operation?
Once /day

42. What is the frequency of maintenance inspections by plant personnel?
52 /year

43. What is the general condition of the anaerobic digesters?
(X) good ( ) fair ( ) poor

44. What are the most common problems that the operator has had with the anaerobic digesters? None

RESIDUALS TREATMENT

Aerobic Stabilization

1. How many aerobic digesters are there? 3 holding tanks

2. What is the design influent flow to each digester?
_____ gallons/day average

3. What is the actual influent flow to each digester?
_____ gallons/day average

4. What are the dimensions of each unit? See plans

5. How many units are presently operating? 3 holding tanks

6. What type of residuals are treated in the aerobic digester?
(X) waste activated ( ) primary ( ) primary and waste activated
( ) other _____

7. How often are residuals applied to the digester? Once /day

8. What is the total duration of influent pumping? _____ hours/day

9. How are influent residuals pumped? (X) manually ( ) automatically

10. What is the solids concentration in the influent residuals? _____ %

11. What is the solids concentration in the aerobic digesters? _____ %

12. What type of aeration equipment is used? (X) diffused air
( ) mechanical mixers ( ) combination ( ) other _____

13. If diffused aeration is used, do air diffusers require frequent cleaning? ( ) yes (X) no ( ) not applicable

14. What type of aerobic digesters are used? (X) open ( ) closed

15. What type of aeration is provided? (X) conventional ( ) pure oxygen

16. What is the residuals retention time? 40± days

17. What is the volatile suspend solids (VSS) loading?
_____ lb VSS/cu ft/day

18. What type of feed system is used? ( ) continuous (X) batch

19. What is the solids concentration of the residuals following settling?
_____ %

20. How much waste residuals are pumped? 2000± gallons/day

21. How often do waste residuals pumps run? - minutes/hour

22. How are residuals wasted? (X) manually ( ) automatically

23. What volume of residuals are recycled back to the aerobic digester?
0 gallons/day average

24. What percentage of the influent residuals flow is the recycle residuals flow? 0 %

25. Are the contents of the tanks well mixed and relatively free of odors?
(X) yes ( ) no

26. Is there a foaming problem? ( ) yes (X) no

27. What is the dissolved oxygen (DO) concentration in the aerobic digestion units? _____ mg/l

28. Are there provisions for pH adjustment by the addition of lime, sodium hydroxide, or sodium bicarbonate? ( ) yes (X) no

29. What is the volume of supernatant flow? _____ gallons/day average

30. What is the BOD of the supernatant flow? _____ mg/l

31. What is the suspended solids concentration of the supernatant?
_____ mg/l

32. What is the nitrate nitrogen concentration of supernatant?
_____ mg/l

33. What is the ammonia nitrogen concentration of the supernatant?
_____ mg/l

34. Is there excessive foaming in the tank? ( ) yes (X) no

35. Are there objectionable odors in the aerobically digested residuals?
( ) yes ( ) no

36. Is the digester overloaded? ( ) yes (X) no

37. Is there clogging of diffusers in the digester?
( ) yes (X) no ( ) not applicable

38. What is the depth of the sand and grit layer? <1 feet

39. What is the active capacity of the digester? _____ cubic feet

40. Is there adequate supernatant removal? (X) yes ( ) no

41. If multiple units are used, is the flow distributed evenly?
(X) yes ( ) no ( ) not applicable

42. Does the unit show signs of short circuiting and/or overloads?
( ) yes (X) no

43. Does the method of stabilization comply with either the Process to Further Reduce Pathogens (PFRP) or the Process to Significantly Reduce Pathogens (PSRP) as described in Title 40 Code of Federal Regulation's Part 257? ( ) yes (X) no

If yes, which one? ( ) PFRP ( ) PSRP

If no, explain. Not required per permit

44. What is the frequency of routine inspections for proper operation?
Once /day

45. What is the frequency of maintenance inspections by plant personnel?
52 /year

46. What is the general condition of the aerobic digesters?
(X) good ( ) fair ( ) poor

47. What are the most common problems that the operator has had with the aerobic digesters? None

RESIDUALS TREATMENT

Centrifugation Not Applicable

1. How many centrifuges are there? _____

2. What is the design influent flow to each centrifuge?
_____ gallons/minute

3. What is the actual influent flow to each centrifuge?
_____ gallons/minute

4. How much cake is produced? _____ lb/day

5. What is the solids concentration of the influent residuals? ____ %

6. What type of centrifuges are used? ( ) solid bowl ( ) disc
( ) basket ( ) other _____

7. What is the solids recovery? ____ %

8. What is the solids concentration in the discharge cake? _____ %

9. How are the centrifuges, conveyers, and residuals feed pumping facilities operated? ( ) manually ( ) automatically

10. How often does each centrifuge operate? _____ /hour

How long does each centrifuge operate each run? _____ minutes

11. Are metering provisions available for the return of the centrate?
( ) yes ( ) no

12. Are there excessive solids in the fluid phase after centrifugation?
( ) yes ( ) no

13. Is the centrifugation residuals cake adequately dry? ( ) yes ( ) no

14. If multiple units are used is the influent flow distributed evenly?
( ) yes ( ) no

15. For multiple units are there provisions for equalization of the centrate flow? ( ) yes ( ) no

16. What type of conditioning chemicals are used? ( ) lime ( ) alum
( ) ferric chloride ( ) other _____

17. What amounts of chemicals are fed? _____ lbs/day

18. How often are chemicals fed? _____ cycles/hour

What is the feed time per cycle? _____ minutes/cycle

19. Does the unit show signs of overloading? ( ) yes ( ) no

20. What is the frequency of routine inspections for proper operation?
_____ /day

21. What is the frequency of maintenance inspections by plant personnel?
_____ /year

22. What is the general condition of the centrifuges?
( ) good ( ) fair ( ) poor

23. What are the most common problems that the operator has had with the centrifuges? _____
_____
_____

RESIDUALS TREATMENT

Vacuum Filtration Not Applicable

1. How many vacuum filters are there? _____

2. What is the design influent flow to each filter?
_____ gallons/minute

3. What is the actual influent flow to each filter?
_____ gallons/minute

4. What is the percent solids of the influent residuals? _____ %

5. What is the effective area of each vacuum filter? _____ sq ft

6. What is the design loading rate? _____ lb/sq ft/hr

7. What is the percent solids in the discharge cake? _____ %

8. Are there settleable solids in the filtrate? ( ) yes ( ) no

   If yes, what is the solids concentration? _____ mg/l

9. How often does each vacuum filter run? _____ /hour

   How long does each vacuum filter operate each run? _____ minutes

10. What type of conditioning chemicals are used? ( ) lime ( ) alum
( ) ferric chloride ( ) other _____

11. What amount of chemicals are fed? _____ lbs/day

12. How are residuals pumped? ( ) manually ( ) automatically

13. How are chemicals fed? ( ) manually ( ) automatically

14. How often do residuals pumps run? _____ /hour

   How long do residuals pumps run each cycle? _____ minutes

15. How often does conditioning equipment run? _____ /hour

   How long does conditioning equipment run each cycle?
_____ minutes

16. If multiple units are used, is the flow distributed evenly?
( ) yes ( ) no

17. Does the unit show signs of short circuiting and/or overloads?
( ) yes ( ) no

18. Is there a high level of solids in the filtrate? ( ) yes ( ) no

19. Is the filter cake thin? ( ) yes ( ) no

20. Is the filter cloth binding? ( ) yes ( ) no

21. Is there a low vacuum on the filter? ( ) yes ( ) no

22. Is the vacuum filter media cleaned properly? ( ) yes ( ) no

23. What is the frequency of routine inspections for proper operation?
_____ /day

24. What is the frequency of maintenance inspections by plant personnel?
_____ /year

25. What is the general condition of the vacuum filters?
( ) good ( ) fair ( ) poor

26. What are the most common problems that the operator has had with the vacuum filters? _____
_____
_____

RESIDUALS TREATMENT

Pressure Filtration Not Applicable

1. How many pressure filters are there? _____

2. What is the design influent flow to each filter?
_____ gallons/minute

3. What is the actual influent flow to each filter?
_____ gallons/minute

4. What is the percent solids of the influent residuals? _____ %

5. What is the filter press volume? _____ cubic feet

6. What is the percent solids in the discharge cake? _____ %

7. Are there settleable solids in the filtrate? ( ) yes ( ) no

   If yes, what is the solids concentration? _____ mg/l

8. How often does each pressure filter run? _____ /hr
   How long does each pressure filter operate each run? _____ minutes

9. If acid washing is provided, is a recirculating system included?
( ) yes ( ) no ( ) not applicable

10. What type of conditioning chemicals are used? ( ) lime ( ) alum
( ) ferric chloride ( ) other _____

11. What amount of conditioning chemicals are pumped? _____ lb/day

12. How are residuals pumped? ( ) manually ( ) automatically

13. How are chemicals fed? ( ) manually ( ) automatically

14. How often do residuals pumps run? _____ /hour

    How long do residuals pumps run each cycle? _____ minutes

15. How often does conditioning equipment run? _____ /hour

    How long does conditioning equipment run each cycle? _____ minutes

16. If multiple units are used, is the flow distributed evenly?
( ) yes ( ) no ( ) not applicable

17. Does the unit show signs of short circuiting and/or overloads?
( ) yes ( ) no

18. Is there a high level of solids in the filtrate? ( ) yes ( ) no

19. Is the filter cake thin? ( ) yes ( ) no

20. Is there a residuals build-up on the belts and/or rollers of the filter press? ( ) yes ( ) no

21. Is there excessive moisture in the belt filter press residuals cake? ( ) yes ( ) no

22. Is there difficult cake discharge from the filter presses? ( ) yes ( ) no

23. Does the filter cake stick to the solids-conveying equipment of the filter press? ( ) yes ( ) no

24. Is there frequent media binding of the filter press? ( ) yes ( ) no

25. What is the frequency of routine inspections for proper operation? _____ /day

26. What is the frequency of maintenance inspections by plant personnel? _____ /year

27. What is the general condition of the pressure filters? ( ) good ( ) fair ( ) poor

28. What are the most common problems that the operator has had with the pressure filters? _____

RESIDUALS TREATMENT

Drying Beds

1. How many drying beds are there? 4

2. What is the design flow to each bed? _____ gallons/day average

3. What is the actual flow to each bed? _____ gallons/day average

4. What are the dimensions of the drying beds? See plans

5. Are the residuals digested before they are applied to the drying bed?
(X) yes ( ) no

6. What types of residuals are applied to the drying beds?
( ) digested primary (X) waste activated ( ) other _____

7. What is the solids concentration of the residuals applied to the drying beds? 55± %

8. What is the solids loading rate? _____ lbs/yr/sq ft

9. What is the population served by the treatment plant? _____

10. What is the drying area provided? _____sq ft/capita

11. What is the solids concentration of the dewatered residuals?
_____ %

12. What is the typical drying time required? 90 days

13. Are there problems with flies or other insects? ( ) yes (X) no

14. Are there problems with weeds? ( ) yes (X) no

15. Is there an underdrain system? (X) yes ( ) no

16. Are there provisions for the return of drainage waters to the plant?
(X) yes ( ) no

17. What is the typical sand depth? 6 inches

18. Are there any beds with sand depths less than 3 or 4 inches?
( ) yes (X) no

19. Are vehicles and equipment operated on permanent vehicle treadways or on planks or plywood laid on tops of the beds? (X) yes ( ) no

20. Are splash plates or diffusion devices in place when residuals are applied to the beds? (X) yes ( ) no

21. Are partitions between and around the bed tight so that residuals will not flow from one compartment to another or outside the beds?
(X) yes ( ) no

22. Are residuals distributed evenly on the drying beds? (X) yes ( ) no

23. Are there dry residuals remaining in the drying beds? ( ) yes (X) no

24. Are all drying beds used? (X) yes ( ) no

25. Are dry residuals stacked around drying beds where run-off may enter navigable waters? ( ) yes (X) no

26. Is the drying time excessive? ( ) yes (X) no

27. Is the filtrate from the drying beds returned to the front of the plant? (X) yes ( ) no

28. What is the frequency of routine inspections for proper operation?
Once /day

29. What is the frequency of maintenance inspections by plant personnel?
52 /year

30. What is the general condition of the drying beds?
(X) good ( ) fair ( ) poor

31. What are the most common problems that the operator has had with the drying beds? None

DISPOSAL SYSTEMS

Outfalls Not Applicable

1. How many outfalls are there? _____

2. What type of receiving waters does the outfall(s) discharge to?
( ) ocean ( ) estuary ( ) lake ( ) river ( ) other _____

3. What is the design capacity of each outfall?
_____ mgd average _____ mgd peak

4. What is the present discharge at each outfall?
_____ mgd average _____ mgd peak

5. What are the diameter and length of each outfall? _____

6. Are the outfall diffusers functioning properly?
( ) yes ( ) no ( ) not applicable

7. Is the outfall(s) operating so that the discharge limitations specified in the permit are consistently met? ( ) yes ( ) no

8. How does the effluent flow in the outfall? ( ) gravity ( ) pressure

If the flow is by gravity and if the outfall(s) extends into the receiving waters, is a manhole provided at the shore end of the outfall? ( ) yes ( ) no ( ) not applicable

9. Is adequate corrosion control provided (i.e., pipe coatings, cathodic protection, etc.)? ( ) yes ( ) no

10. For outfalls subject to tidal or high water backup, are flap valves or automatically closing gates functioning properly?
( ) yes ( ) no ( ) not applicable

11. Does the outfall(s) exhibit signs of scour or undercutting?
( ) yes ( ) no

12. Is the outfall(s) adequately protected from floodwaters, tides, and other hazards so as to reasonably ensure structural stability and prevent stoppage? ( ) yes ( ) no

13. Can effluent samples be obtained at a point after the final treatment process and before discharge to or mixing with the receiving waters?
( ) yes ( ) no

14. Are outfall and diffuser pipes routinely inspected for breakage and corrosion? ( ) yes ( ) no

15. What is the frequency of maintenance inspections by plant personnel?
_____ /year

16. What is the general condition of the outfall facilities?
( ) good ( ) fair ( ) poor

17. What are the most common problems that the operator has had with the plant outfall(s)? _____
_____
_____
_____

DISPOSAL SYSTEMS

Injection Wells Not Applicable

1. What is the name and address of the facility where the injection well(s) is located? _____

2. Are additional facilities served by the injection well(s)?
( ) yes ( ) no

   If yes, what is the name and address of each additional facility?
   _____

3. How many injection wells are there? _____

4. What is the maximum permitted flow to each injection well?
_____ gpm/mgd (circle one)

5. How many days during the last year has the actual maximum flow to the well exceeded the maximum permitted flow? _____

6. What was the average daily flow to each well during the last year?
_____ gpm/mgd (circle one)

7. What is the inside diameter of each well? _____ inches

8. Is there a fluid-filled annulus? ( ) yes ( ) no

   If yes, what type? ( ) tubing and packer ( ) fluid seal
   ( ) other (specify) _____

9. What percentage of the total flow to the domestic wastewater treatment plant is from non-domestic sources? _____ percent

10. Are there any wastestream sources that bypass the wastewater treatment plant and discharge directly to the wet well? ( ) yes ( ) no

    If yes, what percentage of the total flow to the well do these untreated wastes represent? _____ percent

11. Does the fluid in the wet well appear to be free of solids/floatables? ( ) yes ( ) no

12. What instrumentation is found at each well head?
( ) injection pressure ( ) injection flow
( ) annulus pressure (fluid-filled annulus)
( ) annulus temperature (fluid-filled annulus)
( ) other (specify) _____

13. What were the instrument readings during the inspection and the appropriate adjustment factors, if any?

a. Injection pressure _____ psi
Adjustment factor: _____

b. Injection flow ____ gpm/mgd (circle one)
Adjustment factor: _____

c. Annulus pressure ____ psi
Adjustment factor: _____

d. Other (specify) _____ units _____
Adjustment factor: _____

14. What is the general condition of the well head instruments?
( ) good ( ) fair ( ) poor

15. How often are the instruments calibrated? _____ /year

16. When were the instruments last calibrated (date)?

a. Injection pressure __/___/___

b. Injection flow ___/___/___

c. Annulus pressure ___/___/___

d. Other (specify type) ___/___/___ Type: _____

17. Is there surge and water hammer control equipment present?
( ) yes ( ) no

If yes, what is the general condition of the surge and water hammer control equipment? ( ) good ( ) fair ( ) poor

If poor, what is the problem? _____

18. Has mechanical integrity testing been conducted within the last five years? ( ) yes ( ) no

If yes, complete the following:

a. Pressure test date ___/___/___

Test pressure _____ psi

Pressure loss _____ psi

Test duration _____ hours/minute (circle one)

c. Temperature log date ___/___/___

Is there any anomalous temperature data?
( ) yes ( ) no

If yes, explain. _____

d. Radioactive tracer survey date ___/___/___

Was fluid movement indicated? ( ) yes ( ) no

19. What is the predetermined acceptable limits for annulus pressure? _____ psi

Is the annulus pressure within the predetermined limits?
( ) yes ( ) no

20. How many monitoring wells are there associated with the injection system? _____

21. Where are the monitoring wells located relative to the injection well(s) (distance/direction)? _____

_____

_____

_____

22. Is each monitoring well functional? ( ) yes ( ) no

If no, what is the problem? _____

23. Which zones are the monitoring wells designed to monitor?

Well Number	Monitoring Interval
_____	_____
_____	_____
_____	_____
_____	_____

24. What volume of water is purged from each monitoring well prior to sampling? _____ gallons

25. How is the purge water disposed of?
( ) returned to wet well ( ) returned to head of treatment plant
( ) surface water discharge (may require separate permit)
( ) on well pad or ground (not acceptable)
( ) other (specify) _____

26. What chemical parameters are monitored and at what frequency are these parameters monitored?

Parameter	Frequency

27. Have any water quality trends been observed in the monitoring data? ( ) yes ( ) no

If yes, which parameters are affected and what trend has been observed (increase/decrease)?

Parameter	Trend Observed

28. What type of monitoring well instrumentation is present?
( ) pressure ( ) water level

29. When was the monitoring well instrumentation last calibrated?
___/___/___

30. Does the water level/pressure data show a trend? ( ) yes ( ) no

If yes, what is the trend? _____
_____

31. Are there any fluid leaks, or evidence of fluid leaks, at the injection or monitoring well heads? ( ) yes ( ) no

32. Do the well heads, valves, and other surface appurtenances appear to be in good working order and well maintained?
( ) yes ( ) no

33. What is the general condition of the injection and monitoring well heads and other surface appurtenances?
( ) good ( ) fair ( ) poor

34. What is the emergency discharge method?
( ) other well(s) ( ) surface waters ( ) percolation ponds
( ) other (specify) _____

35. Are facilities in place to use the specified emergency discharge method? ( ) yes ( ) no

36. Are the injection and monitoring well heads fenced or otherwise protected from accidental damage by heavy equipment? ( ) yes ( ) no

37. Are plant operators familiar with procedures for emergency shut down of the injection system? ( ) yes ( ) no

38. Is an emergency procedures manual located on-site?
( ) yes ( ) no

REUSE SYSTEMS

Part II Slow Rate Land Application Systems; Restricted Public Access Not Applicable

1. Is at least secondary treatment provided? ( ) yes ( ) no

2. Is at least basic disinfection provided? ( ) yes ( ) no

3. If a subsurface application system is used, does the reclaimed water never exceed 10 mg/l of TSS? ( ) yes ( ) no ( ) not applicable

4. Does the treatment facility have a permitted capacity of at least 0.1 mgd? ( ) yes ( ) no

5. Are ground water monitoring facilities provided and is monitoring regularly performed (normally quarterly)? ( ) yes ( ) no

6. Are background, intermediate, and compliance wells provided and monitored? ( ) yes ( ) no ( ) not applicable

7. Are monitoring wells well marked? ( ) yes ( ) no ( ) not applicable
8. Are monitoring wells operational and well maintained?
( ) yes ( ) no ( ) not applicable

9. Are there any violations of ground water standards at the compliance wells? ( ) yes ( ) no ( ) not applicable

10. Is there evidence of potential ground water quality problems at the intermediate wells? ( ) yes ( ) no ( ) not applicable

11. Are system storage facilities provided and do they have adequate capacity? ( ) yes ( ) no ( ) not applicable

12. Are the storage facilities lined? ( ) yes ( ) no ( ) not applicable

13. Is there evidence of seepage through the berms?
( ) yes ( ) no ( ) not applicable

14. Is there evidence of discharge over the tops of the berms, erosion of the berms, or of any illegal discharge devices?
( ) yes ( ) no ( ) not applicable

15. Are piping, control, and pumping facilities operational and well maintained? ( ) yes ( ) no ( ) not applicable

16. Is there evidence that the storage facilities are used?
( ) yes ( ) no ( ) not applicable

17. Are the berms well maintained (including vegetation control)?
( ) yes ( ) no ( ) not applicable

18. Is a mosquito control program in place?
( ) yes ( ) no ( ) not applicable

19. Is there evidence of mosquito problems?
( ) yes ( ) no ( ) not applicable

20. Is an emergency overflow structure provided and is it well maintained and usable? ( ) yes ( ) no ( ) not applicable

21. Are storage facilities enclosed with a fence or other facilities that preclude public access? ( ) yes ( ) no ( ) not applicable

22. Are any features provided that enable reduction in setback distances?
( ) yes ( ) no

If yes, specify:

( ) High-level disinfection
( ) Class I reliability
( ) Subsurface application systems
( ) Continuous vegetated barrier at least 5 feet high
( ) Low trajectory, low pressure nozzles or surface application

23. Are adequate setback distances provided from the wetted area to the property lines or buildings? ( ) yes ( ) no ( ) not applicable

24. Are adequate setback distances provided to potable water supply wells, Class I waters, and Class II waters?
( ) yes ( ) no ( ) not applicable

25. Is the wetted area at least 100 feet from outdoor public eating, drinking, and bathing facilities? ( ) yes ( ) no ( ) not applicable

26. Are transmission facilities located at least 100 feet from public water supply wells? ( ) yes ( ) no ( ) not applicable

27. Is there evidence of hydraulic problems such as ponding or run-off from the site? ( ) yes ( ) no ( ) not applicable

28. Is public access adequately restricted by fencing or posting of advisory signs? ( ) yes ( ) no ( ) not applicable

29. Are distribution piping, pumping, and other appurtenances well maintained and operational? ( ) yes ( ) no ( ) not applicable

30. Is there evidence of clogging of nozzles or other facilities?
( ) yes ( ) no ( ) not applicable

31. Is there evidence of or public complaints about aerosol drift off of the site, odors, or other nuisance conditions?
( ) yes ( ) no ( ) not applicable

32. Are the distribution facilities labeled?
( ) yes ( ) no ( ) not applicable

33. Are above ground hose bibbs present?
( ) yes ( ) no ( ) not applicable

34. Are supplemental fertilizers or residuals applied to the site?
( ) yes ( ) no ( ) not applicable

35. If fertilizers or residuals are applied, are they applied in moderate amounts such that the nutrient needs of the crops are not exceeded?
( ) yes ( ) no ( ) not applicable

36. Is there evidence that fertilizer or residuals application results in ground water quality problems (nitrogen is main concern)?
( ) yes ( ) no ( ) not applicable

37. What crops are grown? _____

38. Are the crops routinely harvested and removed from the site?
( ) yes ( ) no ( ) not applicable

39. Are underdrains or perimeter drainage features provided?
( ) yes ( ) no ( ) not applicable

If yes, specify:

( ) Underdrains
( ) Perimeter drains

40. Does the water collected in underdrains or perimeter drainage features meet appropriate effluent limits? ( ) yes ( ) no ( ) not applicable

41. What is the average annual hydraulic loading rate (based on the total wetted area)? _____ inches/week

42. Are cattle allowed to graze on the site? ( ) yes ( ) no

If yes, what type?

( ) Beef cattle
( ) Dairy cattle
( ) Others _____

43. If dairy cattle graze on the site, are they kept off the site for at least 15 days after application of reclaimed water?
( ) yes ( ) no ( ) not applicable

44. If edible food crops are grown, please complete the checklists for Part III reuse systems and for edible crop irrigation.

REUSE SYSTEMS

Part III Slow Rate Land Application Systems; Public Access; Residential Irrigation; and Edible Crops Not Applicable

1. Is at least secondary treatment provided? ( ) yes ( ) no

2. Is high-level disinfection provided? ( ) yes ( ) no

3. Do the treatment facilities have permitted capacities in excess of the minimum system size requirements (0.1 mgd for public access systems, 0.5 mgd for residential irrigation, 0.5 mgd for edible crop irrigation)? ( ) yes ( ) no

4. Is there a DER-approved cross-connection control program covering the areas served by reclaimed water? ( ) yes ( ) no

5. Is there a uniform system for color coding and/or marking reclaimed water pipes? ( ) yes ( ) no

6. Does the utility inspect all new connections to the reclaimed water system? ( ) yes ( ) no

7. Does the utility provide routine inspections of existing connections to the reclaimed water system? ( ) yes ( ) no

8. Is an approved industrial pretreatment program in-place?
( ) yes ( ) no ( ) not needed

9. Is the industrial pretreatment program enforced? ( ) yes ( ) no

10. Is there a DER-approved operating protocol on-site and available to the operators? ( ) yes ( ) no ( ) not needed

11. Has the operating protocol been updated and approved annually?
( ) yes ( ) no

12. What set points are contained in the operating protocol for the following items?

    Turbidity: _____ NTU

    Chlorine Residual: _____ mg/l

    Other Parameter (specify): Parameter: _____

    Limit: _____ mg/l

13. Are the operators familiar with the operating protocol?
( ) yes ( ) no

14. Does the operator use the operating protocol to control the facility and to make judgments on the quality of the reclaimed water being produced? ( ) yes ( ) no

15. Is the 5.0 mg/l TSS limit met at all times for reclaimed water sent to the reuse system? ( ) yes ( ) no

16. Are the high-level disinfection criteria for fecal coliforms met at all times for reclaimed water sent to the reuse system?
( ) yes ( ) no

17. Have the operators simulate a case where turbidity or chlorine residuals violate the limits set in the operating protocol. Is the reclaimed water of "unacceptable quality" diverted to the reject storage system or permitted alternative discharge system?
( ) yes ( ) no

18. Are continuous monitoring devices provided for measuring turbidity (after filter/before chlorination) and chlorine residual (after contact chamber)? ( ) yes ( ) no

19. Are these instruments in good repair and used in the operation and control of the facilities? ( ) yes ( ) no

20. Are the filters in operation and in good repair? ( ) yes ( ) no

21. Are chemical feed facilities provided? ( ) yes ( ) no

22. What chemicals can be added? _____

23. Are the chemical feed facilities in operation and in good repair?
( ) yes ( ) no

24. Can the high-level disinfection criteria be met without chemical addition? ( ) yes ( ) no

25. Is the reclaimed water flowing out of the filters and chlorination system very clear? ( ) yes ( ) no

26. Is the turbidity measurement being reported consistent with the appearance of the reclaimed water? ( ) yes ( ) no

27. Are system storage facilities provided to store reclaimed water of acceptable quality? ( ) yes ( ) no

28. Are system storage facilities used? ( ) yes ( ) no

29. Are system storage facilities well maintained and fully operational?
( ) yes ( ) no

30. Are system storage facilities (including golf course lakes) used for temporary storage (as opposed to being used as "percolation ponds" with no effort to pump out of them for irrigation purposes)?
( ) yes ( ) no

31. Are lined reject storage facilities provided to store reclaimed water of unacceptable quality? ( ) yes ( ) no

32. Is there evidence that reject storage facilities are used?
( ) yes ( ) no

33. Is the reject storage system well maintained and fully operational?
( ) yes ( ) no

34. If automatic control and diversion are provided, are the systems operational, well maintained, and used?
( ) yes ( ) no ( ) not applicable

35. Is reclaimed water released to the system storage and reuse system only during periods when an operator is present?
( ) yes ( ) no ( ) not applicable (other reliability measures provided)

36. Is stored reject water returned to the treatment facilities for additional treatment and disinfection?
( ) yes ( ) no ( ) not applicable

37. Are the facilities for return of reject water to the treatment facilities well maintained, operational, and in use?
( ) yes ( ) no ( ) not applicable

38. Are reclaimed water pipes and appurtenances appropriately marked and color coded? ( ) yes ( ) no

39. Are advisory signs posted alerting the public that reclaimed water is being used? ( ) yes ( ) no

40. Are there illegal surface water discharge points? ( ) yes ( ) no

41. Is there evidence of abuse of the system, such as significant run-off off-site, or severe ponding? ( ) yes ( ) no

42. Are low trajectory nozzles used within 100 feet of outdoor public eating, drinking, or bathing facilities? ( ) yes ( ) no

43. Is reclaimed water applied within 75 feet of potable water supply wells? ( ) yes ( ) no

44. Are distribution systems and pumps operational and well maintained?
( ) yes ( ) no

45. Are ground water monitoring facilities provided and is monitoring regularly performed (normally quarterly)? ( ) yes ( ) no

46. Are background, intermediate, and compliance wells provided and monitored? ( ) yes ( ) no ( ) not applicable

47. Are monitoring wells well marked? ( ) yes ( ) no ( ) not applicable

48. Are monitoring wells operational and well maintained?
( ) yes ( ) no ( ) not applicable

49. Are there any violations of ground water standards at the compliance wells? ( ) yes ( ) no ( ) not applicable

50. Is there evidence of potential ground water quality problems at the intermediate wells? ( ) yes ( ) no ( ) not applicable

51. Are above ground hose bibbs present on reclaimed water lines? ( ) yes ( ) no ( ) not applicable

52. Is there evidence of or public complaints about aerosol drift, odors, or other nuisance conditions? ( ) yes ( ) no ( ) not applicable

REUSE SYSTEMS

Part III Slow Rate Land Application Systems; Edible Crops **Not Applicable**

1. Does the treatment facility have a permitted capacity of at least 0.5 mgd? ( ) yes ( ) no

   Note: The minimum system size is reduced to 0.1 mgd if the following conditions are met:

   a. A direct contact method of irrigation is not used.

   b. The crop produced is processed before human consumption.

   c. Public access to the site is restricted.

2. What edible crops are grown? _____

3. What edible crops are commercially processed (thermal processing) before being sent to commercial markets? _____

4. List the edible crops produced that are **always** peeled, skinned, or cooked by consumers? _____

5. What types of application methods are used when irrigating with reclaimed water? _____

6. Does the DER permit accurately describe the crops grown, processing provided, and application methods?
   ( ) yes ( ) no ( ) not applicable

7. Is a direct contact method (spray irrigation) used on crops that are not peeled, skinned, cooked, or thermally processed before human consumption (does not include irrigation of citrus or tobacco)?
   ( ) yes ( ) no ( ) not applicable

8. Is public access to the site restricted by fencing or by posting of advisory signs? ( ) yes ( ) no ( ) not applicable

9. Are the farm workers aware of the fact that reclaimed water is being used for irrigation? ( ) yes ( ) no ( ) not applicable

REUSE SYSTEMS

Part IV Rapid Rate Land Application Systems

1. Is at least secondary treatment provided? (X) yes ( ) no

2. Is at least basic disinfection provided? (X) yes ( ) no

3. Does the reclaimed water never exceed 12 mg/l of nitrate (as N)?
( ) yes ( ) no (X) not applicable

4. Does the treatment facility have a permitted capacity of at least 0.1 mgd? (X) yes ( ) no

5. Are ground water monitoring facilities provided and is monitoring regularly performed (normally quarterly)? (X) yes ( ) no

6. Are background, intermediate, and compliance wells provided and monitored? (X) yes ( ) no ( ) not applicable

7. Are monitoring wells well marked? (X) yes ( ) no ( ) not applicable

8. Are monitoring wells operational and well maintained?
(X) yes ( ) no ( ) not applicable

9. Are there any violations of ground water standards at the compliance wells? ( ) yes (X) no ( ) not applicable

10. Is there evidence of potential ground water quality problems at the intermediate wells? ( ) yes (X) no ( ) not applicable

11. Are system storage facilities provided and do they have adequate capacity? (X) yes ( ) no ( ) not applicable

12. Are the storage facilities lined? ( ) yes (X) no ( ) not applicable

13. Is there evidence of seepage through the berms?
( ) yes (X) no ( ) not applicable

14. Is there evidence of discharge over the tops of the berms, erosion of the berms, or of any illegal discharge devices?
( ) yes (X) no ( ) not applicable

15. Are piping, control, and pumping facilities operational and well maintained? (X) yes ( ) no ( ) not applicable

16. Is there evidence that the storage facilities are used?
(X) yes ( ) no ( ) not applicable

17. Are the berms well maintained (including vegetation control)?
(X) yes ( ) no ( ) not applicable

18. Is a mosquito control program in place?
(X) yes ( ) no ( ) not applicable

19. Is there evidence of mosquito problems?
( ) yes (X) no ( ) not applicable

20. Is an emergency overflow structure provided and is it well maintained and usable? ( ) yes ( ) no (X) not applicable

21. Are storage facilities enclosed with a fence or other facilities that preclude public access? ( ) yes ( ) no (X) not applicable

22. Are any features provided that enable reduction in setback distances?
(X) yes ( ) no

If yes, specify:

(X) High-level disinfection
(X) Class I reliability
( ) Site adjacent to a right-of-way

23. Are adequate setback distances provided from the wetted area to the property lines or buildings? (X) yes ( ) no ( ) not applicable

24. Are adequate setback distances provided to potable water supply wells, Class I waters, and Class II waters? (X) yes ( ) no ( ) not applicable

25. Are transmission facilities located at least 100 feet from public water supply wells? (X) yes ( ) no ( ) not applicable

26. Is there evidence of a reduction in infiltration rates over the last permit period? ( ) yes (X) no

27. Is there evidence of hydraulic problems such as ponding or run-off from the site? ( ) yes (X) no ( ) not applicable

28. Is public access to the overall site adequately restricted by fencing or posting of advisory signs? (X) yes ( ) no ( ) not applicable

29. Are the infiltration basins surrounded by a fence or other features that preclude public access? ( ) yes ( ) no (X) not applicable

30. Are distribution piping, pumping, and other appurtenances well maintained and operational? (X) yes ( ) no ( ) not applicable

31. Is there evidence of clogging of distribution or other facilities?
( ) yes (X) no ( ) not applicable

32. Is there evidence of or public complaints about odors, excessive ground water mounding, or other nuisance conditions?
( ) yes (X) no ( ) not applicable

33. Are the distribution facilities labeled?
( ) yes ( ) no (X) not applicable

34. Are above ground hose bibbs present?
( ) yes (X) no ( ) not applicable

35. Are two or more infiltration basins provided?
( ) yes ( ) no (X) not applicable

36. Is the system operated with an alternating wetting and drying cycle?
( ) yes ( ) no (X) not applicable

If yes, basin is wetted for __ __ days and is dried for ____ days.

37. Are the basins allowed to fully dry before being reloaded?
( ) yes ( ) no (X) not applicable

Note: If the basins are not allowed to dry, the system is subject to regulation as an other system under Part VII of Chapter 17-610, F.A.C. This will require higher levels of treatment and reliability.

38. Are the berms well maintained? (X) yes ( ) no ( ) not applicable

39. Are the basin bottoms routinely scarified or otherwise maintained to maintain percolation rates? ( ) yes ( ) no (X) not applicable

40. Is adequate freeboard provided (3 feet from normal maximum fill line to the top of the berm)? (X) yes ( ) no ( ) not applicable

41. Is an emergency overflow or discharge device provided to ensure that water in the basin will not reach within 1 foot of the top?
( ) yes ( ) no (X) not applicable

42. Are the emergency overflow or discharge facilities well maintained and operational? ( ) yes ( ) no (X) not applicable

43. Are underdrains or perimeter drainage features provided?
( ) yes (X) no ( ) not applicable

If yes, specify:

( ) Underdrains
( ) Perimeter drains

44. Does the water collected in underdrains or perimeter drainage features meet appropriate effluent limits? ( ) yes ( ) no (X) not applicable

45. What is the average annual hydraulic loading rate (as applied to the total bottom area of all infiltration basins)? Not Applicable
_____ inch/day

REUSE SYSTEMS

Part V Absorption Field Systems Not Applicable

1. Is at least secondary treatment provided? ( ) yes ( ) no

2. Is at least basic disinfection provided? ( ) yes ( ) no

3. Does the reclaimed water never exceed 12 mg/l of nitrate (as N)?
( ) yes ( ) no ( ) not applicable

4. Does the reclaimed water never exceed 10 mg/l TSS?
( ) yes ( ) no ( ) not applicable

5. Does the treatment facility have a permitted capacity of at least 0.1 mgd? ( ) yes ( ) no

6. Are ground water monitoring facilities provided and is monitoring regularly performed (normally quarterly)? ( ) yes ( ) no

7. Are background, intermediate, and compliance wells provided and monitored? ( ) yes ( ) no ( ) not applicable

8. Are monitoring wells well marked? ( ) yes ( ) no ( ) not applicable
9. Are monitoring wells operational and well maintained?
( ) yes ( ) no ( ) not applicable

10. Are there any violations of ground water standards at the compliance wells? ( ) yes ( ) no ( ) not applicable

11. Is there evidence of potential ground water quality problems at the intermediate wells? ( ) yes ( ) no ( ) not applicable

12. Are system storage facilities provided and do they have adequate capacity? ( ) yes ( ) no ( ) not applicable

13. Are the storage facilities lined? ( ) yes ( ) no ( ) not applicable

14. Is there evidence of seepage through the berms?
( ) yes ( ) no ( ) not applicable

15. Is there evidence of discharge over the tops of the berms, erosion of the berms, or of any illegal discharge devices?
( ) yes ( ) no ( ) not applicable

16. Are piping, control, and pumping facilities operational and well maintained? ( ) yes ( ) no ( ) not applicable

17. Is there evidence that the storage facilities are used?
( ) yes ( ) no ( ) not applicable

18. Are the berms well maintained (including vegetation control)?
( ) yes ( ) no ( ) not applicable

19. Is a mosquito control program in place?
( ) yes ( ) no ( ) not applicable

20. Is there evidence of mosquito problems?
( ) yes ( ) no ( ) not applicable

21. Is an emergency overflow structure provided and is it well maintained and usable? ( ) yes ( ) no ( ) not applicable

22. Are storage facilities enclosed with a fence or other facilities that preclude public access? ( ) yes ( ) no ( ) not applicable

23. Are any features provided that enable reduction in setback distances?
( ) yes ( ) no

If yes, specify:

( ) High-level disinfection
( ) Class I reliability
( ) Site adjacent to a right-of-way

24. Are adequate setback distances provided from the wetted area to the property lines or buildings? ( ) yes ( ) no ( ) not applicable

25. Are adequate setback distances provided to potable water supply wells, Class I waters, and Class II waters?
( ) yes ( ) no ( ) not applicable

26. Are transmission facilities located at least 100 feet from public water supply wells? ( ) yes ( ) no ( ) not applicable

27. Is there evidence of a reduction in infiltration rates over the last permit period? ( ) yes ( ) no

28. Is there evidence of hydraulic problems such as wetness at the ground surface, ponding, or run-off from the site?
( ) yes ( ) no ( ) not applicable

29. Are adequate advisory signs posted around the site?
( ) yes ( ) no ( ) not applicable

30. Are distribution piping, pumping, and other appurtenances well maintained and operational? ( ) yes ( ) no ( ) not applicable

31. Is there evidence of clogging of distribution or other facilities?
( ) yes ( ) no ( ) not applicable

32. Is there evidence of or public complaints about odors, run-off, excessive ground water mounding, or other nuisance conditions?
( ) yes ( ) no ( ) not applicable

33. Are the distribution facilities labeled?
( ) yes ( ) no ( ) not applicable

34. Are above ground hose bibbs present?
( ) yes ( ) no ( ) not applicable

35. Are two or more distribution systems provided?
( ) yes ( ) no ( ) not applicable

36. Is the system operated with an alternating wetting and drying cycle?
( ) yes ( ) no ( ) not applicable

If yes, system is wetted for ____ days and is dried for ____ days.

37. Are the distribution systems rested before being reloaded?
( ) yes ( ) no ( ) not applicable

Note: If the distribution systems are not allowed to rest, the system is subject to regulation as an other system under Part VII of Chapter 17-610, F.A.C. This will require higher levels of treatment and reliability.

38. Is the property well maintained? ( ) yes ( ) no ( ) not applicable

39. Is the absorption field operated such as to use the overlying vegetation? ( ) yes ( ) no

40. Is the vegetation routinely cut and the cuttings removed from the site? ( ) yes ( ) no ( ) not applicable

41. Are underdrains or perimeter drainage features provided?
( ) yes ( ) no ( ) not applicable

If yes, specify:

( ) Underdrains
( ) Perimeter drains

42. Does the water collected in underdrains or perimeter drainage features meet appropriate effluent limits? ( ) yes ( ) no ( ) not applicable

43. What is the average annual hydraulic loading rate (as applied to the total bottom area of all distribution systems' trenches)?
_____ inch/day

WETLAND SYSTEMS
Not Applicable

1. What is the acreage of the wetland? _____ acres

2. What is the annual average discharge to the wetland? _____ mgd

3. What is the average annual hydraulic loading to the wetland?
_____ inches/week

4. What is the maximum annual hydraulic loading to the wetland?
_____ inches/week

5. What is the minimum annual hydraulic loading to the wetland?
_____ inches/week

6. What is the annual loading rate of total phosphorus to the wetland?
_____ grams per square meter per year

7. What is the annual loading rate of total nitrogen to the wetland?
_____ grams per square meter per year

8. Who is responsible for operating the spreader structure(s) which discharges the effluent into the wetland?
( ) wastewater treatment plant operator ( ) consulting firm _____
( ) other _____

9. What operational criteria are used to determine needed adjustments to the spreader structure(s)? _____
_____
_____
_____

10. Does the spreader structure(s) distribute the effluent effectively over the discharge point into the wetland? ( ) yes ( ) no

11. Are there any signs of erosion or ponding at the initial discharge into the wetland? ( ) yes ( ) no

12. Is there a build-up of foreign materials which evaded screening at the wastewater treatment plant? ( ) yes ( ) no

13. How does the effluent flow through the wetland?
( ) channels ( ) sheets ( ) other _____
_____

Does the effluent sheet flow through with even coverage in all parts of the wetland or does it tend to channelize in certain areas?
_____
_____

14. Is the perimeter of the wetland posted with signs indicating that effluent is being applied to the area? ( ) yes ( ) no

15. Is the public allowed access to the wetland? ( ) yes ( ) no

If no, how is access prevented? _____

16. Is a holding pond on-site? ( ) yes ( ) no

If yes, what is the capacity of the holding pond?
_____ million gallons

17. Has any effluent not meeting pretreatment requirements been discharged into the wetland system? ( ) yes ( ) no

How are such discharges typically avoided? _____

18. Is the odor in the wetland system offensive? ( ) yes ( ) no

19. Has the discharge to the wetland impacted the type, nature, or function of the wetland? ( ) yes ( ) no

Explain. _____

20. What portion of the year is the wetland predominantly dry? _____

21. Has the discharge to the wetland affected historic water levels, periods of time the wetland is predominantly dry, or periods of time the wetland is predominantly wet? ( ) yes ( ) no

22. Have there been die-offs or shifts in vegetative composition at either the initial discharge into the wetland or other points throughout the wetland? ( ) yes ( ) no

23. Have there been changes in fish or amphibian populations since the discharge to the wetland was initiated? ( ) yes ( ) no

24. Have there been any shifts in pH, dissolved oxygen, or other water quality parameters since the discharge was initiated? ( ) yes ( ) no

If yes, why? _____

25. Are threatened or endangered species (e.g., ospreys, eagles, alligators, etc.) present? ( ) yes ( ) no

If yes, please list species, locations, and approximate dates seen.

_____
_____
_____
_____

26. What is the general condition of the wetland?
( ) good ( ) fair ( ) poor

27. What is the frequency of routine inspections of the wetland?
_____ /year

28. Who is responsible for each aspect of operational monitoring of the receiving/treatment wetland required by the permit?

_____
_____
_____
_____
_____
_____
_____

29. Are all wetland stations permanently marked? ( ) yes ( ) no

If yes, how are they marked? _____
_____
_____
_____

30. What type of stage monitor is used at each site? _____
_____
_____
_____

31. Is each stage monitor operating properly? ( ) yes ( ) no

32. Are wetland samples taken at the sites specified in the permit?
( ) yes ( ) no

33. Is sampling and analysis completed for each parameter specified by the permit? ( ) yes ( ) no

34. Is the frequency and methodology of sampling in accordance with the permit? ( ) yes ( ) no

35. Is laboratory analysis conducted in accordance with the permit?
( ) yes ( ) no

36. Are copies of current and past wetland reports kept at the wastewater treatment plant? ( ) yes ( ) no

Is the amount of information and the detail provided in these reports consistent with that required by the permit? ( ) yes ( ) no

37. What are the most common problems with the wetland? _____

_____

_____

_____

FLORIDA DEPARTMENT OF
Environmental Protection

South District
PO Box 2549
Fort Myers FL 33902-2549
SouthDistrict@FloridaDEP.gov

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

REQUEST FOR ADDITIONAL INFORMATION

November 6, 2020

Wade Moser, General Manager
6000 Forest Blvd
Fort Myers, FL 33908-4318
wmoser23@aol.com

Re: Request for Additional Information (RAI)
Lee County – Wastewater
Facility Name: Forest Utilities, Inc.
Facility ID: FLA014478
DEP Application No.: FLA014478-015-DW1P

Dear Mr. Moser:

Thank you for your application for permit renewal submitted on November 3, 2020 for the above referenced Facility. A review of your application and supporting documentation indicates the application is incomplete. Please provide the information listed below and refer to this RAI in your response. The response to this RAI must be signed, sealed, and dated by a registered Florida Professional Engineer.

1. Due to a large number of compliance well exceedances for TDS and chloride over the permitted period (dating back to January 2016), please provide corrective actions to return the groundwater parameters' concentrations to below standards. *[62-520.700, F.A.C.]*

2. Please explain what will be done to prevent recurrence of unacceptable groundwater parameter concentrations. *[62-620.320(1), F.A.C.]*

3. Please provide a proposed schedule to monitor TDS and chloride at EFA-1 in order to determine whether the effluent is negatively impacting the TDS and chloride levels in the groundwater. Your application suggested collecting data quarterly through the end of this year. This schedule will not provide a sufficient data set. The Department suggests collecting TDS and chloride data on a monthly basis for several months over at least one wet and one dry season. *[62-520.600(3), F.A.C.]*

To continue the processing of your application, the Department must receive a response by December 9, 2020, unless a written request for additional time to provide the requested information is submitted and approved. It is the Department's desire to provide prompt turnaround times on permit applications, and a quicker response to this RAI shortens the timeframe for which a final decision on the application can be made. Pursuant to Rule 62-4.050, F.A.C. and Section 120.60, F.S., failure of an applicant to provide timely requested information by the applicant deadline may result in denial of the application. You are encouraged to contact this office to discuss the items requested to assist you in developing a complete

and adequate response.

Your processor will be Bill Robertson and can be contacted at (239) 344-5657, bill.d.robertson@floridadep.gov. Please submit your response by email to SouthDistrict@floridadep.gov, with a copy to bill.d.robertson@floridadep.gov. After posting the submittal, send an e-mail to SouthDistrict@floridadep.gov, with a copy to bill.d.robertson@floridadep.gov, alerting us that it has been posted.

Sincerely,



Nolin Moon
Environmental Administrator

cc:
James P. Elliott, P.E. jpelliott@source-inc.com

SOURCE, INC.
Engineers - Planners
FL Eng. Business #34338

James P. Elliott, P.E., President
Timothy E. Pugh, P.E., Vice President

1334 Lafayette Street
Cape Coral, FL 33904-9770
(239) 549-2345
Fax (239) 549-6779
E-mail address: Mail@source-inc.com

Submitted Electronically
November 17, 2020

Received
Electronically
Nov 17, 2020
South District

Mr. Nolin Moon, P.E., Environmental Manager
Florida Department of Environmental Protection
South District
2295 Victoria AVE, Suite 364
Ft. Myers, FL 33902-2549

Re: Additional Information RAI Response, Lee Co. - Wastewater
Forest Utilities, Inc. – Facility ID No. FLA014478
Application No. FLA014478-015-DWIP
Source, Inc. Project No. 170-02-20

Dear Mr. Moon:

We reviewed your November 20, 2020 letter requesting additional information (RAI) and offer the following responses:

1. Due to a large number of compliance well exceedances for TDS and chloride over the permitted period (dating back to January 2016), please provide corrective actions to return the groundwater parameters concentrations to below standards. *[62-520.700, F.A.C.]*
   The effluent from the Forest Utilities wastewater treatment facility is not contributing or responsible for the elevated TDS and chlorides, therefore, the utility cannot perform corrective actions or preventive measures.

2. Please explain what will be done to prevent recurrence of unacceptable groundwater parameter concentrations. *[62-620.320(1), F.A.C.]*
   As presented in the attached Water Science Associates November 10, 2020 "Effluent Monitoring for Forest Utilities WWTP" technical memorandum, we conclude the effluent is not a contributing factor for the elevated TDS and chlorides in the GWM wells.

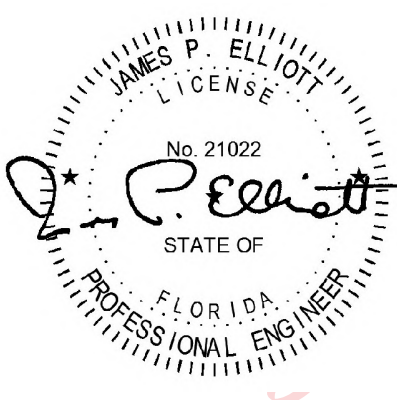
3. Please provide schedule to monitor TDS and chloride at EFA-1 in order to determine whether the effluent is negatively impacting the TDS and chloride levels in the groundwater. Your application suggested collecting data quarterly through the end of this year. This schedule will not provide a sufficient data set. The Department suggests collecting TDS and chloride data on a monthly basis for several months over at least one wet and one dry season. *[62-520.600(3), F.A.C.]*
   The monitoring parameters of TDS and chlorides at EFA-1 schedule were completed as agreed upon with the Department with the results presented in the attached Water Science Associates November 10, 2020 memorandum. Based on the monitoring results provided, we do not believe an extended schedule collecting TDS and chloride data is necessary.

We trust the responses to this RAI are sufficient to enable the Department to continue processing the application. Should you have any questions, do not hesitate to call.

Very truly yours,
SOURCE, INC.

James P. Elliott, P.E.
FL License No. 21022

JPE/jbd*
Attachments
cc: Andy McThenia, P.G.
Wade Moser



Digitally signed by James P Elliott
Date: 2020.11.17 15:50:21 -05'00'

Effluent Monitoring
for Forest Utilities WWTP

To: Wade Moser - Forest Utilities, Jim Elliot P.E. - Source Engineering
From: Andy McThenia, P.G. Water Science Associates
Date November 10, 2020
Re: Supplemental Effluent Monitoring Plan

Background

On April 7, 2020, a teleconference was convened by FDEP with Forest Utilities, Water Science Associates, and Source Engineering in attendance. Forest Utility requested that chlorides and total dissolved solids (TDS) be removed from the list of compliance parameters in the Utilities' Groundwater Monitoring Plan (GWMP) due to the contribution of these constituents from the Golf Course and private homeowner irrigation sources that were beyond the control of Forest Utilities. Maps and tables of existing conditions in groundwater and lakes were presented to FDEP to identify likely sources of chlorides entering the Water Table Aquifer other than the wastewater treatment plant (WWTP) effluent. FDEP indicated that Forest Utilities would need to demonstrate that the effluent was not contributing to levels of these contaminants in the Water Table Aquifer. In response to this request, Water Science submitted correspondence to FDEP on May 1, 2020 indicating that Forest Utilities would be conducting quarterly supplemental effluent sampling for chlorides and TDS through calendar year 2020. The purpose of the sampling was to determine whether the WWTP effluent is contributing to groundwater quality exceedances for chlorides and TDS. Based on guidance from FDEP, a plan for supplemental monitoring of effluent was implemented and has now been completed according to the plan.

Effluent Sampling Results

The supplemental sampling of the effluent was initiated during the 1st quarter of 2020 and continued through the 4th quarter of 2020. The results of the effluent water quality sampling for chlorides and TDS are as follows:

Table 1. Results of 2020 Effluent Sampling

Sample Location	Date	Chlorides (mg/l)	TDS (mg/l)
Effluent	2/5/2020	228	540
Effluent	4/8/2020	130	440
Effluent	5/5/2020	193	250
Effluent	7/6/2020	149	280
Effluent	10/1/2020	211	200

The complete laboratory reports for the effluent analyses are included as Exhibit A to this report.

Effluent Versus Groundwater Quality

The results of 2020 quarterly effluent samples were compared to previous and current groundwater quality sampling results from the existing GWMP monitor wells to determine whether the effluent is contributing to groundwater degradation with respect to chlorides and TDS. The GWMP data have previously been submitted to FDEP in quarterly monitoring reports. Tables of chloride and TDS data used for the plots in this report are included

as Exhibit B to this report. The locations of the five currently permitted groundwater monitor wells are shown in Figure 1.

Also shown in Figure 1 are the estimated 241 domestic irrigation wells permitted in the Forest Community which are owned and operated by the individual private residents. Of these wells, the Lee County Department of Natural Resources has recorded chloride concentrations of the water from 44 wells which are indicated on Figure 1. The chlorides range from 192 mg/l to 1056 mg/l with an average of 509 mg/l. These wells are primarily completed in the Mid Hawthorn Aquifer with casings set at an averaged depth of 190 feet below land surface (bls) and having average total depths of 230 ft. bls. Several Lower Hawthorn Aquifer wells are permitted with average casing depths of 450 feet bls and average total depths of 740 feet bls. The water being pumped by homeowners from the Mid and Lower Hawthorn Aquifers represents a significant source of chlorides and TDS being applied to the ground surface at hundreds of separate locations within the development.



Figure 1. Map Showing Locations of Forest Utilities Monitor Wells and Private Irrigation Wells

Graphs of the monitor well and effluent water quality parameters of chlorides and TDS were prepared and are included as Figures 2-6.

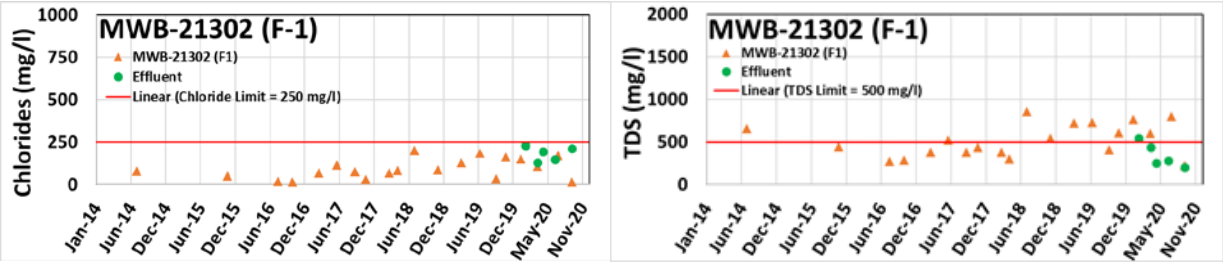


Figure 2. Chloride and TDS Levels in Effluent and Background Monitor Well F-1

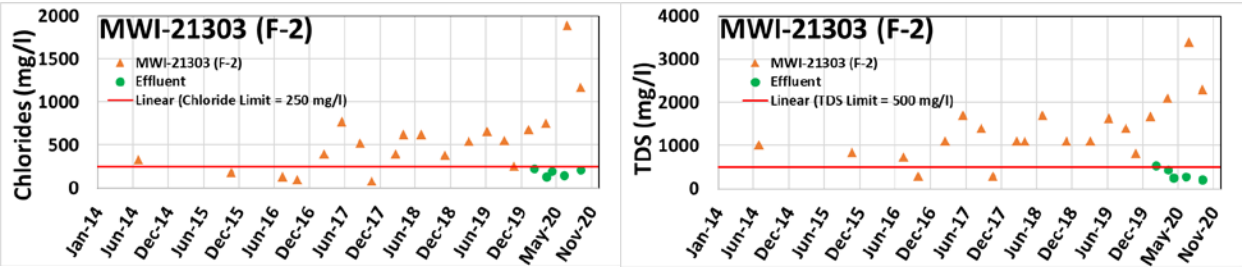


Figure 3. Chloride and TDS Levels in Effluent and Intermediate Monitor Well F-2

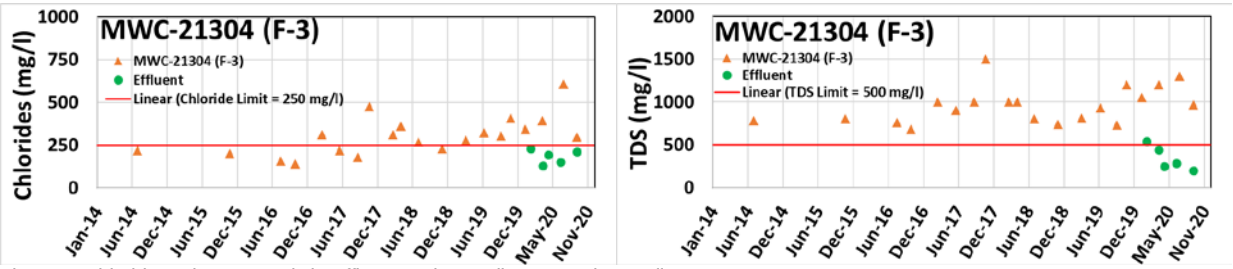


Figure 4. Chloride and TDS Levels in Effluent and Compliance Monitor Well F-3

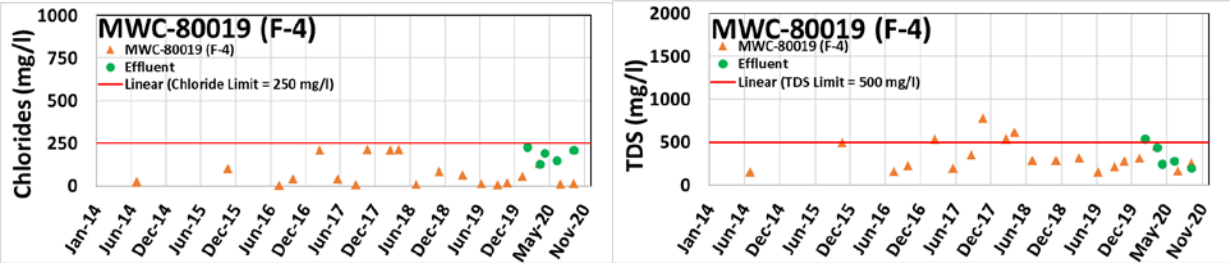


Figure 5. Chloride and TDS Levels in Effluent and Compliance Monitor Well F-4

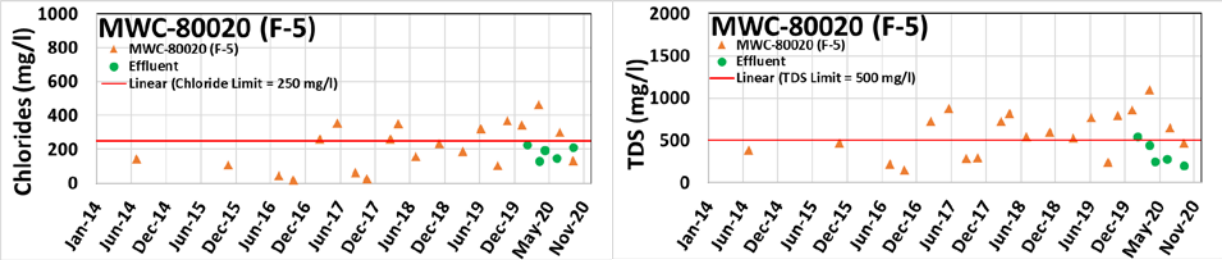


Figure 6. Chloride and TDS Levels in Effluent and Compliance Monitor Well F-5

The graphs of chlorides and TDS indicate that groundwater quality has generally shown increasing trends which are reaching levels far in exceedance of the effluent water quality. These trends clearly indicate an alternate source of salinity other than the effluent.

Effluent Versus Irrigation Water Quality

Forest Utilities discharges treated effluent to a single on-site lake identified as RW located adjacent to the wastewater treatment plant and shown in Figure 7. From the RW lake, the Forest Country Club (FCC) pumps water into three other lakes identified as Lake 6, BCL (Bobcat Lake), and BL (Bear Lake). Four FCC permitted wells also supply water from the Mid and Lower Hawthorn Aquifers into these lakes where it is blended with the lake water. Water is then pumped from the lakes and used for landscape and turf irrigation throughout the two golf courses operated by the FCC. These lakes are unlined and potentially influenced by shallow groundwater and surface water connections to nearby mangrove wetlands including the tidal waters of Hendry Creek. This influence is most likely to occur as lake levels are pumped lower than the surrounding water table and during extreme high tides and storm events.

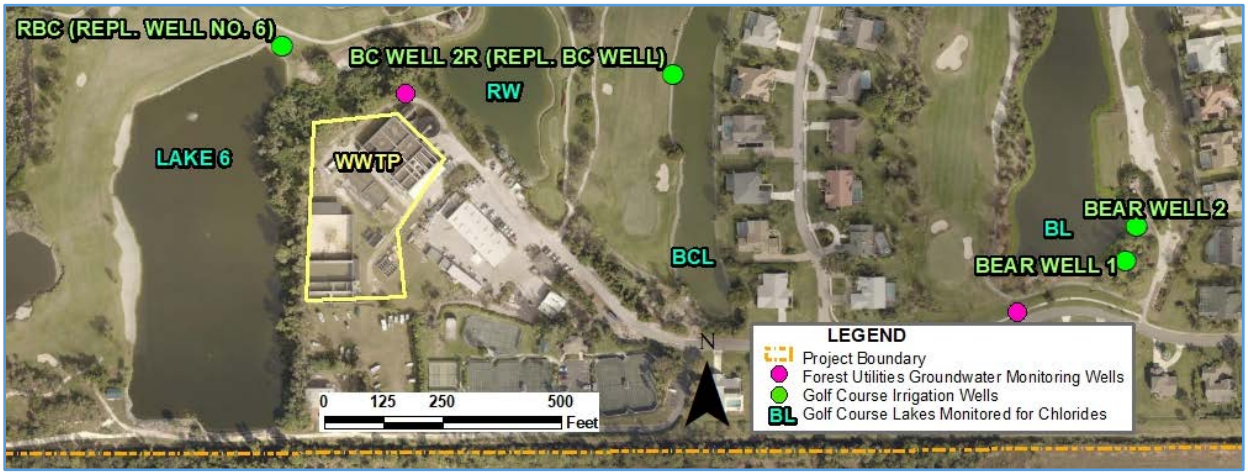


Figure 7. Map Showing Locations of Forest Country Club Irrigation Lakes

During the past five months of chloride monitoring of the FCC permitted irrigation wells, the chlorides from groundwater entering the lake and irrigation system has averaged 581 mg/l. The individual well chloride averages from June through October of 2020 are shown below in Table 2.

Table 2. Monthly Chloride Concentrations in Water From FCC Irrigation Wells

Well Name	Date Range	Average Chlorides (mg/l)
Bear Well 1	6/28/20 – 10/28/20	599
Bear Well 2	6/28/20 – 10/28/20	608
BC Well 2R (Repl. BC Well)	6/28/20 – 10/28/20	574
RBC (Repl. Well No. 6)	6/28/20 – 10/28/20	543

FCC also monitors the chloride concentrations on a monthly basis at the four lakes shown in Figure 7 as a compliance requirement of South Florida Water Management District (SFWMD) permit No. 36-00161-W. The chloride levels in the samples from the lakes from June 2018 through October 2020 are plotted along with the recent supplemental effluent monitoring by Forest Utilities (Figures 8 and 9). The results indicate that the effluent samples are consistently lower in chlorides than any of the four FCC irrigation lakes and are lower than the chlorides from the four FCC irrigation supply wells. These FCC well and lake chloride data are included in Exhibit C.

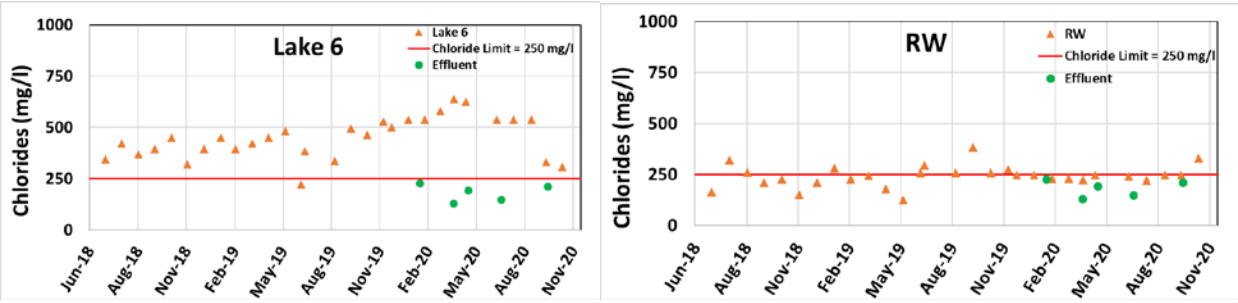


Figure 8. Effluent and Lake Water Chloride Levels for Forest Country Club Lakes 6 and RW

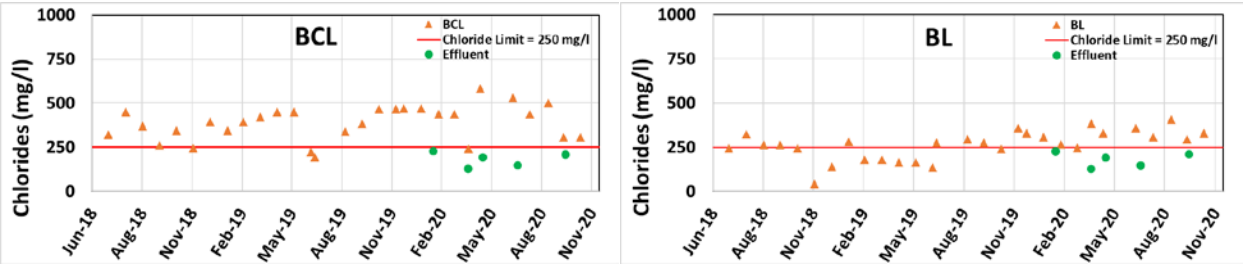


Figure 9. Effluent and Lake Water Chloride Levels for Forest Country Club Lakes BCL and BL

Conclusion

Based on guidance from FDEP, the plan for four quarters of effluent monitoring was completed. The testing has demonstrated that the effluent is not the cause for the exceedance of compliance limits in the groundwater monitor well network. The effluent water quality is shown to be reliably and consistently lower in chlorides than the compliance limit of 250 mg/l; whereas, the other potential sources of water influencing groundwater quality at the site including private irrigation wells, golf course irrigation wells, and irrigation source and blending lakes all exhibit chloride levels consistently higher than the limit. The chloride levels from residential and golf course irrigation wells and golf course irrigation lakes have been shown to exceed 250 mg/l for the majority of the sampling events documented. The results show that the effluent is fresher than any of the other potential sources of water entering the Water Table Aquifer.

Forest Utility effluent is providing a positive water quality improvement benefit to the Water Table Aquifer by diluting the higher chloride water being applied from irrigation lakes and from Mid and Lower Hawthorn Aquifer wells. Forest utility is not responsible for exceedances of chloride or TDS water quality standards in the monitor wells and has no authority or responsibility to reduce the levels in the groundwater that result from contributing sources other than the effluent.

EXHIBIT A

LABORATORY REPORTS OF 2020 EFFLUENT SAMPLING

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

February 12, 2020

Wade Moser
Forest Utility
6000 Forest Blvd
Ft Myers, FL 33908
TEL: 941-481-5333
FAX:

RE: Order No.: 2002168

Dear Wade Moser:

Sanders Laboratories, Inc received 1 sample(s) on 2/5/2020 for the analyses presented in the following report.

These results only pertain to the samples as received. These pages may include, but are not limited to: Analytical Data, Chains of Custodies, Subcontracted Data and Case Narratives for samples. Results relate only to the samples in the report.

Reports are archived for a minimum of 5 years. Copies of reports are available for a fee of $50.00. Copies will be provided within 2 weeks of the time of the request.
Laboratory PQL's are available upon request.

Test results meet all the requirements of the NELAP standards, unless otherwise noted.
Nokomis Certificate # E84380 Fort Myers Certificate # E85457

A statement of estimated uncertainty of results is available upon request.
Laboratory report shall not be reproduced except in full, without the written approval of Sanders Laboratories.
Sanders Laboratories follows DEP standard operating procedures for field sampling, unless otherwise noted.



Katie Strothman
Laboratory Director

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

Definition Only

WO#: **2002168**

Date: **2/12/2020**

Definitions:

B: Results based upon colony counts outside the acceptable range.

G: Sample value indicates that the analyte was detected at or above the method detection limit in both the sample and the associated field blank, equipment blank, or trip blank, and the blank value was greater than 10% of the associated sample value. The value in the blank shall not be subtracted from associated samples.

I: The reported value is greater than or equal to the laboratory MDL but less than the laboratory PQL.

J: Estimated Value.

J7: Excessive amounts of Sodium Sulfite used to dechlorinate the sample due to high levels of chlorine present.

K: Off scale low, actual value is known to be less than the value given.

L: Off scale high, actual value is known to be greater than the value given.

NC: Not Certified. Parameter was ran but is not covered under laboratory accredited scopes.

Q: Sample held beyond acceptable holding time.

U: The compound was analyzed for, but not detected.

V: Indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.

Y: The laboratory analysis was from an improperly preserved sample.

Z: Too many colonies were present for accurate counting.

Sanders Laboratories
Environmental Testing Services

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

Analytical Report

(continuous)

WO#: **2002168**

Date Reported: **2/12/2020**

CLIENT: Forest Utility

Lab Order: 2002168

Project:

Lab ID: 2002168-001

Collection Date: 2/5/2020 10:00:00 AM

Client Sample ID: CCC, EFF

Matrix: WASTE WATER

Analyses	Result	MDL	Qual	Units	DF	Date Analyzed
FECAL COLIFORM				**A9222D**		Analyst: **TM**
Coliform, Fecal	ND	1.00		CFU/100ml	1	2/5/2020 12:10:00 PM
NITROGEN, NITRATE + NITRITE				**E353.2**		Analyst: **PS**
Nitrogen, Nitrate	14.2	0.0100		mg/L	1	2/10/2020 12:33:00 PM
NITROGEN, NITRITE				**A4500-NO2-B**		Analyst: **SP**
Nitrogen, Nitrite	ND	0.0100		mg/L	1	2/5/2020 4:00:00 PM
CHLORIDE				**A4500-CL-E**		Analyst: **EH**
Chloride	228	3.00		mg/L	1	2/10/2020 12:51:00 PM
SULFATE				**ASTM-D516-90**		Analyst: **EH**
Sulfate	77.5	2.00		mg/L	1	2/6/2020 1:28:00 PM
TOTAL DISSOLVED SOLIDS				**A2540C**		Analyst: **NS**
Total Dissolved Solids (Residue, Filterable)	540	20		mg/L	1	2/6/2020 11:30:00 AM

Qualifiers:

H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
PL	Permit Limit	RL	Reporting Detection Limit
U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as specified at testcode

Original

DBPix Evaluation

Sanders Laboratories
Environmental Testing Services

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 2002 168 / 2002 007

Client: Forest Util
Address:
Phone:
Fax:

Email: Wade
Report To:
Bill to:
P.O. #

Project Name: WWTP
Project Location:
Customer Type:
Kit #: 2417
Requested Due Date:

Preservative: HCL = H, HNO_3 = N, $Na_2S_2O_3$ = ST
H_2SO_4 = S, NaOH = SH, NH_4Cl = NH

Sampled By (PRINT): Neil Harden
Sampler Signature:

Matrix	Sample Description	Sample Date	Sample Time	Sample Type	Preservatives pH	Preservatives Ice	Analysis Requested: NO_2 NO_3	TDS	Cl - SO_4	Lead	Sample ID # (Lab Use Only)
WW	CCC EFF	2/5/20	1000	G		✓	X				1A
"	"	"	"	"		"		X			B
"	"	"	"	"		"			X		C
"	"	"	"	"		"				X	D

Bottle Lot #: 073015E-13; 9.197.003; 8038006

Okay to Run As Is... Client Initial:

Samples On Ice: (Yes) No — 8.3

Relinquished By/Affiliation	Date	Time	Accepted By/Affiliation	Date	Time
Neil Harden	2/5/20		WR	2/5/20	1142

1050 Endeavor Ct, Nokomis, FL 34275-3623 (941) 488-8103 fax(941) 484-6774
10090 Bavaria Rd., Fort Myers, FL 33913 (239) 590-0337 fax (239) 590-0536

www.ammara.com

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

April 13, 2020

Wade Moser
Forest Utility
6000 Forest Blvd
Ft Myers, FL 33908
TEL: 941-481-5333
FAX:

RE: Forest - Effluent Testing Order No.: 2004337

Dear Wade Moser:

Sanders Laboratories, Inc received 1 sample(s) on 4/8/2020 for the analyses presented in the following report.

These results only pertain to the samples as received. These pages may include, but are not limited to: Analytical Data, Chains of Custodies, Subcontracted Data and Case Narratives for samples. Results relate only to the samples in the report.

Reports are archived for a minimum of 5 years. Copies of reports are available for a fee of $50.00. Copies will be provided within 2 weeks of the time of the request.
Laboratory PQL's are available upon request.

Test results meet all the requirements of the NELAP standards, unless otherwise noted.
Nokomis Certificate # E84380 Fort Myers Certificate # E85457

A statement of estimated uncertainty of results is available upon request.
Laboratory report shall not be reproduced except in full, without the written approval of Sanders Laboratories.
Sanders Laboratories follows DEP standard operating procedures for field sampling, unless otherwise noted.

Katie Strothman
Laboratory Director

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

Definition Only

WO#: **2004337**

Date: **4/13/2020**

Definitions:

B: Results based upon colony counts outside the acceptable range.

G: Sample value indicates that the analyte was detected at or above the method detection limit in both the sample and the associated field blank, equipment blank, or trip blank, and the blank value was greater than 10% of the associated sample value. The value in the blank shall not be subtracted from associated samples.

I: The reported value is greater than or equal to the laboratory MDL but less than the laboratory PQL.

J: Estimated Value.

J7: Excessive amounts of Sodium Sulfite used to dechlorinate the sample due to high levels of chlorine present.

K: Off scale low, actual value is known to be less than the value given.

L: Off scale high, actual value is known to be greater than the value given.

NC: Not Certified. Parameter was ran but is not covered under laboratory accredited scopes.

Q: Sample held beyond acceptable holding time.

U: The compound was analyzed for, but not detected.

V: Indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.

Y: The laboratory analysis was from an improperly preserved sample.

Z: Too many colonies were present for accurate counting.

Sanders Laboratories
Environmental Testing Services

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

Analytical Report

(continuous)

WO#: **2004337**

Date Reported: **4/13/2020**

CLIENT: Forest Utility **Lab Order:** 2004337

Project: Forest - Effluent Testing

Lab ID: 2004337-001 **Collection Date:** 4/8/2020 9:00:00 AM

Client Sample ID: CCC, EFF **Matrix:** WASTE WATER

Analyses	Result	MDL	Qual	Units	DF	Date Analyzed
CHLORIDE				**A4500-CL-E**		Analyst: **EH**
Chloride	130	3.00		mg/L	1	4/13/2020 10:35:00 AM
TOTAL DISSOLVED SOLIDS				**A2540C**		Analyst: **SP**
Total Dissolved Solids (Residue, Filterable)	440	20		mg/L	1	4/9/2020 10:20:00 AM

Qualifiers:				
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	PL	Permit Limit	RL	Reporting Detection Limit
	U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as specified at testcode

DBPix Evaluation

Sanders Laboratories
Environmental Testing Services

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 2004 337

Client: Forest Util
Address:
Phone:
Fax:

Email: Wade
Report To:
Bill to:
P.O. #

Project Name: WWTP
Project Location:
Customer Type:
Kit #:
Requested Due Date:

Preservative: HCL = H, HNO_3 = N, $Na_2S_2O_3$ = ST
H_2SO_4 = S, NaOH = SH, NH_4Cl = NH

Sampled By (PRINT): Neil Harden
Sampler Signature:

Matrix	Sample Description	Sample Date	Sample Time	Sample Type	Preservatives pH	Preservatives Ice	Analysis Requested CL-	Analysis Requested TDS	Sample ID # (Lab Use Only)
WW	CCC, EFF	4/8/20	0900	G		✓	X		1A
"	CCC, EFF	"	"	"		✓		X	B

Bottle Lot #:

Okay to Run As Is... Client Initial:

Samples On Ice: Yes / No
2.9

Relinquished By/Affiliation	Date	Time	Accepted By/Affiliation	Date	Time
Neil Harden	4/8/20	1025		4/8/20	1025

1050 Endeavor Ct, Nokomis, FL 34275-3623 (941) 488-8103 fax(941) 484-6774
10090 Bavaria Rd., Fort Myers, FL 33913 (239) 590-0337 fax (239) 590-0536

Form #: RCF -02 Approved by: KS 7/11/2018

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Ft. Myers Lab02
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Fort Myers, FL 33913
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Website: www.sanderslabs.net

May 18, 2020

Wade Moser
Forest Utility
6000 Forest Blvd
Ft Myers, FL 33908
TEL: 941-481-5333
FAX:

RE: Forest - Effluent Testing Order No.: 2005161

Dear Wade Moser:

Sanders Laboratories, Inc received 1 sample(s) on 5/5/2020 for the analyses presented in the following report.

These results only pertain to the samples as received. These pages may include, but are not limited to: Analytical Data, Chains of Custodies, Subcontracted Data and Case Narratives for samples. Results relate only to the samples in the report.

Reports are archived for a minimum of 5 years. Copies of reports are available for a fee of $50.00. Copies will be provided within 2 weeks of the time of the request.
Laboratory PQL's are available upon request.

Test results meet all the requirements of the NELAP standards, unless otherwise noted.
Nokomis Certificate # E84380 Fort Myers Certificate # E85457

A statement of estimated uncertainty of results is available upon request.
Laboratory report shall not be reproduced except in full, without the written approval of Sanders Laboratories.
Sanders Laboratories follows DEP standard operating procedures for field sampling, unless otherwise noted.

Katie Strothman
Laboratory Director

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

Definition Only

WO#: **2005161**

Date: **5/18/2020**

Definitions:

B: Results based upon colony counts outside the acceptable range.

G: Sample value indicates that the analyte was detected at or above the method detection limit in both the sample and the associated field blank, equipment blank, or trip blank, and the blank value was greater than 10% of the associated sample value. The value in the blank shall not be subtracted from associated samples.

I: The reported value is greater than or equal to the laboratory MDL but less than the laboratory PQL.

J: Estimated Value.

J7: Excessive amounts of Sodium Sulfite used to dechlorinate the sample due to high levels of chlorine present.

K: Off scale low, actual value is known to be less than the value given.

L: Off scale high, actual value is known to be greater than the value given.

NC: Not Certified. Parameter was ran but is not covered under laboratory accredited scopes.

Q: Sample held beyond acceptable holding time.

U: The compound was analyzed for, but not detected.

V: Indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.

Y: The laboratory analysis was from an improperly preserved sample.

Z: Too many colonies were present for accurate counting.

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

Analytical Report

(continuous)

WO#: **2005161**

Date Reported: **5/18/2020**

CLIENT: Forest Utility **Lab Order:** 2005161

Project: Forest - Effluent Testing

Lab ID: 2005161-001 **Collection Date:**

Client Sample ID: CCC, EFF **Matrix:** WASTE WATER

Analyses	Result	MDL	Qual	Units	DF	Date Analyzed
CHLORIDE				**A4500-CL-E**		Analyst: **EH**
Chloride	193	3.00		mg/L	1	5/7/2020 11:05:00 AM
TOTAL DISSOLVED SOLIDS				**A2540C**		Analyst: **SP**
Total Dissolved Solids (Residue, Filterable)	250	20		mg/L	1	5/6/2020 10:20:00 AM

Qualifiers:

H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
PL	Permit Limit	RL	Reporting Detection Limit
U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as specified at testcode

DBPix Evaluation

Sanders Laboratories
Environmental Testing Services

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 2005 161

Client: Forest Util
Address:
Phone:
Fax:

Email: Wade
Report To:
Bill to:
P.O. #:
Preservative: HCL = H, HNO_3 = N, $Na_2S_2O_3$ = ST
H_2SO_4 = S, NaOH = SH, NH_4Cl = NH

Project Name: WWTP
Project Location:
Customer Type:
Kit #: 2895
Requested Due Date:

Sampled By (PRINT): Neil Harden
Sampler Signature:

Matrix	Sample Description	Sample Date	Sample Time	Sample Type	Preservatives pH	Preservatives Ice	Analysis Requested TDS	Analysis Requested Cl-	Sample ID # (Lab Use Only)
WW	CCC, EFF	5/5/20	0930	G		✓	X		1A
"	"	"	"	"		✓		X	B

Bottle Lot #	Relinquished By/Affiliation	Date	Time	Accepted By/Affiliation	Date	Time
	Neil Harden	5/5/20	1200	NL	5/5/20	1200

Okay to Run As Is... Client Initial:

Samples On Ice: (Yes) No — 7.2

1050 Endeavor Ct, Nokomis, FL 34275-3623 (941) 488-8103 fax(941) 484-6774
10090 Bavaria Rd., Fort Myers, FL 33913 (239) 590-0337 fax (239) 590-0536

Form #: RCF -02 Approved by: KS 7/11/2016

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Ft. Myers Lab02
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Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

July 13, 2020

Wade Moser
Forest Utility
6000 Forest Blvd
Ft Myers, FL 33908
TEL: 941-481-5333
FAX:

RE: Forest - Effluent Testing Order No.: 2007193

Dear Wade Moser:

Sanders Laboratories, Inc received 1 sample(s) on 7/6/2020 for the analyses presented in the following report.

These results only pertain to the samples as received. These pages may include, but are not limited to: Analytical Data, Chains of Custodies, Subcontracted Data and Case Narratives for samples. Results relate only to the samples in the report.

Reports are archived for a minimum of 5 years. Copies of reports are available for a fee of $50.00. Copies will be provided within 2 weeks of the time of the request.
Laboratory PQL's are available upon request.

Test results meet all the requirements of the NELAP standards, unless otherwise noted.
Nokomis Certificate # E84380 Fort Myers Certificate # E85457

A statement of estimated uncertainty of results is available upon request.
Laboratory report shall not be reproduced except in full, without the written approval of Sanders Laboratories.
Sanders Laboratories follows DEP standard operating procedures for field sampling, unless otherwise noted.



Katie Strothman
Laboratory Director

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

Definition Only

WO#: **2007193**

Date: **7/13/2020**

Definitions:

B: Results based upon colony counts outside the acceptable range.

G: Sample value indicates that the analyte was detected at or above the method detection limit in both the sample and the associated field blank, equipment blank, or trip blank, and the blank value was greater than 10% of the associated sample value. The value in the blank shall not be subtracted from associated samples.

I: The reported value is greater than or equal to the laboratory MDL but less than the laboratory PQL.

J: Estimated Value.

J7: Excessive amounts of Sodium Sulfite used to dechlorinate the sample due to high levels of chlorine present.

K: Off scale low, actual value is known to be less than the value given.

L: Off scale high, actual value is known to be greater than the value given.

NC: Not Certified. Parameter was ran but is not covered under laboratory accredited scopes.

Q: Sample held beyond acceptable holding time.

U: The compound was analyzed for, but not detected.

V: Indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.

Y: The laboratory analysis was from an improperly preserved sample.

Z: Too many colonies were present for accurate counting.

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

Analytical Report

(continuous)

WO#: **2007193**

Date Reported: **7/13/2020**

CLIENT: Forest Utility **Lab Order:** 2007193

Project: Forest - Effluent Testing

Lab ID: 2007193-001 **Collection Date:** 7/6/2020 9:00:00 AM

Client Sample ID: CCC, EFF **Matrix:** WASTE WATER

Analyses	Result	MDL	Qual	Units	DF	Date Analyzed
CHLORIDE				**A4500-CL-E**		Analyst: **EH**
Chloride	149	3.00		mg/L	1	7/9/2020 12:20:00 PM
TOTAL DISSOLVED SOLIDS				**A2540C**		Analyst: **SP**
Total Dissolved Solids (Residue, Filterable)	280	20		mg/L	1	7/6/2020 3:04:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
PL	Permit Limit	RL	Reporting Detection Limit
U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as specified at testcode

DBPix Evaluation

Sanders Laboratories
Environmental Testing Services

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): 2007 193

Client: Forest Util
Address:
Phone:
Fax:

Email:
Report To: Wade
Bill to:
P.O. #

Project Name: WWTP
Project Location:
Customer Type:
Kit #: 3144
Requested Due Date:

Preservative: HCL = H, HNO_3 = N, $Na_2S_2O_3$ = ST, H_2SO_4 = S, NaOH = SH, NH_4Cl = NH

Sampled By (PRINT): Neil Harden
Sampler Signature:

Matrix	Sample Description	Sample Date	Sample Time	Sample Type	Preservatives pH	Preservatives Ice	Analysis Requested TDS	Analysis Requested Cl-	Sample ID # (Lab Use Only)
WW	CCC, EFF	7/6/20	0900	G		✓	X		1A
"	" , "	"	"	"		✓		X	B

Bottle Lot #	Okay to Run As Is... Client Initial:	Relinquished By/Affiliation	Date	Time	Accepted By/Affiliation	Date	Time
		Neil Harden 7/6/20		1048			1048

6.9

Samples On Ice: (Yes) No

1050 Endeavor Ct, Nokomis, FL 34275-3623 (941) 488-8103 fax(941) 484-6774
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Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

October 07, 2020

Wade Moser
Forest Utility
6000 Forest Blvd
Ft Myers, FL 33908
TEL: 941-481-5333
FAX:

RE: Forest - Effluent Testing Order No.: 2010037

Dear Wade Moser:

Sanders Laboratories, Inc received 1 sample(s) on 10/1/2020 for the analyses presented in the following report.

These results only pertain to the samples as received. These pages may include, but are not limited to: Analytical Data, Chains of Custodies, Subcontracted Data and Case Narratives for samples. Results relate only to the samples in the report.

Reports are archived for a minimum of 5 years. Copies of reports are available for a fee of $50.00. Copies will be provided within 2 weeks of the time of the request.
Laboratory PQL's are available upon request.

Test results meet all the requirements of the NELAP standards, unless otherwise noted.
Nokomis Certificate # E84380 Fort Myers Certificate # E85457

A statement of estimated uncertainty of results is available upon request.
Laboratory report shall not be reproduced except in full, without the written approval of Sanders Laboratories.
Sanders Laboratories follows DEP standard operating procedures for field sampling, unless otherwise noted.



Katie Strothman
Laboratory Director

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

Definition Only

WO#: **2010037**
Date: **10/7/2020**

Definitions:

B: Results based upon colony counts outside the acceptable range.

G: Sample value indicates that the analyte was detected at or above the method detection limit in both the sample and the associated field blank, equipment blank, or trip blank, and the blank value was greater than 10% of the associated sample value. The value in the blank shall not be subtracted from associated samples. Also if the RPD on a field duplicate exceeds allowable control limit.

I: The reported value is greater than or equal to the laboratory MDL but less than the laboratory PQL.

J: Estimated Value.

J7: Excessive amounts of Sodium Sulfite used to dechlorinate the sample due to high levels of chlorine present.

K: Off scale low, actual value is known to be less than the value given.

L: Off scale high, actual value is known to be greater than the value given.

NC: Not Certified. Parameter was ran but is not covered under laboratory accredited scopes.

Q: Sample held beyond acceptable holding time.

U: The compound was analyzed for, but not detected.

V: Indicates that the analyte was detected at or above the MDL in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.

Y: The laboratory analysis was from an improperly preserved sample.

Z: Too many colonies were present for accurate counting.

Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337 FAX: (239) 590-0536
Website: www.sanderslabs.net

Analytical Report

(continuous)

WO#: **2010037**

Date Reported: **10/7/2020**

CLIENT: Forest Utility **Lab Order:** 2010037

Project: Forest - Effluent Testing

Lab ID: 2010037-001 **Collection Date:** 10/1/2020 9:00:00 AM

Client Sample ID: CCC, EFF **Matrix:** WASTE WATER

Analyses	Result	MDL	Qual	Units	DF	Date Analyzed
CHLORIDE				**A4500-CL-E**		Analyst: **EH**
Chloride	211	2.00		mg/L	1	10/5/2020 12:37:00 PM
TOTAL DISSOLVED SOLIDS				**A2540C**		Analyst: **KH**
Total Dissolved Solids (Residue, Filterable)	200	20		mg/L	1	10/1/2020 4:28:00 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
PL	Permit Limit	RL	Reporting Detection Limit
U	Samples with CalcVal < MDL	W	Sample container temperature is out of limit as specified at testcode

Original

DBPix Evaluation

Sanders Laboratories
Environmental Testing Services

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only): QR 101120 — 2010 ~~02~~ 027 037

Client: Forest Util
Address:
Phone:
Fax:

Email:
Report To: Wade
Bill to:
P.O. #

Project Name: WWTP
Project Location:
Customer Type:
Kit #: 3517
Requested Due Date:

Preservative: HCL = H, HNO_3 = N, $Na_2S_2O_3$ = ST, H_2SO_4 = S, NaOH = SH, NH_4Cl = NH

Sampled By (PRINT): Neil Harden
Sampler Signature:

Matrix	Sample Description	Sample Date	Sample Time	Sample Type	Preservatives pH	Preservatives Ice	Analysis Requested TDS	Analysis Requested Cl	Sample ID # (Lab Use Only)
WW	CCC EFF 10	1/20	0900	G		✓			
"	" "	"	"	"		✓	X		1A
								X	B

Bottle Lot #:

Okay to Run As Is... Client Initial:

Samples On Ice: Yes / No — 3.6

Relinquished By/Affiliation	Date	Time	Accepted By/Affiliation	Date	Time
Neil Harden	10/1/20	1045	QR	10/1/20	1045

1050 Endeavor Ct, Nokomis, FL 34275-3623 (941) 488-8103 fax(941) 484-6774
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Form #: RCF -02 Approved by: KS 7/11/2016

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EXHIBIT B

SUMMARY TABLE OF GROUNDWATER QUALITY DATA FOR CHLORIDES AND TDS

Exhibit B. Groundwater Monitoring Data

Monitor Well ID	Date	Chlorides (mg/l)	TDS (mg/l)
MWB-21302 (F-1)	7/28/14	80	660
MWB-21302 (F-1)	11/11/15	50	443
MWB-21302 (F-1)	8/1/16	18	270
MWB-21302 (F-1)	10/13/16	15	290
MWB-21302 (F-1)	2/27/17	70.3	380
MWB-21302 (F-1)	5/31/17	115	520
MWB-21302 (F-1)	9/1/17	74.5	380
MWB-21302 (F-1)	10/30/17	28.8	440
MWB-21302 (F-1)	2/27/18	70.3	380
MWB-21302 (F-1)	4/11/18	83.9	300
MWB-21302 (F-1)	7/9/18	200	860
MWB-21302 (F-1)	11/7/18	86.4	540
MWB-21302 (F-1)	3/8/19	130	720
MWB-21302 (F-1)	6/11/19	188	728
MWB-21302 (F-1)	9/5/19	34.4	410
MWB-21302 (F-1)	10/25/19	160	610
MWB-21302 (F-1)	1/9/20	150	766
MWB-21302 (F-1)	4/6/20	110	600
MWB-21302 (F-1)	7/23/20	171	800
MWB-21302 (F-1)	10/1/20	13.9	220

Monitor Well ID	Date	Chlorides (mg/l)	TDS (mg/l)
MWC-21304 (F-3)	7/28/14	218	780
MWC-21304 (F-3)	11/11/15	199	800
MWC-21304 (F-3)	8/1/16	156	760
MWC-21304 (F-3)	10/13/16	141	680
MWC-21304 (F-3)	2/27/17	311	1000
MWC-21304 (F-3)	5/31/17	219	900
MWC-21304 (F-3)	9/1/17	178	1000
MWC-21304 (F-3)	10/30/17	474	1500
MWC-21304 (F-3)	2/27/18	311	1000
MWC-21304 (F-3)	4/11/18	359	1000
MWC-21304 (F-3)	7/9/18	267	800
MWC-21304 (F-3)	11/7/18	228	740
MWC-21304 (F-3)	3/8/19	279	810
MWC-21304 (F-3)	6/11/19	320	932
MWC-21304 (F-3)	9/5/19	304	730
MWC-21304 (F-3)	10/25/19	408	1200
MWC-21304 (F-3)	1/9/20	343	1050
MWC-21304 (F-3)	4/6/20	392	1200
MWC-21304 (F-3)	7/23/20	606	1300
MWC-21304 (F-3)	10/1/20	295	970

Monitor Well ID	Date	Chlorides (mg/l)	TDS (mg/l)
MWC-80020 (F-5)	7/28/14	143	388
MWC-80020 (F-5)	11/11/15	110	470
MWC-80020 (F-5)	8/1/16	46	220
MWC-80020 (F-5)	10/13/16	21	150
MWC-80020 (F-5)	2/27/17	263	730
MWC-80020 (F-5)	5/31/17	356	880
MWC-80020 (F-5)	9/1/17	61.3	283
MWC-80020 (F-5)	10/30/17	28	290
MWC-80020 (F-5)	2/27/18	263	730
MWC-80020 (F-5)	4/11/18	352	820
MWC-80020 (F-5)	7/9/18	157	540
MWC-80020 (F-5)	11/7/18	235	600
MWC-80020 (F-5)	3/8/19	188	530
MWC-80020 (F-5)	6/11/19	321	768
MWC-80020 (F-5)	9/5/19	106	240
MWC-80020 (F-5)	10/25/19	367	790
MWC-80020 (F-5)	1/9/20	344	864
MWC-80020 (F-5)	4/6/20	466	1100
MWC-80020 (F-5)	7/24/20	300	650
MWC-80020 (F-5)	10/1/20	134	470

Monitor Well ID	Date	Chlorides (mg/l)	TDS (mg/l)
MWI-21303 (F-2)	7/28/14	331	1024
MWI-21303 (F-2)	11/11/15	184	853
MWI-21303 (F-2)	8/1/16	131	730
MWI-21303 (F-2)	10/13/16	99	290
MWI-21303 (F-2)	2/27/17	394	1100
MWI-21303 (F-2)	5/31/17	774	1700
MWI-21303 (F-2)	9/1/17	526	1400
MWI-21303 (F-2)	10/30/17	81	290
MWI-21303 (F-2)	2/27/18	394	1100
MWI-21303 (F-2)	4/11/18	623	1100
MWI-21303 (F-2)	7/9/18	620	1700
MWI-21303 (F-2)	11/7/18	384	1100
MWI-21303 (F-2)	3/8/19	544	1100
MWI-21303 (F-2)	6/11/19	660	1630
MWI-21303 (F-2)	9/5/19	555	1400
MWI-21303 (F-2)	10/25/19	254	820
MWI-21303 (F-2)	1/9/20	683	1680
MWI-21303 (F-2)	4/6/20	755	2100
MWI-21303 (F-2)	7/23/20	1890	3400
MWI-21303 (F-2)	10/1/20	1170	2300

Monitor Well ID	Date	Chlorides (mg/l)	TDS (mg/l)
MWC-80019 (F-4)	7/28/14	24	156
MWC-80019 (F-4)	11/11/15	102	497
MWC-80019 (F-4)	8/1/16	3	160
MWC-80019 (F-4)	10/13/16	42	230
MWC-80019 (F-4)	2/27/17	209	540
MWC-80019 (F-4)	5/31/17	44	200
MWC-80019 (F-4)	9/1/17	7.14	357
MWC-80019 (F-4)	10/30/17	215	780
MWC-80019 (F-4)	2/27/18	209	540
MWC-80019 (F-4)	4/11/18	214	620
MWC-80019 (F-4)	7/9/18	12.3	290
MWC-80019 (F-4)	11/7/18	86	290
MWC-80019 (F-4)	3/8/19	64.6	320
MWC-80019 (F-4)	6/11/19	16.1	152
MWC-80019 (F-4)	9/5/19	8.89	220
MWC-80019 (F-4)	10/25/19	18.2	280
MWC-80019 (F-4)	1/9/20	55.4	320
MWC-80019 (F-4)	4/6/20	132	460
MWC-80019 (F-4)	7/23/20	12.4	170
MWC-80019 (F-4)	10/1/20	15.2	260

Monitor Well ID	Date	Chlorides (mg/l)	TDS (mg/l)

EXHIBIT C

IRRIGATION LAKE AND WELL CHLORIDE DATA FROM SFWMD DATABASE

Exhibit C. Irrigation Lake and Well Chloride Data from SFMWD Database

Entity Type	Entity Name	District ID	Date of Data Collection (mm/dd/yyyy)	Chloride
WELL	Bear Well 1	4722	6/28/2020	581
WELL	Bear Well 1	4722	7/29/2020	626
WELL	Bear Well 1	4722	8/31/2020	581
WELL	Bear Well 1	4722	9/28/2020	626
WELL	Bear Well 1	4722	10/28/2020	581
WELL	Bear Well 2	117327	6/28/2020	581
WELL	Bear Well 2	117327	7/29/2020	626
WELL	Bear Well 2	117327	8/31/2020	581
WELL	Bear Well 2	117327	9/28/2020	626
WELL	Bear Well 2	117327	10/28/2020	626
WELL	BC Well 2R (repl. BC Well)	259516	6/28/2020	581
WELL	BC Well 2R (repl. BC Well)	259516	7/29/2020	581
WELL	BC Well 2R (repl. BC Well)	259516	8/31/2020	539
WELL	BC Well 2R (repl. BC Well)	259516	9/28/2020	589
WELL	BC Well 2R (repl. BC Well)	259516	10/28/2020	581
WELL	RBC (repl. Well No. 6)	259874	6/28/2020	581
WELL	RBC (repl. Well No. 6)	259874	7/29/2020	581
WELL	RBC (repl. Well No. 6)	259874	8/31/2020	436
WELL	RBC (repl. Well No. 6)	259874	9/28/2020	539
WELL	RBC (repl. Well No. 6)	259874	10/28/2020	581
PUMP	FCC BCL	151793	6/30/2018	322
PUMP	FCC BCL	151793	7/31/2018	451
PUMP	FCC BCL	151793	8/31/2018	369
PUMP	FCC BCL	151793	9/30/2018	262
PUMP	FCC BCL	151793	10/31/2018	345
PUMP	FCC BCL	151793	11/30/2018	244
PUMP	FCC BCL	151793	12/31/2018	394
PUMP	FCC BCL	151793	12/31/2018	394
PUMP	FCC BCL	151793	1/31/2019	345
PUMP	FCC BCL	151793	2/28/2019	394
PUMP	FCC BCL	151793	3/31/2019	422
PUMP	FCC BCL	151793	4/30/2019	451
PUMP	FCC BCL	151793	5/31/2019	451
PUMP	FCC BCL	151793	6/30/2019	224
PUMP	FCC BCL	151793	7/7/2019	193
PUMP	FCC BCL	151793	8/31/2019	337
PUMP	FCC BCL	151793	9/30/2019	383
PUMP	FCC BCL	151793	10/31/2019	465
PUMP	FCC BCL	151793	11/30/2019	465
PUMP	FCC BCL	151793	12/15/2019	468
PUMP	FCC BCL	151793	1/15/2020	468
PUMP	FCC BCL	151793	2/15/2020	436
PUMP	FCC BCL	151793	3/15/2020	436
PUMP	FCC BCL	151793	4/9/2020	241
PUMP	FCC BCL	151793	5/1/2020	581
PUMP	FCC BCL	151793	6/28/2020	530
PUMP	FCC BCL	151793	7/29/2020	436
PUMP	FCC BCL	151793	8/31/2020	502
PUMP	FCC BCL	151793	9/28/2020	307
PUMP	FCC BCL	151793	10/28/2020	307

Entity Type	Entity Name	District ID	Date of Data Collection (mm/dd/yyyy)	Chloride
PUMP	FCC BL	151794	6/30/2018	244
PUMP	FCC BL	151794	7/31/2018	322
PUMP	FCC BL	151794	8/31/2018	262
PUMP	FCC BL	151794	9/30/2018	262
PUMP	FCC BL	151794	10/31/2018	244
PUMP	FCC BL	151794	11/30/2018	42
PUMP	FCC BL	151794	12/31/2018	137
PUMP	FCC BL	151794	12/31/2018	137
PUMP	FCC BL	151794	1/31/2019	281
PUMP	FCC BL	151794	2/28/2019	179
PUMP	FCC BL	151794	3/31/2019	179
PUMP	FCC BL	151794	4/30/2019	164
PUMP	FCC BL	151794	5/31/2019	164
PUMP	FCC BL	151794	6/30/2019	136
PUMP	FCC BL	151794	7/7/2019	277
PUMP	FCC BL	151794	8/31/2019	296
PUMP	FCC BL	151794	9/30/2019	277
PUMP	FCC BL	151794	10/31/2019	241
PUMP	FCC BL	151794	11/30/2019	360
PUMP	FCC BL	151794	12/15/2019	330
PUMP	FCC BL	151794	1/15/2020	307
PUMP	FCC BL	151794	2/15/2020	266
PUMP	FCC BL	151794	3/15/2020	247
PUMP	FCC BL	151794	4/9/2020	383
PUMP	FCC BL	151794	5/1/2020	330
PUMP	FCC BL	151794	6/28/2020	360
PUMP	FCC BL	151794	7/29/2020	307
PUMP	FCC BL	151794	8/31/2020	407
PUMP	FCC BL	151794	9/28/2020	296
PUMP	FCC BL	151794	10/28/2020	330
PUMP	FCC RW	151795	6/30/2018	164
PUMP	FCC RW	151795	7/31/2018	322
PUMP	FCC RW	151795	8/31/2018	262
PUMP	FCC RW	151795	9/30/2018	210
PUMP	FCC RW	151795	10/31/2018	226
PUMP	FCC RW	151795	11/30/2018	150
PUMP	FCC RW	151795	12/31/2018	210
PUMP	FCC RW	151795	12/31/2018	210
PUMP	FCC RW	151795	1/31/2019	281
PUMP	FCC RW	151795	2/28/2019	226
PUMP	FCC RW	151795	3/31/2019	244
PUMP	FCC RW	151795	4/30/2019	179
PUMP	FCC RW	151795	5/31/2019	125
PUMP	FCC RW	151795	6/30/2019	258
PUMP	FCC RW	151795	7/7/2019	296
PUMP	FCC RW	151795	8/31/2019	258
PUMP	FCC RW	151795	9/30/2019	383
PUMP	FCC RW	151795	10/31/2019	258
PUMP	FCC RW	151795	11/30/2019	277
PUMP	FCC RW	151795	12/15/2019	247
PUMP	FCC RW	151795	1/15/2020	247
PUMP	FCC RW	151795	2/15/2020	229
PUMP	FCC RW	151795	3/15/2020	229
PUMP	FCC RW	151795	4/9/2020	224
PUMP	FCC RW	151795	5/1/2020	247
PUMP	FCC RW	151795	6/28/2020	241
PUMP	FCC RW	151795	7/29/2020	221
PUMP	FCC RW	151795	8/31/2020	247
PUMP	FCC RW	151795	9/28/2020	247
PUMP	FCC RW	151795	10/28/2020	330

Entity Type	Entity Name	District ID	Date of Data Collection (mm/dd/yyyy)	Chloride
PUMP	FFC Lake 6	186149	6/30/2018	345
PUMP	FFC Lake 6	186149	7/31/2018	422
PUMP	FFC Lake 6	186149	8/31/2018	369
PUMP	FFC Lake 6	186149	9/30/2018	394
PUMP	FFC Lake 6	186149	10/31/2018	451
PUMP	FFC Lake 6	186149	11/30/2018	322
PUMP	FFC Lake 6	186149	12/31/2018	394
PUMP	FFC Lake 6	186149	12/31/2018	394
PUMP	FFC Lake 6	186149	1/31/2019	451
PUMP	FFC Lake 6	186149	2/28/2019	394
PUMP	FFC Lake 6	186149	3/31/2019	422
PUMP	FFC Lake 6	186149	4/30/2019	451
PUMP	FFC Lake 6	186149	5/31/2019	482
PUMP	FFC Lake 6	186149	6/30/2019	224
PUMP	FFC Lake 6	186149	7/7/2019	383
PUMP	FFC Lake 6	186149	8/31/2019	337
PUMP	FFC Lake 6	186149	9/30/2019	496
PUMP	FFC Lake 6	186149	10/31/2019	465
PUMP	FFC Lake 6	186149	11/30/2019	530
PUMP	FFC Lake 6	186149	12/15/2019	502
PUMP	FFC Lake 6	186149	1/15/2020	539
PUMP	FFC Lake 6	186149	2/15/2020	539
PUMP	FFC Lake 6	186149	3/15/2020	581
PUMP	FFC Lake 6	186149	4/9/2020	639
PUMP	FFC Lake 6	186149	5/1/2020	626
PUMP	FFC Lake 6	186149	6/28/2020	539
PUMP	FFC Lake 6	186149	7/29/2020	539
PUMP	FFC Lake 6	186149	8/31/2020	539
PUMP	FFC Lake 6	186149	9/28/2020	330
PUMP	FFC Lake 6	186149	10/28/2020	307

FLORIDA DEPARTMENT OF Environmental Protection

South District
Post Office Box 2549
Fort Myers, FL 33902-2549
SouthDistrict@FloridaDEP.gov

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

March 1, 2021

Wade Moser, General Manager
6341 Deer Run Road SW
Fort Myers, FL 33908
Email: forestu@aol.com

Re: Warning Letter
Forest Utilities WWTP
FLA014478
LEE County – DW

Dear Mr. Moser:

A Compliance Evaluation Inspection was conducted for your facility on October 14, 2020 and a File Review on February 26, 2021, respectively under the authority of Section 403.061, Florida Statutes (F.S.). During this inspection and file review, possible violations of Chapters 62-160, 62-520, 62-555, 62-600, 62-610, 62-620, of the Florida Administrative Code (F.A.C.), were observed.

During the inspection and file review, Department personnel noted the following:

- The facility did not properly fill out their chain of custody.
- The facility did not preserve their samples properly.
- The facility did not complete their calibration/verification logs for their pH meter, chlorine meter, and turbidity meter.
- The facility did not record the beginning and end times of composite sampling.
- The facility does not have all records of sampling available and complete.
- The facility has DMR deficiencies.
- The facility did not do the required sampling for annual Reclaimed Water and/or Effluent Analysis Report.
- The facility did not submit an Annual Reuse Report.
- The facility did not submit their monitoring results for Giardia and Cryptosporidium in a timely manner.
- The facility did not submit their groundwater DMRs in a timely manner.
- The facility did not identify all of their analysis methods in their groundwater DMR.

- The facility did not properly report their non-detectable values on their groundwater DMR.
- The facility has multiple groundwater exceedances.

Violations of Florida Statutes or administrative rules may result in liability for damages and restoration, and the judicial imposition of civil penalties, pursuant to Sections 403.121, Florida Statutes.

Please contact Louise Chang, at (239) 344-5630, within **15 days** of receipt of this Warning Letter to arrange a meeting to discuss this matter. The Department is interested in receiving any facts you may have that will assist in determining whether any violations have occurred. Any document submittals can be made to our email mailbox at SD-WWinspect@Floridadep.gov or may be mailed to the above address. You may bring anyone with you to the meeting that you feel could help resolve this matter.

Please be advised that this Warning Letter is part of an agency investigation, preliminary to agency action in accordance with Section 120.57(5), Florida Statutes. We look forward to your cooperation in completing the investigation and resolving this matter.

Sincerely,

Jon M. Iglehart
Director of District Management
South District
Florida Department of Environmental Protection

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
WASTEWATER COMPLIANCE INSPECTION REPORT

Facility Name and Physical Address	WAFR ID	County	Entry Date	Entry Time
Forest Utilities WWTP 6341 Deer Run Road SW Fort Myers, FL 33908	FLA014478 **Facility Phone #** (239) 481 - 5333	LEE	10/14/2020 **Exit Date** 10/14/2020	09: 00 AM **Exit Time** 11: 30 AM

LAT	N 26	o	29	‘	13	“
LONG	W 81	o	52	‘	12	“

Name(s) of Field Representatives(s) and Title	Operator Certification #	Email	Phone

Name & Address of Permittee / Designated Rep.	Title	Email	Phone
Wade Moser 6341 Deer Run Road SW Fort Myers, FL 33908	General Manager	Forestu@aol.com	(239) 481 - 5333

Inspection Type	C	E	I		Samples Taken(Y/N): N Pictures Taken(Y/N): Y	Sample ID#:	Samples Split (Y/N) : N

X **Domestic** ☐ **Industrial**

FACILITY COMPLIANCE AREAS EVALUATED

IC = In Compliance; MC = Minor Out of Compliance; NC = Out of Compliance; SC = Significant out of Compliance; NA = Not Applicable; NE = Not Evaluated
Significant Non-Compliance Criteria Should be Reviewed when Out of Compliance Ratings Are Given in Areas Marked by a “♦ ”

	PERMITS/ORDERS		SELF MONITORING PROGRAM		FACILITY OPERATIONS		EFFLUENT/DISPOSAL
IC	1. ♦ Permit	IC	3. Laboratory	IC	6. Facility Site Review	IC	9. ♦ Effluent Quality
NA	2. ♦ Compliance Schedules	NC	4. Sampling	IC	7. Flow Measurement	IC	10. ♦ Effluent Disposal
		NC	5. ♦ Records & Reports	IC	8.♦ Operation & Maintenance	IC	11. Biosolids
						NC	12. ♦ Groundwater
NE	14. Other					IC	13. ♦ SSO Survey

Facility and/or Order Compliance Status:	☐ In-Compliance	X Out-Of-Compliance	☐ Significant-Out-Of-Compliance

Recommended Actions: See Warning Letter

Name(s) and Signature(s) of Inspector(s)		District Office/Phone Number	Date
Nicole Devine	Nicole Devine	SD/ (239) 344-5675	10/23/2020
Name and Signature of Reviewer Deanna Newburg	Deanna Newburg	**District Office/Phone Number** SD/ (239) 344-5677	**Date** 02/26/2021

Single Event Violations (*SNC SEVs)				
Check for Yes	**Evaluation Area**	**Description**	**Finding Description**	**Finding ID**
☐	Permit	Effluent Violations - Unapproved Bypass	Wastewater was diverted from a portion of the treatment process without department approval.	**UNBY**
☐	*Permit	Permit Violations - Discharge Without a Valid Permit	The facility was operating without a permit or with an expired permit.	**UPHI**
☐	Permit	Permit Violations - Failure to Submit Timely Permit Renewal Application	The permittee failed to submit an application to renew the existing permit at least 180 days prior to expiration.	**PFSA**
☐	Laboratory	Management Practice Violations - Laboratory Not Certified	The laboratory was not certified by the National Environmental Laboratory Accreditation Conference (NELAC).	**LNCE**
☐	Sampling	Monitoring Violations - Analysis not Conducted	The facility failed to collect and/or analyze samples as required by permit or enforcement action.	**ANCV**
☐	Sampling	Monitoring Violations - Failure to Monitor for Toxicity Requirements	The facility failed to collect and/or analyze routine or follow-up toxicity samples.	**FTOX**
☐	Records and Reports	Management Practice Violations - Failure to Develop Adequate SPCC Plan	The facility failed to develop or maintain their Spill Prevention Control and Countermeasures (SPCC) plan.	**FSPC**
☐	Records and Reports	Management Practice Violations - Failure to Maintain Records	The facility failed to maintain records for the required retention period.	**FMRR**
☐	Records and Reports	Reporting Violations - Failure to Notify	The permittee failed to notify the department of any event or activity that requires notification as required by permit or rule.	**RSWP**
☒	Records and Reports	Reporting Violations - Failure to Submit DMRs	The permittee failed to submit any DMR required by rule, permit, or enforcement action in a timely manner.	**FDMR**
☒	Records and Reports	Reporting Violations - Failure to submit required report (non-DMR, non-pretreatment)	The facility failed to submit any report required by rule, permit, enforcement action or inspection activity except for DMRs.	**FRPT**
☐	Facility Site Review	Management Practice Violations - Improper Land Application (non-503, non-CAFO)	The land application system was not being maintained.	**LASN**
☐	Flow Measurement	Monitoring Violations - No Flow Measurement Device	The facility failed to install a flow measurement device, an approved flow measurement device, or a working flow measurement device.	**NOFL**
☐	Operation and Maintenance	Management Practice Violations - Improper Operation and Maintenance	The facility failed to follow their operation and maintenance plan/manual or their Biosolids Nutrient Management Plan.	**IONM**
☐	Operation and Maintenance	Management Practice Violations - Inflow/Infiltration (I/I)	The facility had an inflow and infiltration problem causing collection system issues and/or operational issues.	**ININ**
☐	Operation and Maintenance	Management Practice Violations - No Licensed/Certified Operator	The facility was being operated without a certified operator or by an operator that is not licensed for the size of plant.	**ONCO**
☐	*Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent acute toxicity has been documented through follow-up tests.	**EATX**
☐	*Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent chronic toxicity has been documented through follow-up tests.	**ECTX**
☐	*Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent acute or chronic toxicity has been documented in the effluent through the use of routine and follow-up tests.	**ETOX**
☐	Effluent Quality	Effluent Violations - Narrative Effluent Violation	The facility violated a permit or enforcement narrative effluent limit.	**XNEV**
☐	*Effluent Quality	Effluent Violations - Reported Fish Kill	The facility had a discharge of wastewater that resulted in a fish kill.	**XFSH**
☐	Sanitary Sewer Overflow Survey	WW SSO - Discharge to Waters	A sewage spill from any components of a collection/transmission system or from a treatment plant reached surface waters including stormwater conveyance system or drainage ditch.	**SSO1**
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to Maintain Records or Meet Record Keeping Requirements	The facility failed to keep routine documentation and reporting records of spills, and/or operation and maintenance activities on the collection/transmission system.	**SSO2**
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to monitor	The facility failed to collect and/or analyze bacteriological samples for sewage spills that reached surface waters.	**SSO3**
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to report violation that may endanger public health 122.41(l)(7)	The facility failed to report a sewage spill within 24 hours of discovery.	**SSO4**
☐	Sanitary Sewer Overflow Survey	WW SSO - Improper Operation and Maintenance	The facility failed to perform routine preventative maintenance to keep the collection/transmission system in good working order.	**SSO5**
☐	Sanitary Sewer Overflow Survey	WW SSO - Overflow to Dry Land	A sewage spill from any part of a collection/transmission system or treatment plant that did not make it to surface waters, i.e., stormwater collection system, drainage ditch, stream, pond, or lake.	**SSO6**

Facility Treatment Summary: The facility is a domestic wastewater treatment plant that uses the extended aeration process. The permitted capacity for the annual average daily flow (AADF) is 0.800 MGD. The facility has four (4) surge tanks and one (1) effluent reject tank. Biological treatment occurs in seven (7) aeration tanks and three (3) clarifiers. The high-level disinfection system consists of two (2) traveling bridge sand filters and two (2) chlorine contact tanks. Biosolids are treated and stored in three (3) anaerobic holding tanks, three (3) aeration holding tanks, three (3) sludge drying beds and one (1) dried sludge holding bin.
Reuse or Disposal Summary: A slow rate public access reuse system that irrigates 280 acres of the Forest Country Club Golf Courses. Reclaimed water is stored in two (2) isolated golf course ponds that do not discharge. The permitted capacity for the reuse system is 0.800 MGD AADF.

1. Permit (PERM) — In-Compliance

Current Permit Available Onsite?	Yes
Date Permit Issued?	May 5, 2016
Date Permit Expires?	May 4, 2021
Permit Renewal Application Due by?	November 5, 2020
Administrative or Judicial Orders?	No

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
1.1 Observation: Is the permit valid?	Yes		UPHI
1.2 Observation: Was Is a copy of the permit available onsite?	Yes	PEOS	PENA
1.3 Observation: Is the facility operated in accordance with the permit?	Yes	PEOP	PEMA
1.4 Observation: Is the permit renewal application in house for review? Additional Comments: The facility has submitted their permit renewal application to the Department on October 27, 2020 and it was issued on December 18, 2020 with an expiration date of May 4, 2026.	Yes	PAPR	
1.5 Observation: Has the facility failed to submit the permit renewal application 180 days prior to the expiration date? Additional Comments: Department records indicate that the current operating permit will expire on May 4, 2021. F.A.C. Rule 62-620.335(1) states that a Permittee shall submit an application to renew the existing permit at least 180 days before the expiration date of the existing permit. Timely and sufficient submittal of the renewal application and permit processing fee is important (and in your best interest) as it automatically extends the expiration date on the existing permit until the Department takes final action on the renewal application. A tardy application could result in non-compliance. Your renewal application and permit processing fee must be submitted no later than November 5, 2020. The facility has submitted their permit renewal application to the Department on October 27, 2020 and it was issued on December 18, 2020 with an expiration date of May 4, 2026.	No	PFSA	PSSC
1.6 Observation: Has the permittee for the facility changed?	No	PSSC	
1.7 Observation: Is wastewater diverted from a portion of the treatment process without Department approval?	No	UNBY	

1.8 Observation: Is the facility discharging to waters of the state without an appropriate FDEP permit?	No	PDWS	
1.9 Observation: Does the facility have a substantial plant modification placed into service without Department approval?	No	UNPM	

2. Compliance Schedules (COMS) Not Applicable

Compliance Schedule in Permit met?	See Observation
Compliance Schedule(s) in Order are being met?	See Observation

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
2.1 Observation: Is the facility under a compliance schedule?	No	PSSC	

3. Laboratory (LABS) In-Compliance

Contract Lab Name and Certification #	Sanders Laboratories Inc. – Nokomis E84380
Facility DOH Certification #	E84380

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
3.1 Observation: Does the facility have a laboratory onsite?	No		NANA
3.2 Observation: Is the laboratory certified by the National Environmental Laboratory Accreditation Conference (NELAC)? Additional Comments: The facility has contract with Sanders Laboratory Inc. Nokomis (E84380) to collect and analyze samples outlined in their permit. The laboratory then submits the sample results back to the facility, who is responsible for properly and correctly reporting those results on their DMRs.	Yes	LACD	LNCE

4. Sampling (SAMP) Out-of-Compliance

Sampling conducted during inspection?	No
Sampling observed during inspection?	No
Sampling conducted at locations identified by the permit?	Yes
Safe access to sampling locations?	Yes

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
4.1 Observation: Is there continuous monitoring?	Yes		

Additional Comments: The facility is permitted to continuously monitor for Total Residual Chlorine (TRC) at both the west and east chlorine contact chamber (CCC) outfalls, Turbidity at both the west and east filter overflow, and Flow at the meter prior to the aeration tanks.

R-001 Reuse System:

			Reclaimed Water Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow (calculated to reuse)	MGD	Max	0.800	Annual Average	5 days/week	Calculated	FLW-02	See I.B.4
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	8-hr FPC	EFA-01	
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	8-hr FPC	EFA-02	
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	7 days/week	Grab	EFB-01	
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	7 days/week	Grab	EFB-02	
Coliform, Fecal	#/100mL	Max	25	Single Sample	7 days/week	Grab	EFA-01	
Coliform, Fecal	#/100mL	Max	25	Single Sample	7 days/week	Grab	EFA-02	
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	7 days/week	Calculated	EFA-01	See I.A.3
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	7 days/week	Calculated	EFA-02	See I.A.3
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	5 Days/Week	Grab	EFA-01	
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	5 Days/Week	Grab	EFA-02	
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	Continuous	Meter	EFA-01	See I.A.4 and I.A.7
Chlorine, Total Residual	mg/L	Min	1.0	Single Sample	Continuous	Meter	EFA-02	
Turbidity	NTU	Max	Report	Single Sample	Continuous	Meter	EFB-01	See I.A.5 and I.A.7
Turbidity	NTU	Max	Report	Single Sample	Continuous	Meter	EFB-02	See I.A.5 and I.A.7
Giardia	cysts/100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-01	See I.A.8

			Reclaimed Water Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Giardia	cysts/100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-02	See I.A.8
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-01	See I.A.8
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	Every 5 years	Grab	EFA-02	See I.A.8

Monitoring Site Number	Description of Monitoring Site
FLW-02	As indicated in the application, flow is determined by bubbler-type flow measurement: flow is calculated using a weir formula. Outlet weir of chlorine contact tanks prior to reuse storage or public access reuse site(s).
EFA-01	The west chlorine contact tank's outfall.
EFA-02	The east chlorine contact tank's outfall.
EFB-01	The west Filter's weir overflow.
EFB-02	The east Filter's weir overflow.

			Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow (into treatment plant)	MGD	Max Max	0.800 Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-01	See I.B.4
Percent Capacity, (TMADF/Permitted Capacity) x 100	percent	Max	Report	3-Month Rolling Average	Monthly	Calculated	CAL-01	
BOD, Carbonaceous 5 day, 20C (Influent)	mg/L	Max	Report	Single Sample	Weekly	8-hr FPC	INF-01	See I.B.3
Solids, Total Suspended (Influent)	mg/L	Max	Report	Single Sample	Weekly	8-hr FPC	INF-01	See I.B.3

Monitoring Site Number	Description of Monitoring Site
FLW-01	Magnetic flow meter prior to the aeration tanks.
CAL-01	Calculation of percent capacity. Calculated from the FLW-01 measurements.
INF-01	At the primary bar screen above the surge tanks.

Biosolids:

			Biosolids Limitations		Monitoring Requirements		
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number
Biosolids Quantity (Landfilled)	Dry Tons	Max	Report	Monthly Total	Monthly	Calculated	RMP-1

Monitoring Site Number	Description of Monitoring Site Calculations
RMP-1	Monthly Total of Biosolids Landfilled.

4.2 Observation: Are samples being collected and analyzed as required by the permit or enforcement action?	Yes		ANCV
4.3 Observation: Is the facility conducting analysis properly for $CBOD_5$?	Yes		SACB
4.4 Observation: Are the TSS samples collected after filtration and prior to chlorination?	Yes		SASS
4.5 Observation: Is sample collection being performed in accordance with DEP SOP-001/01?	Yes	SOPF	SSOP
4.6 Observation: Are samples being collected in the proper containers in accordance with 40 CFR Part 136, Table II? Additional Comments: The facility does not indicate on their chain of custody (COC) the type of sampling container they utilize. See Section 4.10 for additional comments, permit/rule reference, and corrective actions.	NE		SPCO
4.7 Observation: Are samples being located at locations specified in the permit?	Yes		SWLO
4.8 Observation: Are the sample locations safe?	Yes	SSAP	SAFA
4.9 Observation: Is the chain of custody form maintained for samples?	Yes		SCOC
4.10 Deficiency: Is the chain of custody form filled out properly? Additional Comments: The COC do not include the following: Name, address and contact information of the sampler; facility and monitoring location sites sampled; facility sampled has the permit ID information provided; the number and type of bottles collected for each analytical group; required field parameters are recorded (pH, temperature, chlorine, etc.); type of sample preservation; lot numbers and expiration dates preservatives; sample temperature at time of receipt; and affiliation of the person who relinquished and received the samples. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter	No		SCHC

62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Corrective Actions: From this point forward, please ensure that the COCs include all required and relevant information. Please submit in documentation of your updated COC.			
4.11 Deficiency: Are samples preserved properly? Additional Comments: The COCs submitted by the facility for review (COC 09/16/2019 – 09/22/2019) are not preserved properly. Specifically, the fecal coliform samples require $Na_2S_2O_3$ to be added to the sample for preservation, and the facility only has ice as a preservative. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter 62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Corrective Actions: From this point forward, please ensure that all samples collected are preserved properly. Please submit in documentation of your updated COC. For more information on proper preservation methods for different parameters, please see Table FS 1000-4 in DEP SOP FS 1000.	No		SNPP
4.12 Observation: Are samples placed on ice?	Yes		SNPI
4.13 Observation: Are the calibration standards and/or buffers expired?	No	CSBO	CBST
4.14 Observation: Is the pH meter calibrated daily?	Yes		SAPC
4.15 Deficiency: Are the calibration/verification logs for the pH meter complete? Additional Comments: The calibration logs for the pH meter does not include the following: Times of calibration, value and/or unit of standard (acceptance criteria); standards and/or buffers used for calibration and their respective lot number(s) and expiration date(s); and indication of whether the calibration passed and/or failed. Also, please note that the DEP SOPs that you have on file have since changed. The current DEP SOPs can be found on our website at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter 62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Corrective Actions: Please submit an updated calibration/verification log to the Department that includes all required and relevant information.	No		PSSC
4.16 Observation: Is the pH calibration bracketed? Additional Comments: The facility uses pH buffers 4.0 s.u. and 7.0 s.u. to calibrate their pH meter daily. Given this range, they can reliably read pH value(s) of 3.8 s.u. to	Yes	PSSC	SAPB

7.2 s.u. The facility does have a pH buffer of 10.0 s.u., but from their calibration records it is unclear when and/or if they use it.			
4.17 Deficiency: Is the chlorine meter calibrated daily? Additional Comments: The chlorine calibration/verification logs submitted by the facility indicate that the meter (both field and continuous) were not calibrated from 09/17/2020 – 10/7/2020. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter 62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Corrective Actions: From this point forward, please ensure that both the chlorine field meter and continuous meter are being calibrated daily. Please submit in documentation of your chlorine calibration/verification log indicating daily calibration.	No		STRC
4.18 Deficiency: Are the calibration/verification logs for the chlorine meter complete? Additional Comments: The calibration logs for the chlorine meter does not include the following; times of calibration, value and/or unit of standard(acceptance criteria), standards and/or buffers used for calibration and their respective lot number(s) and expiration date(s), and indication of whether calibration passed. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter 62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Corrective Actions: Please submit an updated calibration/verification log to the Department that includes all required and relevant information.	No		PSSC
4.19 Deficiency: Are the calibration/verification logs for the turbidity meter complete? Additional Comments: The calibration logs for the turbidity meter does not include the following; times of calibration, value and/or unit of standard(acceptance criteria), standards and/or buffers used for calibration and their respective lot number(s) and expiration date(s), and indication of whether calibration passed. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter 62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Corrective Actions: Please submit an updated calibration/verification log to the Department that includes all required and relevant information.	No		PSSC

4.20 Observation: Are self-monitoring records maintained in an organized manner?	Yes		SASM
4.21 Observation: Does the facility have composite sampling?	Yes		
4.22 Observation: Are temperature measurement devices routinely checked against NIST thermometers?	Yes		SATM
4.23 Observation: Is a thermometer present at the influent and/or effluent composite sampler? Additional Comments: The facility does not have a composite sampler onsite, rather they take the samples themselves and store them in a refrigerator in the office that has a NIST thermometer which is checked daily.	Yes	PSSC	SNTP
4.24 Deficiency: Do records show the beginning and end times of composite sampling? Additional Comments: The facility does not record the beginning or end times of each composite sampling event in their records. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter 62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Permit/Rule Reference: F.A.C. Rule 62-160.240(3)(c)(5) states that the date and time of sample collection, including date and time sample collection ended (if collecting a composite sample) shall be provided when requested by the Department. Corrective Actions: From this point forward, please record the beginning and end times of all composite sampling events. Please submit in documentation of these entries.	No		SABE

5. Records and Reports (RRPT) Out-of-Compliance

Documents/Records Reviewed	
Discharge Monitoring Reports (DMRs)	From 06/01/2019 To 10/31/2020

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
5.1 Observation: Are copies of the operator license current and onsite? Additional Comments: Neil R. Harden (0005379) Class B issued on 04/23/2019 and expires on 04/30/2021. Adrian Charlton (0014895) Class A issued on 04/26/2019 and expires on 04/30/2021. Wade E. Moser (0003040) Class C issued on 04/29/2019 and expires on 04/30/2021.	Yes	OCAO	ROPL
5.2 Observation: Is a copy of the current laboratory certification available onsite?	Yes	LCAI	LCNA

Additional Comments: The facility has contract with Sanders Laboratory Inc. Nokomis (E84380) to collect and analyze samples outlined in their permit.			
5.3 Deficiency: Does the facility have all records of sampling available and complete? Additional Comments: While the facility has a complete record of sampling, the COCs are missing information. Permit/Rule Reference: F.A.C. Rule 62-620.610(18)(e) states that field activities. Including onsite tests and sample collection, shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in F.A.C. Chapter 62-160. The full list of DEP SOPs is available online at: https://floridadep.gov/dear/quality-assurance/content/dep-sops. Corrective Actions: From this point forward, please ensure that the COCs include all required and relevant information. Please submit in documentation of your updated COC.	No		RECD
5.4 Observation: Are the DMRs submitted on the proper form?	Yes		RDMR
5.5 Observation: Is an authorized representative signing the DMRs?	Yes		RARS
5.6 Deficiency: Does a review of the DMRs reveal any deficiencies? Additional Comments: Please see the table below for a detailed description of the deficiencies found in the DMR review. Also, the Department does not have reasonable assurance that the facility is calibrating their meter correctly and/or that their meter is functioning as intended given the constant pH readings of 6.9 s.u. to 7.1 s.u. on Part B of the DMRs. Permit/Rule Reference: F.A.C. Rule 62-600.650 (5) states that the owner, manager, or operator of a domestic wastewater facility, or agent or employee thereof, shall not submit misleading, false, or inaccurate information or operational reports to the Department, either knowingly or through neglect. Corrective Actions: Please provide documentation to the Department explaining the cause of the constant pH readings, with a description of how the facility calibrates their pH meter. Also, please correct all DMR deficiencies outlined in the table below and re-submit the DMRs to the Department. When re-submitting DMRs, please remember to check of the re-submittal box on the DMR.	Yes	RDMV	RRDS

Monitoring Period	Description of Deficiencies/Transcriptions and/or Calculation Errors
SEP-2020	- pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
AUG-2020	- pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - FLW-01 (PARM Code 50050) monthly average calculated incorrectly - Missing additional operator on DMR Part B
JUL-2020	- pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
JUN-2020	- CBOD EFA-01 (PARM Code 80082) weekly and monthly average calculated incorrectly - pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B

	- pH EFA-01 (PARM Code 0400) is consistently the same - FLW-01 (PARM Code 50050) monthly average calculated incorrectly - CBOD INF-01 (PARM Code 80082) maximum value transcribed incorrectly - Missing additional operator on DMR Part B
MAY-2020	- pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
APR-2020	- FLW-02 (PARM Code 50050) is not on the submitted Part B - pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
MAR-2020	- FLW-02 (PARM Code 50050) is not on the submitted Part B - CBOD EFA-01 (PARM Code 80082) weekly average is calculated and/or transcribed incorrectly - pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - TSS INF-01 (PARM Code 00530) maximum value transcribed incorrectly - Missing additional operator on DMR Part B
FEB-2020	- FLW-02 (PARM Code 50050) is not on the submitted Part B - pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - TSS INF-01 (PARM Code 00530) maximum value transcribed incorrectly - Missing additional operator on DMR Part B
JAN-2020	- FLW-02 (PARM Code 50050) is not on the submitted Part B - pH EFA-01 (PARM Code 00400) has NOD on DMR Part A but values on Part B - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
DEC-2019	- FLW-02 (PARM Code 50050) is not on the submitted Part B - Fecal Coliform EFA-01 (PARM Code 74055) maximum value transcribed incorrectly - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
NOV-2019	- FLW-02 (PARM Code 50050) is not on the submitted Part B - CBOD EFA-01 (PARM Code 80082) weekly average is calculated and/or transcribed incorrectly - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
OCT-2019	- FLW-02 (PARM Code 50050) is not on the submitted Part B - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
SEP-2019	- FLW-02 (PARM Code 50050) is not on the submitted Part B - No explanation of NOD for FLW-02 - CBOD EFA-01 (PARM Code 80082) weekly average is calculated and/or transcribed incorrectly - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
AUG-2019	- FLW-02 (PARM Code 50050) is not on the submitted Part B - No explanation of NOD for FLW-02 - CBOD EFA-01 (PARM Code 80082) weekly average is calculated and/or transcribed incorrectly - pH EFA-01 (PARM Code 0400) is consistently the same - Missing additional operator on DMR Part B
JUL-2019	- FLW-02 (PARM Code 50050) is not on the submitted Part B - No explanation of NOD for FLW-02

	- CBOD EFA-01 (PARM Code 80082) weekly average is calculated and/or transcribed incorrectly - pH EFA-01 (PARM Code 0400) is consistently the same
JUN-2019	- FLW-02 (PARM Code 50050) is not on the submitted Part B - No explanation of NOD for FLW-02 - CBOD EFA-01 (PARM Code 80082) weekly average is calculated and/or transcribed incorrectly - pH EFA-01 (PARM Code 0400) is consistently the same

5.7 Observation: Is the facility submitting fraudulent data?	No	RSFD	
5.8 Observation: Is there failure to correct incomplete/deficient DMRs for 30 days or more after Department notice?	No	RDID	
5.9 Deficiency: Has the facility failed to submit any DMR required by rule, permit, or enforcement action in a timely manner? Additional Comments: The following DMRs were not submitted in a timely manner. Please see the table below for a more detailed description. Permit/Rule Reference: F.A.C. Rule 62-620.610(18) states that during any period of operation authorized by the current permit, the permittee shall complete and submit to the Department Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e. monthly, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to the permit. Unless specified otherwise in this permit, monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates outlined in the permit. DMRs shall be submitted for each required monitoring period, including periods of no discharge. Rule/Permit Reference: F.A.C. Rule 62-520.600(11)(b) states that on a quarterly basis, or as specified in the permit, the permittee shall submit reports on all monitoring wells identification the type, number and concentration of discharge constituents or parameters that have been approved by the Department as appropriate criteria to monitor in the monitoring program based upon their potential to exceed the minimum criteria contained in F.A.C. Rule 62-520.400 and the appropriate standards for the particular class of water adjacent to the zone of discharge as described in F.A.C. Rule 62-520.420 through 62-520.470. Corrective Actions: From this point forward, please ensure that all DMRs are submitted in a timely manner.	Yes	FDMR	PSSC

Monitoring Period	Date Submitted	Date Due	Days Late
AUG-2020	09/29/2020	09/28/2020	1
AUG-2019	09/31/2019	09/28/2020	3
JUL-2019	09/16/2019	08/28/2019	19

Groundwater DMR

Monitoring Period	Date Submitted	Date Due	Days Late
APR-2020 to JUN-2020	08/26/2020	07/28/2020	29

5.10 Observation: Does the facility have two or more DMRs not submitted to the Department within a 6-month period?	No	RD26	
5.11 Observation: Are all required documents and reports available at the plant well organized and complete?	Yes	RALL	PSSC

5.12 Observation: Does the facility maintain records of their daily calibration of their pH meter?	Yes		RRPH
5.13 Observation: Does the facility maintain records of their daily calibration of their chlorine meter?	Yes		RTRC
5.14 Observation: Does the facility maintain records of their daily checks of their in-line meter(s) with their field meter(s)?	Yes		RDIM
5.15 Observation: Is a copy of the Operation and Maintenance (O & M) Manual available onsite?	Yes		ROMM
5.16 Deficiency: Has the permittee submitted an annual Reclaimed Water and/or Effluent Analysis Report? Additional Comments: The facility submitted their Annual Reclaimed Water and/or Effluent Analysis Report, but they did not conduct any sampling. Permit/Rule Reference: As outlined in the permit under Section I.B during the period of operation authorized by this permit, reclaimed water or effluent shall be monitored annually for the primary and secondary drinking water standards contained in Chapter 62-550, F.A.C., (except for asbestos, total coliform, color, odor, and residual disinfectants). These monitoring results shall be reported to the Department annually on the DMR. During years when a permit is not renewed, a certification stating that no new non-domestic wastewater dischargers have been added to the collection system since the last reclaimed water or effluent analysis was conducted may be submitted with the signed DMR in lieu of performing the analysis. When such a certification is submitted with the DMR, monitoring not required this period should be noted on the DMR. The annual reclaimed water or effluent analysis report, and certification if applicable, shall be completed and submitted in a timely manner so as to be received by the Department at the address identified on the DMR by January 28 of each year. Approved analytical methods identified in Rule 62-610.100(3)(j), F.A.C, shall be used for analysis. If no method is included for a parameter, methods specified in Chapter 62-550, F.A.C., shall be used. Corrective Actions: Please sample for the parameters outlined in the permit and resubmit the Annual Reclaimed Water and/or Effluent Analysis Report (DMR RWS-A) to the Department.	Yes	PSSC	RARR
5.17 Deficiency: Has the permittee submitted an Annual Reuse Report on DEP Form 62-610.300(4)(a)2? Additional Comments: The Department has no record of the Annual Reuse Report for OCT-2019 to SEP-2020. Permit/Rule Reference: Section IV.A.14 in the permit states that the permittee shall submit an Annual Reuse Report using DEP Form 62-610.300(4)(a)2 on or before January 1 of each year. The form can be found on the DEP website here: https://floridadep.gov/water/domestic-wastewater/content/domestic-wastewater-forms. Corrective Actions: Please submit the Annual Reuse report to the South District and the DEP Reuse Coordinator in Tallahassee.	No		PSSC
5.18 Deficiency: Does the facility submit their monitoring results for Giardia and Cryptosporidium in a timely manner?	No		RNGC

Additional Comments: The facility has not submitted their pathogen monitoring within the last five (5) years. Permit/Rule Reference: F.A.C. Rule 62-610.463(4)(b) states that treatment facilities having capacities of less than 1.0 MGD, shall sample the reclaimed water for Giardia and Cryptosporidium where sampling shall be conducted at one time during each five-year period. Intervals between sampling shall not be greater than five years. Samples shall be taken at a point immediately following the disinfection process. Corrective Actions: Please submit DEP Form 62-610.300(4)(a)4 to the South District and the DEP Reuse Coordinator in Tallahassee. https://floridadep.gov/water/domestic-wastewater/forms/pathogen-monitoring			
5.19 Observation: Are the Giardia and Cryptosporidium results submitted on the DEP Form 62-610.300(4)(a)4? Additional Comments: The facility has not submitted their pathogen monitoring within the last five (5) years. Please see Section 5.18 for Additional Comments, Permit/Rule Reference and Corrective Actions.	NE		PSSC
5.20 Observation: Has the facility failed to maintain the records onsite for the required retention period?	No	FMRR	
5.21 Observation: Are records well organized?	Yes	RORG	
5.22 Observation: Is the logbook available onsite?	Yes		RNOM
5.23 Observation: Are the entries in the operator logbook clear, concise, informative and relevant?	Yes	ROPC	
5.24 Observation: Is the logbook complete and contains all required information?	Yes	LOGI	RLOG
5.25 Observation: Has the permittee failed to notify the Department of any event or activity that requires notification as required by permit or rule?	No	RSWP	
5.26 Deficiency: Has the facility failed to submit any report required by rule, permit, enforcement action or inspection activity, except for DMRs? Additional Comments: The facility has not submitted their pathogen monitoring within the last five (5) years and the Annual Reuse Report form. Permit/Rule Reference: F.A.C. Rule 62-610.463(4)(b) states that treatment facilities having capacities of less than 1.0 MGD, shall sample the reclaimed water for Giardia and Cryptosporidium where sampling shall be conducted at one time during each five-year period. Intervals between sampling shall not be greater than five years. Samples shall be taken at a point immediately following the disinfection process. Permit/Rule Reference: Section IV.A.14 in the permit states that the permittee shall submit an Annual Reuse Report using DEP Form 62-610.300(4)(a)2 on or before January 1 of each year. The form can be found on the DEP website here: https://floridadep.gov/water/domestic-wastewater/content/domestic-wastewater-forms. Corrective Actions: Please submit DEP Form 62-610.300(4)(a)4 to the South District and the DEP Reuse Coordinator in Tallahassee. https://floridadep.gov/water/domestic-wastewater/forms/pathogen-monitoring	No	FRPT	

6. Facility Site Review (FACS) In-Compliance

Facility Site Review (Plant/Site Grounds)	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.1 Observation: Are odors emanating from the facility and permeating beyond the plant site at the time of the inspection?	No	FAFO	FANO
6.2 Observation: Is there excessive noise which could be heard beyond the boundaries of the facility?	No	FAEN	
6.3 Observation: Are facility grounds well maintained?	Yes	FACM	FGNM
6.4 Observation: Is the area surrounding the facility overgrown with vegetation?	No	FAVE	
6.5 Observation: Is the site secured properly?	Yes	FAPS	FNPS
6.6 Observation: Is the fence around the facility compromised?	No	FAAC	
6.7 Observation: Are rags, grit and/or screening being disposed on the facility grounds?	No	FARG	
6.8 Observation: Is sludge being disposed on the facility grounds?	No	FASL	
6.9 Observation: Is leachate from the screening dumpster(s) discharging onto the facility grounds?	No	FLDG	
6.10 Observation: Is the leachate discharging to a nearby storm drain?	No	FLDS	
6.11 Observation: Is there adequate access to all monitoring locations?	Yes		FAMA

Facility Site Review (RPZ)	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.12 Observation: Is an RPZ in place on the potable water supply line?	Yes	RPZI	FANB
6.13 Observation: Is the RPZ(s) leaking and/or in need of a repair and/or replacement?	No	RRPZ	RPOK
6.14 Observation: Is a record of testing available on the RPZ(s)? Additional Comments: The RPZ was calibrated on 10/08/2020 by Lee County Utilities Cross Connection Control Program.	Yes	PSSC	FARB
6.15 Observation: Are there any cross connections between the potable water supply and the facility?	No	FACC	

Facility Site Review (Headworks)	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.16 Observation: Are there excessive odors emanating from the headworks?	No		FNEO
6.17 Observation: Is there excessive corrosion in the area surrounding the headworks?	No	FECO	
6.18 Observation: Are screenings and grit being collected in suitable containers?	Yes	FSGS	FANC
6.19 Observation: Are screenings and grit being disposed at a Class I Landfill?	Yes	FSG1	FAC1

6.20 Observation: Is the disposal of the screenings and grit being placed on drying beds and causing vector attraction?	No	FADB	
6.21 Observation: Is there excessive debris on the bar screen?	No	FEDA	FBSC
6.22 Observation: Is the bar screen damaged?	No	FBCD	
6.23 Observation: Does the operator logbook indicate that the bar screen is cleaned routinely?	Yes		FABS
6.24 Observation: Is there evidence of recent overflows at the headworks?	No	FARO	

Facility Site Review (Surge Tanks)	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.25 Deficiency: Are there two functioning pumps in the surge tank(s)?	Yes		FS2P

Facility Site Review (Aeration Basin(s))	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.26 Observation: Is the aeration basin providing adequate mixing?	Yes	FACG	FABM
6.27 Observation: Is even distribution of air observed?	Yes		FADC
6.28 Observation: Are the air line(s) to the aeration basin(s) free from leaks?	Yes	FAOK	FALL
6.29 Observation: Is thick foam observed in the aeration basin(s)?	No	FWBF	
6.30 Observation: Is excessive foaming being carried over into the clarifiers?	No	FFOA	
6.31 Observation: Is the clock for the aeration system control operational?	Yes	FCLO	FTCA
6.32 Observation: Is the return activated sludge (RAS) line properly located so that it comes in contact with the influent?	Yes	FRLP	FRIL
6.33 Observation: Is there excessive splashing from the RAS line causing solids to be discharged outside the tank?	No	FESR	

Facility Site Review (Blowers)	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.34 Observation: Are dual blowers and motors required to run the facility?	Yes	F2BR	
6.35 Observation: Are the blowers equipped with belt guards?	Yes	BHBG	BGMB
6.36 Observation: Are the blowers excessively loud?	No	FB2L	
6.37 Observation: Is the blower operational at the time of the inspection?	Yes	FBWK	FBNW
6.38 Observation: Is the secondary blower missing?	No	F2BM	
6.39 Observation: Is the secondary blower motor operational?	Yes	F2OK	F2BI
6.40 Observation: Is there excessive wear on blowers?	No	FBBW	
6.41 Observation: Do the motor(s) have air filters?	Yes	FBFR	
6.42 Observation: Does the blower motor air filter need to be replaced?	No	FBAR	
6.43 Observation: Are spare parts and a second standby blower stored onsite?	Yes	FSPS	

6.44 Observation: Is one of the dual blower motor(s) undersized?	No	F1BU	
6.45 Observation: Is the electrical box wiring for the blowers adequately protected?	Yes		FBWI

Facility Site Review (Clarifier(s))	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.46 Observation: Is the clarifier effluent clear and free of solids?	Yes	FCLR	FESO
6.47 Observation: Are solids discharging over the clarifier weir(s)?	No	FCSD	
6.48 Observation: Is there excessive sand and/or grit accumulated in the clarifier?	No	FPES	
6.49 Observation: Is excessive scum and/or trash overflowing from the clarifier?	No	FAEX	
6.50 Observation: Does the skimmer appear to be functional?	Yes	FSKP	FSTH
6.51 Observation: Is the sludge pump functional?	Yes		FSPF
6.52 Observation: Is the RAS very watery indicating the pump is not functioning?	No	FRAS	
6.53 Observation: Is the sludge collector functional?	Yes		FSCF
6.54 Observation: Are the clarifier weir(s) level?	Yes	FCWA	FCWL
6.55 Observation: Are the clarifier weir(s) overgrown with algae?	No	FCWC	
6.56 Observation: Is there evidence of short circuiting in the clarifier?	No	FSHO	
6.57 Observation: Is gasification occurring to cause solids to rise to the surface?	No	FGAS	

Facility Site Review (Chlorine Contact Chamber(s))	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.58 Observation: Is the Chlorine Contact Chamber (CCC) effluent clear with no scum or debris observed?	Yes	FCCC	FOAT
6.59 Observation: Is it free of an accumulation of solids?	Yes		FSOL
6.60 Observation: Are the baffles functioning as intended?	Yes	FBMD	
6.61 Observation: Does the chlorine injection point provide optimal mixing to occur?	Yes		FCIP
6.62 Observation: Is the chlorine pump operational?	Yes	FPRI	
6.63 Observation: Is there an adequate chlorine supply for disinfection?	Yes		FCNO
6.64 Observation: Is the chlorine storage area protected from the elements?	Yes		FCHL
6.65 Observation: Does the facility have an alarm for their chlorine system?	Yes		
6.66 Observation: Is the alarm indicator for the chlorine system operational?	Yes	FALO	FALR
6.67 Observation: Does the facility use chlorine gas for disinfection?	Yes		
6.68 Observation: Is the chlorine supply system covered in frost?	No	FROS	
6.69 Observation: Is the fan inside the chlorine room operational?	Yes		FFAN

6.70 Observation: Are the chlorine scales operational?	Yes		FSCA
6.71 Observation: Is the Self-Contained Breathing Apparatus (SCBA) available?	Yes	SCBA	SCNA
6.72 Observation: Are the chlorine gas cylinders properly secured?	Yes	FGCS	FCGS
6.73 Observation: Are the chlorine gas cylinders properly labeled as empty and/or full?	Yes	CCTA	CCNT
6.74 Observation: Is a leak detection kit available?	Yes		FLDK
6.75 Observation: Is a fresh supply of ammonia available to test for leaks in the gas chlorination system?	Yes		FAMM

Facility Site Review (Filter(s))	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.76 Observation: Is the filter plugged and/or overflowing?	No	FSFP	
6.77 Observation: Did the filter contain sufficient media?	Yes	FHSM	F1FM
6.78 Observation: Is the media filter covered with solids?	No	FSFM	

Facility Site Review (Digester(s))	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.79 Observation: Were the tank contents in the aerobic digester(s) well mixed?	Yes	FDWM	FADX
6.80 Observation: Are the diffusers clogged providing for uneven mixing?	No	FDMX	
6.81 Observation: Are the digester(s) free from excessive odors?	Yes	FDNO	FDOD
6.82 Observation: Are the digester(s) free from excessive foaming?	Yes	FDNF	FEFO
6.83 Observation: Is the digester full?	No	FULL	

Facility Site Review (Lift Station(s))	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.84 Observation: Is the area around the lift station(s) maintained?	Yes		FLAO
6.85 Observation: Are there warning signs with emergency contact information on and/or around the lift station(s)?	Yes		FNWS
6.86 Observation: Is the cover to the lift station(s) locked?	Yes		FCLL
6.87 Observation: Is the cover to the lift station(s) a safety hazard?	No	FLCR	
6.88 Observation: Are there two functioning pumps that alternate?	Yes		FL2R
6.89 Observation: Are both pumps at the lift station functional?	Yes		FLPN
6.90 Observation: Does the electrical panel need to be repaired and/or replaced?	No	FREW	
6.91 Observation: Is the lift station(s) warning system functional? Additional Comments: The facility has a SCADA system as their primary warning system for their collection system that operates via sensors in the lift station, with some lift stations having a backup warning system of audio and/or visual alarms.	Yes	PSSC	FWSN

Facility Site Review (Alternative Power Source)	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
6.92 Observation: Was an alternative power source available at the facility?	Yes	FHAP	FNAP
6.93 Observation: Is the onsite generator tested under load on a monthly basis?	Yes	FOGT	FGNT
6.94 Observation: Are records available for the testing of the generator?	Yes	FTRA	FROT

7. Flow Measurement (FLOW) In-Compliance

Flow Meter Present and Location as per Permit?	Yes
Easy Access to Flow Meter?	Yes
Date of Last Flow Meter Calibration?	05/12/2020

Flow Meter Location	Prior to Aeration Tanks (FLW-01)
Flow Meter Type	Mag Meter

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
7.1 Observation: Is the flow measuring device installed?	Yes		NOFL
7.2 Observation: Is the flow measuring device installed properly?	Yes	FLPI	FLII
7.3 Observation: Is the flow measurement device operational?	Yes		PSSC
7.4 Observation: Is a copy of the flow calibration report current? Additional Comments: The flow meter (FLW-01) was calibrated on 05/12/2020 by Florida Rural Water Association (FRWA).	Yes	FCRP	FLDC
7.5 Observation: Is the flow measurement device calibrated properly?	Yes	FLCO	
7.6 Observation: Is the flow measurement device operating within +/- 10% of the actual flow?	Yes	F10A	

8. Operation and Maintenance (OPMA) In-Compliance

Facility being operated as per permit?	Choose an item.

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
8.1 Observation: Is a certified operator operating the wastewater treatment facility with the appropriate license level for the size of the plant?	Yes	O602	ONCO
8.2 Observation: Is the operator performing treatment plant operation and maintenance duties in a responsible and professional manner?	Yes	OMPM	OPMM

8.3 Observation: Does the facility have adequate plant staffing?	Yes		OAST
8.4 Observation: Are the any of the features at the plant in disrepair providing for an unsafe work environment?	No	HCTR	
8.5 Observation: Are leaks noted on the exterior of the tanks, wall, and/or pipes of the facility?	No	LITP	
8.6 Observation: Is the facility operated in accordance with the Operations and Maintenance (O & M) Manual(s)?	Yes		IONM
8.7 Observation: Is the facility maintaining a log documenting routine equipment maintenance?	Yes		OLOG
8.8 Observation: Are critical spare parts available?	Yes	OSPA	OSPN
8.9 Observation: Does the facility have an inflow and infiltration problem causing collection system issues and/or operational issues?	No	ININ	
8.10 Observation: Does the facility fail to replace malfunctioning equipment, which resulted in a high potential for water supply quality or health impacts?	No	OFRE	
8.11 Observation: Is the facility operating in a manner that results in a high potential for water quality violations?	No	OHPV	
8.12 Observation: Does the facility fail to perform maintenance, which resulted in a high potential for water quality violations?	No	OFPM	

9. Effluent Quality (EFLQ) In-Compliance

DMR Review Period	From 06/01/2019 To 12/31/2020
Any Exceedances?	No

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
9.1 Observation: Is the effluent clear?	Yes	EFCL	
9.2 Observation: Is excessive foaming observed in the final discharge stream?	No	EFOA	
9.3 Observation: Is suspended solids, scum and/or color observed in the final effluent stream?	No	ETSS	
9.4 Observation: Are grease balls observed in the final effluent stream?	No	EGRE	
9.5 Observation: Is a visible sheen observed in the final effluent stream?	No	EOIL	
9.6 Observation: Is the final effluent excessively turbid?	No	ETUR	
9.7 Observation: Is the effluent within the acceptable total residual chlorine (TRC)? Additional Comments: At the time of the inspection the facility has a TRC of 7.77 mg/L on their in-line continuous TRC meter.	Yes	ECRA	E5RC (0.5 mg/L) E1VI (1.0 mg/L)

9.8 Observation: Does the facility violate the permit or enforcement narrative effluent limitation(s)?	No	XNEV	
9.9 Observation: Is the facility violating an effluent limitation four out of six months?	No	PSSC	
9.10 Observation: Is the TRC below the minimum requirement for 10% or more in a six-month timeframe?	No	EC10	
9.11 Observation: Does the facility have a discharge that resulted in a fish kill?	No	XFSH	

10. Effluent Disposal (EFLD) In-Compliance

Facility Discharging?	Yes
Discharge Location(s) as per Permit?	Yes

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
10.1 Observation: Is the facility discharging?	Yes	EDAI	ENOD
10.2 Observation: Is advisory signage posted around the disposal site(s)?	Yes		EWAR
10.3 Observation: Is an aerosol mist leaving the boundaries of the land application?	No	EMIS	
10.4 Observation: Is the facility operating an unauthorized disposal system?	No	PSSC	
10.5 Observation: Is the disposal system failing resulting in a high potential for water quality and/or health impacts?	No	PSSC	
10.6 Observation: Is the facility modifying their disposal system without proper approval?	No	PSSC	

Effluent Disposal (Reuse)	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
10.7 Observation: Is all plastic reclaimed water equipment color-coded Pantone purple?	Yes	522O	522C
10.8 Observation: Are the reclaimed water valves and outlets appropriately tagged and/or labeled?	Yes		EDND
10.9 Observation: Is the public adequately notified of the use of reclaimed water?	Yes		ENOT
10.10 Observation: Is a cross connection control program implemented within reuse areas?	Yes	ICCP	ECCC
10.11 Observation: Is the facility meeting the minimum setback distance?	Yes	E421	ESET
10.12 Observation: Is the reclaimed water running off the application site?	No	EROF	
10.13 Observation: Is significant ponding observed on the reclaimed water disposal site?	No	EPON	

10.14 Observation: Is a cover crop and/or vegetation been planted on the reclaimed water area(s)?	Yes		ECRO
10.15 Observation: Are edible food crops being irrigated with the reclaimed water?	No	EEAT	
10.16 Observation: Does the reclaimed water storage ponds have adequate free-board?	Yes		E3FB

11. Biosolids (RESS) In-Compliance

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
11.1 Observation: Does the facility maintain adequate records for sludge hauling? Additional Comments: The facility last hauled their biosolids on 07/09/2020.	Yes	PSSC	RE5Y
11.2 Observation: Are the biosolids being disposed of in accordance with the per-mit? Additional Comments: The facility is permitted to dispose of biosolids in a Class I solid waste landfill.	Yes	RMET	RDIS

12. Groundwater Quality (GWQL) Out-of-Compliance

DMR Review Period	From 06/01/2019 To 12/31/2020
Any Exceedances?	Yes
All monitoring wells accessible, secured and locked?	Yes

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
12.1 Observation: Is the facility exempt from groundwater monitoring?	No	GWEX	
12.2 Observation: Are the groundwater monitoring wells locked and secured?	Yes	GLCS	GLOC
12.3 Observation: Are the groundwater monitoring wells labeled?	Yes		PSSC
12.4 Observation: Are any of the groundwater monitoring wells damaged?	No		
12.5 Observation: Are the groundwater monitoring results sent to the Department on the correct form?	Yes		GWRF
12.6 Deficiency: Are the groundwater monitoring results sent to the Department on time? Additional Comments: Please see the table below for a more detailed description of the groundwater DMRs that were received late. Permit/Rule Reference: F.A.C. Rule 62-520.600(11)(b) states that on a quarterly basis, or as specified in the permit, the permittee shall submit reports on all monitoring wells	No		GNSU

identification the type, number and concentration of discharge constituents or parameters that have been approved by the Department as appropriate criteria to monitor in the monitoring program based upon their potential to exceed the minimum criteria contained in F.A.C. Rule 62-520.400 and the appropriate standards for the particular class of water adjacent to the zone of discharge as described in F.A.C. Rule 62-520.420 through 62-520.470. Corrective Actions: From this point forward, please ensure that all DMRs are submitted in a timely manner.			

Monitoring Period	Date Submitted	Date Due	Days Late
APR-2020 to JUN-2020	08/26/2020	07/28/2020	29

12.7 Observation: Is the facility sampling for the correct groundwater monitoring parameters?	Yes		GPWP
12.8 Observation: Is the facility sampling according to the frequency in the permit?	Yes		GWOP
12.9 Deficiency: Is the analysis method identified on the groundwater monitoring report? Additional Comments: The analysis method is not identified on DMR Part D MWB021302 for Total Recoverable Chromium. Permit/Rule Reference: F.A.C. Rule 62-610.412(2) states that a groundwater monitoring program shall be established by the permittee and approved by the Department pursuant to F.A.C. Rule 62-522.600 (unless other exempted). Groundwater sampling parameters for monitoring background and receiving water quality will be established by the Department based upon the quality of reclaimed water to be discharged, site specific soil and hydrogeologic characteristics, and other considerations. Corrective Actions: Please re-submit the Part D DMRs to the Department with all required information include. When re-submitting DMRs, please ensure that the re-submittal box is check off.	No		GANA
12.10 Observation: Are the laboratory detection limits provided on the groundwater monitoring report?	Yes	GOKI	GDET
12.11 Observation: Is the static water reported on the groundwater monitoring report?	Yes	GSLR	GSTA
12.12 Observation: Does any of the groundwater monitoring reports reveal that the wells were too dry to sample?	No	GDRY	
12.13 Deficiency: Are appropriate codes used when transcribing non-detectable samples? Additional Comments: The facility is using the code "BDL" (below detection limit) when reporting non-detectable (ND) samples on their Part D DMR for the following quarters: • Apr-Jun 2019 for MWB-21302, MWI-21303, MWC-21304, MWC-80019 and MWC-80020 • Jul-Sep 2019 for MWB-21302, MWI-21303, MWC-21304, MWC-80019 and MWC-80020 • Oct-Dec 2019 for MWB-21302, MWI-21303, MWC-21304, MWC-80019 and MWC-80020	No		PSSC

• Jan-Mar 2020 for MWB-21302, MWI-21303, MWC-21304, MWC-80019 and MWC-80020 Permit/Rule Reference: Acceptable codes, with descriptions and instructions, are contained in the permit under "Instructions for Completing the Wastewater Discharge Monitoring Report." Results less than the MDL (method detection limit) shall be reported by entering a less than sign ("<") followed by the laboratory's MDL value. Corrective Actions: Please re-submit Part D DMRs to the Department with all ND sample values correctly transcribed. When re-submitting DMRs, please ensure that the re-submittal box is check off.			
12.14 Observation: Does the facility have records of their purging logs?	Yes		PSSC
12.15 Observation: Are the wells purged properly?	Yes	GWPP	GRNC
12.16 Deficiency: Are there any exceedances from the groundwater monitoring results? Additional Comments: Department personnel conducted an inspection on 09/25/2019 and issued a Compliance Assistance Offer Letter (CAOL) on 10/30/2019. The inspection report and letter detailed groundwater exceedances, which the facility addressed via additional groundwater sampling. The facility modified their groundwater monitoring plan based upon these results. This modification was included with the facility's permit renewal application. Permit/Rule Reference: F.A.C. Rule 62-610.412(2) states that a groundwater monitoring program shall be established by the permittee and approved by the Department pursuant to F.A.C. Rule 62-522.600 (unless other exempted). Groundwater sampling parameters for monitoring background and receiving water quality will be established by the Department based upon the quality of reclaimed water to be discharged, site specific soil and hydrogeologic characteristics, and other considerations. Corrective Actions: The groundwater monitoring plan was submitted with the renewal application and was approved with the issuance of the permit to remove TDS and Chloride. Please address the plans for the exceedances for pH, Arsenic, and Fecal.	Yes	GVIO	GNOD

Monitoring Period	Compliance Well(s)	MWB-21302	Limit(s)
OCT-2020 to DEC-2020	*MWC-21304* TDS: 970 mg/L Cl: 295 mg/L	*MWB-21302* TDS: 220 mg/L Cl: 13.9 mg/L	 500.0 mg/L 250.0 mg/L
JUL-2020 to SEP-2020	*MWC-21304* TDS: 1,300 mg/L Cl: 606 mg/L Fecal: 2 #/100mL pH: 6.41 s.u.	*MWB-21302* TDS: 800 mg/L Cl: 171 mg/L Fecal: 1 #/100mL pH: 7.0 s.u	 500.0 mg/L 250.0 mg/L 0.0 #/100mL 6.5 – 8.5 s.u.
	MWC-80019 Arsenic: 12 ug/L Fecal: 12 #/100mL	*MWB-21302* Arsenic: 3.8 ug/L Fecal: 1 #/100mL	 10.0 ug/L 0.0 #/100mL
	MWC-80020 Cl: 300 mg/L	*MWB-21302* Cl: 171 mg/L	 250.0 mg/L
APR-2020 to JUN-2020	*MWC-21304* TDS: 1,200 mg/L Cl: 392 mg/L	*MWB-21302* TDS: 600 mg/L Cl: 110 mg/L	 500.0 mg/L 250.0 mg/L

	MWC-80019 Arsenic: 13 ug/L Fecal: 4 #/100mL	*MWB-21302* Arsenic: 2.3 ug/L Fecal: 1 #/100mL	10.0 ug/L 0.0 #/100mL
	MWC-80020 N: 19.9 mg/L TDS: 1,100 mg/L Cl: 300 mg/L	*MWB-21302* N: 0.04 mg/L TDS: 600 mg/L Cl: 110 mg/L	10.0 mg/L 500.0 mg/L 250.0 mg/L
JAN-2020 to MAR-2020	*MWC-21304* TDS: 1,050 mg/L Cl: 343 mg/L pH: 6.43 s.u.	*MWB-21302* TDS: 766 mg/L Cl: 150 mg/L pH: 7.13 s.u.	500.0 mg/L 250.0 mg/L 6.5 – 8.5 s.u.
	MWC-80020 N: 11.8 mg/L TDS:864 mg/L Cl: 344 mg/L	*MWB-21302* N: 2.62 mg/L TDS: 766 mg/L Cl: 150 mg/L	10.0 mg/L 500.0 mg/L 250.0 mg/L
OCT-2019 to DEC-2019	*MWC-21304* TDS: 1,200 mg/L Cl: 408 mg/L	*MWB-21302* TDS: 610 mg/L Cl: 160 mg/L	500.0 mg/L 250.0 mg/L
	MWC-80020 TDS:790 mg/L Cl: 367 mg/L	*MWB-21302* TDS: 610 mg/L Cl: 160 mg/L	500.0 mg/L 250.0 mg/L
JUL-2019 to SEP-2019	*MWC-21304* TDS: 730 mg/L Cl: 304 mg/L pH: 6.42 s.u.	*MWB-21302* TDS: 410 mg/L Cl: 34.4 mg/L pH: 6.89 s.u.	500.0 mg/L 250.0 mg/L 6.5 – 8.5 s.u.

13. SSO Survey (SSOS) In-Compliance

Does the facility have an Operating and Maintenance Manual for their collection system?	Yes
Does the facility track spills in their collection system?	Yes
Does the facility have procedures for minimizing spills?	Yes
Are those procedures included in the Operation and Maintenance Manual or a separate document?	Yes
How often is the Manual updated?	As Needed

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
13.1 Observation: Does the facility have any abnormal events? Additional Comments: The facility has had no SSOs over the past 12 months.	No	PSSC	PSSC
13.2 Observation: Does the facility report the spill(s) to the Department within 24 hours of discovery?	NA		SS04
13.3 Observation: Does the facility follow up on spills?	Yes	PSSC	PSSC
13.4 Observation: Are there any spills that made it to surface water, include storm-water conveyance system and/or drainage ditch?	NA	SS01	

13.5 Observation: Is the facility sampling for any spills that reached surface water(s)?	NA		SS03
13.6 Observation: Are there any spills released to the ground?	NA	SS06	
13.7 Observation: Does the facility keep routine documentation and reporting records of spills, and/or operation and maintenance activities on the collection/transmission system(s)?	Yes		SS02
13.8 Observation: Does the facility have an emergency response plan including the collection/transmission system(s)?	Yes		PSSC
13.9 Observation: Does the facility perform routine preventative maintenance to keep the collection/transmission system(s) in good working order?	Yes		SS05

14. Other (OTHE) Not Evaluated

	Inspection Result	For DEP Use Only Database Codes	
		Yes	No
14.1 Observation: Not Evaluated.	NE	NENE	NENE

I certify that these photos represent the true
on-site conditions observed
and have not been altered in any way.

Nicole Devine

Forest Utilities (FLA014478)
Photos by Nicole Devine on 10/14/2020



1. Facility Grounds



2. Surge Tank Pumps



3. Surge Tanks



4. Bar Screen

Forest Utilities (FLA014478)
Photos by Nicole Devine on 10/14/2020

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Nicole Devine



5. Biological Treatment Blowers



6. Aeration Tank



7. RAS Pumps



8. Clarifier

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Nicole Devine

Forest Utilities (FLA014478)
Photos by Nicole Devine on 10/14/2020



9. Filter



10. CCC



11. Sludge Drying Bed



12. Lift Station Electrical Panel

I certify that these photos represent the true
on-site conditions observed
and have not been altered in any way.

Nicole Devine

Forest Utilities (FLA014478)
Photos by Nicole Devine on 10/14/2020



13. GW Well



14. GW Well

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

Receipt for Notification Submission

March 08, 2021

Daniel Scippo

FOREST UTILITIES WWTP - FLA014478
6341 DEER RUN ROAD SW
FORT MYERS, FL

This is to acknowledge that your Request for Approval to Place a Domestic Wastewater Collection/Transmission System into Operation was received on **March 08, 2021**.

The form and supporting information fulfills the requirements to request approval from DEP to place the domestic wastewater collection/transmission system into operation and that the project as described below has been constructed in accordance with the associated DEP Permit Number and related plans and materials.

DEP may contact you for additional information. If you indicated substantial deviations and you do not hear from your district office, your project may be placed into service 10 days from the date of this letter. If you did NOT indicate substantial deviations and you do not hear from your district office, your project may be placed into service 3 days from the date of this letter.

This Clearance Notification Process does not relieve you from the responsibility of obtaining other permits or authorizations from other agencies (federal, state, city, etc.) that may be required for the project.

In support of your notification you provided the following information:

Construction Permit Number:	50149-021-DWC/CM
Project Name:	Devonwood Preserve
Project Location:	Devonwood Estates
Permittee:	Devonwood Development, Inc.
Collection System Owner:	Devonwood Estates Homeowners Association, Inc.
Treatment Facility:	FOREST UTILITIES WWTP - FLA014478
Clearance Type:	Total Clearance
Submitter Indicated Substantial Deviations?:	No
Substantial Deviations (when applicable):	

Attachments:
File Description: Form 62-604.300
File Name: FDEP-Request for Approval S&S.pdf
File Hash: 4aa544286b82e416730ebd5dc2246cae670a8b029c08ec0746e4bb6397561116

All files related to your facility may be viewed at our Departmental Information Portal:
https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/FLA014478/facility!search
Please allow up to three (3) business days for the above documents to appear.

Staff will notify you of any additional information that may be required to complete your notification.

The Office for your project is:
South District
SD_newapps@floridadep.gov

Please contact this Office for any questions regarding your project.

From:	wade moser
To:	Chang, Louise
Cc:	Devine, Nicole; Homic, Cierra; Forest Utilities; dorree3@gmail.com
Subject:	Re: FW: DEP Mail /Forest Utilities FLA014478 – Warning Letter and Inspection Report
Date:	Friday, April 2, 2021 10:43:52 AM
Attachments:	COC.pdf

Louise please accept the following as Forest Utilities (FU) response to the 03/01/2021 Warning Letter. Attachments are provided and included within this and subsequent emails. Below is a summary response to the issues as listed on page 1 of the letter.

1) ***COCs:***
The existing and proposed sample Chain of Custody (COC) are attached for your review and consideration. Please note that FU does not know the preservative lot numbers, expiration dates or sample temperature at time of receipt. This information is recorded on the COC by the laboratory upon receipt of samples and provided to FU together with the analysis results.

2) ***Sample preservation:***
FU's facility did preserve the samples properly. However the preservation methods were not listed within the COCs in their entirety. Specifically the only preservation method listed was 'Ice" and did not specify the Na2S2O3 preservative. The revised COC has been modified to include this designation. Also the laboratory provides this preservative contained within the Fecal sample bottles prior to FUs receipt of bottles and collection of samples.

3) ***Calibration logs:***
Attached you will find FU's revised calibration Log Book reflecting the specified additional information. Also attached is a copy of the calibration log for the 09/17/2020-10/7/2020 time frame. These were overlooked at the time of inspection due to the calibrations continuation on subsequent pages. From this point forward FU will record each instrument's daily calibrations on a separate page for entirety of each month.

4) ***Composite sampling:***
Attached you will find FU's revised composite sample log reflecting the specified additional information. Please note that FU's composite samples are 8 separate grab samples and therefore a time record of each samples collection.

CONTINUED SUBSEQUENT EMAILS

- 0917_0930 Cl2 log.pdf
- Chlorine Log.pdf
- NTU log.pdf
- pH log.pdf

- COC r1.pdf

On Wed, Mar 31, 2021 at 1:09 PM Chang, Louise <Louise.Chang@floridadep.gov> wrote:

Good Afternoon Wade,

We can schedule the meeting after you submit your response on your proposed date, April 7th.

Regards,

Louise Chang

Environmental Specialist

South District

Florida Department of Environmental Protection

2295 Victoria Avenue, Suite 364

Fort Myers, FL 33901

Louise.Chang@FloridaDEP.gov

Main: 239-344-5600

Office: 239-344-5630

From: wade moser <wademoser23@gmail.com>
Sent: Wednesday, March 31, 2021 11:36 AM
To: Devine, Nicole <Nicole.Devine@FloridaDEP.gov>
Cc: Homic, Cierra <Cierra.Homic@FloridaDEP.gov>; Chang, Louise <Louise.Chang@floridadep.gov>; Forest Utilities <forestu@aol.com>; dorree3@gmail.com
Subject: Re: FW: DEP Mail /Forest Utilities FLA014478 – Warning Letter and Inspection Report

Louise, I am in the process of preparing the necessary documents, resubmittals and additional information for Forest Utilities' Warning Letter response and would request that we postpone scheduling a meeting until your office has received and reviewed this response. I would anticipate submitting this response by Wednesday, April 7th. Please let me know if

this meets with your approval. Thanks

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>
> **Nicole Devine**
>
> Environmental Specialist II
>
> 2295 Victoria Avenue, Suite 364
>
> Fort Myers, FL 33901
>
> Main: (239) 344-5675
>
> Office: (239) 344-5600
>
> **From:** wade moser <wademoser23@gmail.com>
> **Sent:** Friday, March 26, 2021 11:54 AM
> **To:** Devine, Nicole <Nicole.Devine@FloridaDEP.gov>
> **Subject:** Re: FW: DEP Mail /Forest Utilities FLA014478 – Warning Letter and Inspection Report

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> >
> > Thanks,
> >
> > **Nicole Devine**
> >
> > Environmental Specialist II
> >
> > 2295 Victoria Avenue, Suite 364
> >
> > Fort Myers, FL 33902

Main: (239) 344-5675

Office: (239) 344-5600

From: South District <SouthDistrict@dep.state.fl.us>
Sent: Monday, March 1, 2021 10:04 AM
To: forestu@aol.com
Cc: South District <SouthDistrict@dep.state.fl.us>; SD-WWinspect <SD-WWinspect@floridadep.gov>; SD_CAP_WPR <SD_CAE_WPR@dep.state.fl.us>; Devine, Nicole <Nicole.Devine@FloridaDEP.gov>; Newburg, Deanna <Deanna.Newburg@FloridaDEP.gov>; Chang, Louise <Louise.Chang@floridadep.gov>; Ammon, Pamela <Pamela.Ammon@dep.state.fl.us>
Subject: DEP Mail /Forest Utilities FLA014478 – Warning Letter and Inspection Report

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https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.967204.1]&[profile=Enforcement_Legal]

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Thank you for your attention to this matter.

FL. Department of Environmental Protection

South District Office

SouthDistrict@dep.state.fl.us

PLEASE NOTE: *Florida has a very broad public records law. Electronic communications regarding state business are public records available upon request. Your e-mail communications may therefore be subject to public disclosure.*

Sanders Laboratories
Environmental Testing Services

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only)

Client: Forest Utilities, Inc./Sampler
Address: 6341 Deer Run
Ft. Myers, Fl. 33908
Phone: 239-481-5333
Fax

Report To: Wade Moser
Bill to:
P.O. #

Preservative: HCL = H, HNO_3= N, $Na_2S_2O_3$ = ST
H_2SO_4 = S, NaOH = SH, NH_4Cl = NH

Project Name: Forest Utilities WWTP FLA014478
Project Location: 6341 Deer Run, Ft. Myers, Fl 33908
Customer Type:
Kit #:
Requested Due Date:

Sampled By (PRINT)
Sampler Signature

Matrix	Sample Description	Sample Date	Sample Time	Sample Type	Preservatives pH	Preservatives Ice	Preservatives ST	Analysis Requested TSS	Analysis Requested FECAL	Analysis Requested CBOD	Sample ID # (Lab Use Only)
WW	AFBC, EFB-01 Bottle # Type 803805			G							
WW	AFBC, EFB-02 Bottle # Type 803805			G							
WW	CCC, EFA-01 Bottle # Type 9197005			G							
WW	CCC, EFA-02 Bottle # Type 9197005			G							
WW	INFLUENT, INF-01 Bottle # _____ Type 803805			C							
WW	CCC, EFA-01 Bottle # _____ Type 803805			C							
WW	CCC, EFA-02 Bottle # _____ Type 803805			C							
WW											

Bottle Lot #			Relinquished By/Affiliation	Date	Time	Accepted By/Affiliation	Date	Time
		Okay to Run As Is... Client Initial:						
		Samples On Ice Yes No						

1050 Endeavor Ct, Nokomis, FL 34275-3623 (941) 488-8103 fax(941) 484-6774 10090 Bavaria Rd., Fort Myers, FL 33913 (239) 590-0337 fax (239) 590-0536

Sanders Laboratories
Environmental Testing Services

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only) _____

Client _____ Report To: _____ Project Name: _____

Address _____ Bill to: _____ Project Location: _____

_____ P.O. # _____ Customer Type: _____

Phone _____ Preservative: HCL = H, HNO_3= N, $Na_2S_2O_3$ = ST Kit #: _____

Fax H_2SO_4 = S, NaOH = SH, NH_4Cl = NH Requested Due Date: _____

Sampled By (PRINT)					Preservatives						Analysis Requested												Samp ID # (Lab Us Only)
Sampler Signature		Sample																					
Matrix	Sample Description	Date	Time	Type	pH	Ice																		

Bottle Lot #			Relinquished By/Affiliation	Date	Time	Accepted By/Affiliation	Date	Time
		Okay to Run As Is... Client Initial:						
		Samples On Ice Yes No						

1050 Endeavor Ct, Nokomis, FL 34275-3623 (941) 488-8103 fax(941) 484-6774 10090 Bavaria Rd., Fort Myers, FL 33913 (239) 590-0337 fax (239) 590-0536

pH PDN April 2021

Buffer lot and Exp Date/Time	4.00	7.00	10.00	Operator
	#98564, Exp. 5/21	#91143, 11/21	2005947, 7/22	

Date, Time	Exp 10/22 0.02	Exp 01/22 4.0	Exp 09/22 10.0	Monitor Band Op Int/Cal		

Chlorine Monitor April 2021

0 Standard Lot# 201012 Exp. 10/22

DATE	TIME	Monitor Int./Cal	Bench 2.0 Standard	Operator

date	monitor	bench	Cl2	operator
Sept 17	3.5	3.4		Neil
18	2.8	2.9		Neil
19	3.0	3.2		Neil
20	4.1	4.2		AC
21	4.0	3.9		Neil
22	3.3	3.1		Neil
23	2.9	3.0		Neil
24	5.0	4.8		Neil
25	2.9	2.8		Neil
26	2.9	2.6		Neil
27	2.9	2.7		AC
28	2.5	2.4		Neil
29	2.8	2.9		Neil
30	3.4	3.3		Neil
Oct 1	3.1	3.2		Neil
2	3.2	3.3		Neil
3	4.0	4.2		AC
4	4.9	5.1		AC
5	3.0	2.9		Neil
6	2.4	2.6		Neil
7	2.6	2.8		Neil
8	3.5	3.4		Neil
9	2.9	2.8		Neil
10	3.1	3.2		AC
11	2.7	2.8		AC
12	4.0	4.2		Neil
13	3.0	3.3		Neil
14	3.2	3.3		Neil
15	3.3	3.1		Neil
16	4.7	4.5		Neil
17	2.1	2.0		AC
18	4.7	4.6		AC
19	5.2	5.5		Neil
20	6.1	6.2		Neil
21	3.0	3.2		Neil
22	2.8	3.0		Neil
23	3.4	3.4		Neil
24	2.2	2.1		AC
25	2.3	2.4		AC
26	3.3	3.4		Neil

From:	wade moser
To:	Chang, Louise
Cc:	Devine, Nicole; Homic, Cierra; Forest Utilities; dorree3@gmail.com
Subject:	Re: FW: DEP Mail /Forest Utilities FLA014478 – Warning Letter and Inspection Report
Date:	Friday, April 2, 2021 1:10:31 PM
Attachments:	Annual reuse 2020 FLA014478_YR_A.pdf

Louise, #2 continuation of FU's WL response

DMR deficiencies:
FU has revised, corrected and resubmitted the specified DMR and GWM reports on the FDEP Business Portal and will make a concerted effort to submit all reports in a more timely manner. The consistency of the pH readings are the result of FU's Facilities operational processes and adjustments as tabilizing pH levels is critical to the treatment process. Specifically our treatment process includes the use of two (2) anoxic tanks which reduces nitrification and increases alkalinity and we closely monitor the dissolved oxygen, preventing low DO (high pH) and high DO (low pH) and consistent chlorine residuals. On a daily basis calibration procedures are performed in accordance with FDEP SOP. However in the future and on a regular basis, Fu will closely monitor the operators calibration techniques to assure continued accurate results.

Reclaimed Water/Effluent Analysis Report:
Please find attached a copy of this report submitted and electronically signed on 11/27/2020 . This report states "NO NEW NON-DOMESTIC WASTEWATER DISCHARGERS HAVE BEEN ADDED TO THE COLLECTION SYSTEM SINCE THE LAST RECLAIMED WATER OR EFFLUENT ANALYSIS WAS CONDUCTED and therefore is exempt from the analysis requirement. FU performs the analysis as required every five and in conjunction with permit renewal. FU's current permit expires in May of 2021 and the new analysis is currently scheduled for collection and analysis with our laboratory.

Annual Reuse Reuse Report:
Please find attached a copy of this report dated 12/18/2020. Also as requested FU will also mail a copy to the reuse coordinator.

Gardia and Cryptosporidium monitoring results:
FU performs this analysis during each permit renewal period, the current permit expires in May of 2021 and the new analysis sample has been collected and currently waiting for analysis results, FU will submit this report as soon as the results are available.

Groundwater DMR:
The GWM DMRs have been revised and resubmitted via FDEP Business Portal. From this point forward FU will have any groundwater Monitoring Wells exceeding permit parmiters resampled and analyzed. The laboratory has been notified to send immediate notification of such an occurrence.

In summary, I hope the above information and attachments have answered the department's concerns and questions. And I would like to thank you for your consideration and efforts to keep FU updated on revisions and implementation of the various regulations stated within your letter. This will greatly enhance our permit compliance efforts and results. Please do not hesitate to contact me if you have any further questions or require additional information.

Thanks again
Wade Moser

2020 annual reuse.pdf

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>
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>
> Environmental Specialist
>
> South District
>
> Florida Department of Environmental Protection
>
> 2295 Victoria Avenue, Suite 364
>
> Fort Myers, FL 33901
>
> Louise.Chang@FloridaDEP.gov
>
> Main: 239-344-5600
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> Office: 239-344-5630
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South District Office

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DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

PERMITTEE NAME: Forest Utilities, Inc.
ADDRESS: 6000 Forest Blvd
Fort Myers, FL 33908

FACILITY: Forest Utilities WWTP
LOCATION: 6341 Deer Run Road SW
Fort Myers, FL 33908

COUNTY: LEE

PERMIT NUMBER: FLA014478
LIMIT: FINAL REPORT: Annually
FACILITY TYPE: DW GROUP: Domestic
MONITORING GROUP: RWS-A

DESCRIPTION: Annual Reclaimed Water or Effluent Analysis

MONITORING PERIOD: From: 01/01/2020 To: 12/31/2020

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Antimony, Total Recoverable	Sample Measurement						ANC		0	ANC	ANC
PARM Code 01268 P Mon. Site: RWS-A	Permit Requirement						Report (Maximum)	ug/L		(1 Annually)	(24-hr Flow Proportioned Composite)
Arsenic, Total Recoverable	Sample Measurement						ANC		0	ANC	ANC
PARM Code 00978 P Mon. Site: RWS-A	Permit Requirement						Report (Maximum)	ug/L		(1 Annually)	(24-hr Flow Proportioned Composite)
Barium, Total Recoverable	Sample Measurement						ANC		0	ANC	ANC
PARM Code 01009 P Mon. Site: RWS-A	Permit Requirement						Report (Maximum)	ug/L		(1 Annually)	(24-hr Flow Proportioned Composite)
Beryllium, Total Recoverable	Sample Measurement						ANC		0	ANC	ANC
PARM Code 00998 P Mon. Site: RWS-A	Permit Requirement						Report (Maximum)	ug/L		(1 Annually)	(24-hr Flow Proportioned Composite)

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Cadmium, Total Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 01113 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Chromium, Total Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 01118 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Cyanide, Free (amen. to chlorination)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 00722 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
Fluoride, Total (as F)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 00951 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**mg/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Lead, Total Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 01114 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Mercury, Total Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 71901 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Nickel, Total Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 01074 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Nitrogen, Nitrate, Total (as N)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 00620 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**mg/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Nitrogen, Nitrite, Total (as N)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 00615 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**mg/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Nitrite plus Nitrate, Total 1 det. (as N)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 00630 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**mg/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Selenium, Total Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 00981 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Sodium, Total Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 00923 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**mg/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Thallium, Total Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 00982 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
1,1-dichloroethylene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34501 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
1,1,1-trichloroethane	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34506 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
1,1,2-trichloroethane	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34511 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
1,2-dichloroethane	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 32103 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
1,2-dichloropropane	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34541 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
1,2,4-trichlorobenzene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34551 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Benzene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34030 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Carbon tetrachloride	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 32102 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
Cis-1,2-dichloroethene, Whole Water	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 81686 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
Dichloromethane (methylene chloride)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 03821 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
Ethylbenzene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34371 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
Monochlorobenzenes	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34031 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
1,2-dichlorobenzene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34536 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
1,4-dichlorobenzene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34571 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
Styrene, Total	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 77128 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
Tetrachloroethylene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34475 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
Toluene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34010 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
1,2-trans-dichloroethylene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34546 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
Trichloroethylene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39180 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
Vinyl chloride	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39175 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
Xylene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 81551 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34675 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
2,4-dichlorophenoxyacetic acid	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39730 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Silvex	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39760 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Alachlor	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39161 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Atrazine	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39033 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Benzo(a)pyrene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34247 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Carbofuran	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 81405 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Chlordane (tech mix. and metabolites)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39350 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Dalapon	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 38432 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Bis(2-ethylhexyl)adipate	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 77903 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Bis (2-ethylhexyl) phthalate	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39100 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Dibromochloropropane (DBCP)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 82625 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
Dinoseb, Whole Water, Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 30191 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Diquat	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 04443 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Endothall	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 38926 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Endrin	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39390 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Ethylene dibromide (1,2-dibromoethane)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 77651 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(Grab)**
Glyphosate	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 79743 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**mg/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Heptachlor	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39410 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Heptachlor epoxide	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39420 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Hexachlorobenzene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39700 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Hexachlorocyclopentadiene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 34386 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Gamma BHC (Lindane)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39782 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Methoxychlor	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39480 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Oxamyl (vydate)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 38865 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Pentachlorophenol	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39032 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Picloram in Whole Water Sample	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39720 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Polychlorinated Biphenyls (PCBs)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39516 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Simazine in Whole Water	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39055 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Toxaphene	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 39400 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Trihalomethane, Total by summation	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 82080 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**mg/L**		**(1 Annually)**	**(Grab)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Radium 226 + Radium 228, Total	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 11503 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**pCi/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Alpha, Gross Particle Activity	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 80045 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**pCi/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Aluminum, Total Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 01104 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**mg/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Chloride (as Cl)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 00940 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**mg/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Iron, Total Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 00980 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**mg/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Copper, Total Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 01119 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Manganese, Total Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 11123 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Silver, Total Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 01079 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Sulfate, Total	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 00945 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**mg/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Zinc, Total Recoverable	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 01094 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**ug/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
pH	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 00400 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**s.u.**		**(1 Annually)**	**(Grab)**
Solids, Total Dissolved (TDS)	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 70295 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**mg/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**
Foaming Agents	**Sample Measurement**						**ANC**		**0**	**ANC**	**ANC**
PARM Code 01288 P Mon. Site: RWS-A	**Permit Requirement**						**Report (Maximum)**	**mg/L**		**(1 Annually)**	**(24-hr Flow Proportioned Composite)**

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE	SUBMITTED ON
Wade Moser	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.	Electronically Signed	(239) 481-5333	11/27/2020

☑ NO NEW NON-DOMESTIC WASTEWATER DISCHARGERS HAVE BEEN ADDED TO THE COLLECTION SYSTEM SINCE THE LAST RECLAIMED WATER OR EFFLUENT ANALYSIS WAS CONDUCTED.

From:	wade moser
To:	Chang, Louise
Cc:	Forest Utilities; dorree3@gmail.com; Newburg, Deanna; Devine, Nicole; Starrach, Gabriele; Homic, Cierra; Reigelman, Landon
Subject:	Re: Forest Utilities FLA014478 - Warning Letter Meeting
Date:	Thursday, April 22, 2021 11:01:31 AM
Attachments:	Buffer and Standards Documentation 2021.xlsx Buffer and Standards Documentation.xlsx CL2 Cal Log Bench.xlsx CL2 Cal Log Monitor.xlsx COC.pdf NTU Cal Log Bench.xlsx NTU Cal Log Monitor.xlsx pH Cal Log.xlsx

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Louise please allow this correspondence to serve as Forest Utilities Response # 2 to the referenced Warning Letter as well as submitting the information requested during the above referenced April 15th meeting.
For your review and approval, you will find attached the proposed revised calibration and composite sample logs, sample chain of custody and standards documentation forms. Please note that in an effort to comply with FDEP's request to perform a two (2) point chlorine meter calibration Forest Utilities has ordered, but not received, a new Hach colorimeter and has listed the meter information on the chlorine calibration log form excluding the meter serial number.
We are still awaiting the Crypto/Giardia and Effluent analysis results and will forward those results to your department upon receipt. Also, we should have the corrected resubmissions of the DMR/GWM reports completed by April 13 for FDEP staff review.
As per our discussion, Forest Utilities would request that the department allow Forest Utilities to continue the quarterly GWM sampling and testing with the stipulation that any and all exceedances shall be resampled and tested as necessary until satisfactory results are achieved. Should the exceedances continue to the extent that satisfactory results are unobtainable, Forest Utilities would proceed with the Operating Permit Modification Application request process no later than the receipt of the 2021 4th quarter GWM test results.
Please do not hesitate to contact me if you require additional information or questions.
Wade Moser

Comp sample Flow-01.pdf

Comp sample Flow-02.pdf

results.

On Tue, Apr 6, 2021 at 1:05 PM Chang, Louise <Louise.Chang@floridadep.gov> wrote:

> Hello Mr. Moser,
>
> Thank you for contacting the Department of Environmental Protection to schedule the Forest Utilities (FLA014478) Warning Letter meeting. A meeting has been scheduled for Thursday, April 15, 2021 at 9 AM on Microsoft Teams (link below).
>
> The Warning Letter can be accessed here:
> https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.967204.1]&[profile=Enforcement_Legal]

Please do not hesitate to contact me if you have any questions.

Regards,

Louise Chang

Environmental Specialist

South District

Florida Department of Environmental Protection

2295 Victoria Avenue, Suite 364

Fort Myers, FL 33901

Louise.Chang@FloridaDEP.gov

Main: 239-344-5600

Office: 239-344-5630

Microsoft Teams meeting

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+1 850-629-7330,,748404124# United States, Tallahassee

Phone Conference ID: 748 404 124#

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Sanders Laboratories
Environmental Testing Services

CHAIN OF CUSTODY RECORD

Project # (Lab Use Only)

Client: Forest Utilities, Inc./Sampler
Address: 6341 Deer Run
Ft. Myers, Fl. 33908
Phone: 239-481-5333
Fax

Report To: Wade Moser
Bill to:
P.O. #

Preservative: HCL = H, HNO_3= N, $Na_2S_2O_3$ = ST
H_2SO_4 = S, NaOH = SH, NH_4Cl = NH

Project Name: Forest Utilities WWTP FLA014478
Project Location: 6341 Deer Run, Ft. Myers, Fl 33908
Customer Type:
Kit #: (LABORATORY)
Requested Due Date:

Sampled By (PRINT)
Sampler Signature

Matrix	Sample Description / Lot #	Sample Date	Sample Time	Sample Type	Preservatives pH	Preservatives Ice	Preservatives ST	Analysis Requested TSS	Analysis Requested FECAL	Analysis Requested CBOD	Sample ID # (Lab Use Only)
WW	AFBC, EFB-01 Bottle # Type 500 mL, #			G							
WW	AFBC, EFB-02 Bottle # Type 500 mL, #			G							
WW	CCC, EFA-01 Bottle # Type 100 ML, # 9197005			G							
WW	CCC, EFA-02 Bottle # Type 100 ML, # 9197005			G							
WW	INFL., INF-01 Bottle # Type 500 mL, #			C							
WW	CCC, EFA-01 Bottle # Type 500 mL, #			C							
WW	CCC, EFA-02 Bottle # Type 500 mL, #			C							
	Total Bottle Count _____										

Bottle Lot #		Relinquished By/Affiliation	Date	Time	Accepted By/Affiliation	Date	Time
	Okay to Run As Is... Client Initial:						
	Samples On Ice Yes No						

1050 Endeavor Ct, Nokomis, FL 34275-3623 (941) 488-8103 fax(941) 484-6774 10090 Bavaria Rd., Fort Myers, FL 33913 (239) 590-0337 fax (239) 590-0536

Buffer and Standards Log Documentation

SOP FD 1000

	Date of	Date of	Expiration				
PH Buffers	**Receipt**	**1st use**	**Date**	**Lot #**	**Catalog#**	**Vendor**	**Operator**
4.01							
7.01							
10.01							
NTU Standards							
0.02							
4.0							
10.0							
Chlorine Standards							
STD -1 = 0.19+/- 0.09	4/20/2021		3/1/2023	A1074	25191000	Hach	
STD -2 = 1.53 +/- 0.14	4/20/2021		3/1/2023	A1074	25192000	Hach	
STD -3 = 2.88 +/- 0.30	4/20/2021		3/1/2023	A1074	25193000	Hach	
Replacement Buffers and/or Standards							

Buffer and Standards Log Documentation

SOP FD 1000

	Date of	Date of	Expiration				
PH Buffers	**Receipt**	**1st use**	**Date**	**Lot #**	**Catalog#**	**Vendor**	**Operator**
4.01							
7.01							
10.01							
NTU Standards							
0.02							
4.0							
10.0							
Chlorine Standards							
0.2							
1.6							
2.7							
Replacement Buffers and/or Standards							

Forest Utilities WWTP FLA014478

Chlorine Calibration Log

Chlorine Bench Meter:

Hach DR300 Pocket Colorimeter, Item# LPV445.97.000110, Serial#

Month/Year

SOP FT 2000

Standards			Blank = 0	STD-1 = 0.19 +/- 0.09				STD-2 = 1.53 +/- 0.14				STD-3 = 2.88 +/- 0.30				Sample	
Date	Time	Site ID	Initial/Pass	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Analysis Bench/Monitor	Operator
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Initial Cal = Initial Calibration, ICV = Initial Calibration Verification, CCV = Ccontinuing Calibration Verification

Note: separate log for Buffer and Standards Documentation

Forest Utilities WWTP FLA014478 Chlorine Calibration Log

Continuous Flow Chlorine Monitor: **Hydro RAH 210, Serial#7Y911F05012, Accuarcy +/- 01%**

Month/Year **SOP FT 1900, +/- 20% of Bench result**

Standards			STD-1 = 0.19 +/- 0.09				STD-2 = 1.53 +/- 0.14				STD-3 = 2.88 +/- 0.30				Sample	
Date	Time	Site ID	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Analysis Bench/Monitor	Operator
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Initial Cal = Initial Calibration, ICV = Initial Calibration Verification, CCV = Ccontinuing Calibration Verification

Note: separate log for Buffer and Standards Documentation

NTU Continuous Flow Monitor: **HF Scientific Model: MTOL, Serial# 20191110777, Accuracy: +/- 2% Three (3) point calibration**

Year **SOP FT 1900, +/- 20% Of Bench**

Standards			0.02				4.0				10.0				Sample	
Date	Time	Site ID	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Analysis Bench/Monitor	Operator
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Initial Cal = Initial Calibration, ICV = Initial Calibration Verification, CCV = Ccontinuing Calibration Verification

Note: separate log for Buffer and Standards Documentation

NTU Bench Meter: **HF Scientific Model: Micro 100, Serial# 201609235, Accuracy: +/- 2% Three (3) point calibration**

Month/Year **SOP FT 1600**

Standards			0.02				4.0				10.0				Sample	
Date	Time	Site ID	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Initial Cal/Pass	ICV	CCV	Expiration	Analysis Bench/Monitor	Operator
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Initial Cal = Initial Calibration, ICV = Initial Calibration Verification, CCV = Ccontinuing Calibration Verification

Note: separate log for Buffer and Standards Documentation

Forest Utilities WWTP Fla 014478
pH Calibration Log

pH Instrument **Hanna Model # HI 98127, Lot #28558. Accuracy : +/- 0.1 pH, Two (2) point calibration**

Month/Year **SOP FT 1100**

Buffer			**4.01**				**7.01**				**10.01**				**Sample**	
Date	**Time**	**Site ID**	**Initial Cal./ Pass**	**ICV**	**CCV**	**Expiration**	**Initial Cal./ Pass**	**ICV**	**CCV**	**Expiration**	**Initial Cal./ Pass**	**ICV**	**CCV**	**Expiration**	**Ph Analysis**	**Operator**
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Initial Cal = Intial Calibration, ICV = Intial Calibration Verification, CCV = Continuing Calibration Verification, ✓ Pass = Fail = Calibration Value

Note: separate log for Buffer and Standards Documentation

Received
Electronically
July 21, 2021
South District

ODYSSEY
engineering company

July 10, 2021

Mr. Nolin Moon, P.E.
Environmental Administrator
Florida Department of Environmental Protection
South District Office
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901

Re: **CONVERSION OF FOREST UTILITIES WASTEWATER TREATMENT PLANT FROM CHLORINE GAS TO BULK SODIUM HYPOCHLORITE**

Encl: (1) Application for a Minor Revision to a Wastewater Facility or Activity Permit
(2) Permit Application Drawings
(3) Bulk Storage Tank Details
(4) Pump, Valve and Pipe Information
(5) Flow Sensors/Transmitters Technical Information
(5) Emergency Eyewash/Shower Information
(6) ANSI/NSF STANDARD 60 Certification and SDS
for Odyssey Ultrachlor Sodium Hypochlorite

Dear Mr. Moon:

Enclosed is one (1) certified submittal package consisting of the appropriate application form and supporting documentation for requesting a Minor Modification for the conversion of the Forest Utilities Wastewater Treatment Plant (WWTP) disinfection system from chlorine gas to bulk sodium hypochlorite. The purpose of the disinfection conversion is to significantly improve the safety of the general public and facility operations personnel as well as minimizing the threat from terrorists. In addition, the effluent water quality will be improved with this modification because of the increase in pH and the fact the sodium hypochlorite has fewer metals than chlorine gas. Forest Utilities has secured the services of Odyssey Manufacturing Company to install the system. We are submitting this permit modification request on behalf of Forest Utilities.

EXISTING SYSTEM

The Forest Utilities WWTP is class one facility utilizing extended aeration process. The plant is permitted for 800,000 gpd annual average daily flow. The plant currently has an average daily flow of 300,000 to 350,000 gpd in summer and 450,000 to 500,000 gpd in winter season. Peak flows occur in the morning and can reach 600 gpm then tapers off to approximately 100 gpm in evening. The clarifiers gravity feed two traveling bridge automatic backwash filters with discharge to a pipe header that feeds two chlorine contact basins. Discharge from the chlorine contact basin flows to a pump station wet well where standard effluent flows to an isolated golf course irrigation lake. Substandard effluent is diverted to a reinforced concrete storage tank. Chlorine gas is currently

fed into a water solution from 150 lb. cylinders then fed at the beginning of the chlorine contact tank. The chlorine feed rate is manually set by the plant operations staff.

Design Basis

Chlorine Usage Rate: 55 ppd / (8.34 x 0.4 MGD) = 16.5 ppm

The average WWTP in Florida feeds approximately 12 – 14 ppm. The reason the feed rate is so much higher is that the chlorine feed needs to be flow-placed so that the feed rate is automatically turned down at night when the plant's flows decrease. This would be done as part of any future sodium hypochlorite conversion.

PROPOSED SODIUM HYPOCHLORITE SYSTEM

Odyssey will pour a new 10' x 10' x 8" concrete slab on the north side of the existing Chlorine Building. On the slab, Odyssey will furnish and install a 1,700-gallon tank inside a containment tub. In addition to the storage tank, Odyssey will furnish and install four Stenner peristaltic feed pumps inside the Chlorine Building on welded PVC shelves. One pump will be dedicated to the East Chlorine Contact Chamber, one to the West Chlorine Contact Chamber, one to the East Pre-Filters and one to the West Pre-Filters. As part of the work, Odyssey will install the plumbing to and from the feed pumps. Additionally, Odyssey will install two new flowmeters on the discharge weirs of the contact chambers. The plant has no eyewash/safety shower and Odyssey will install a new potable water line to the Chlorine Building and install an eyewash/safety shower. Lastly, will perform electrical upgrade work which is necessary based on existing conditions

SEQUENCE OF EVENTS

Once the permit is approved, Odyssey will procure the equipment and pour the new concrete pad. After proper curing, Odyssey will arrive on-site and complete the project. Once the system is operational, the Odyssey will remove/demolish the chlorine gas equipment. The work will be done in such a manner to maintain continuous disinfection during the entire process.

CONCRETE PAD

Odyssey will grade the area on the north side of the existing Chlorine Building and furnish and install a 10' x 10' x 8" concrete pad for the new storage tank. The pad will be constructed of 4,000 psi concrete with #5 rebar on the bottom of the pad on 12" centers.

FLOWMETERS

Odyssey will furnish and install two Endress-Hauser FDU-90 ultrasonic sensors over the end of each Contact Chamber (one for each contact chamber on a new section of SS316 strut near the existing v-notch weir at the end of each contact chamber). Odyssey will then install a single Endress Hauser FMU-90 transmitter unit for both chambers which is capable of totalizing the flow inside the existing Chlorine Building and do all of the required electrical and control wire hookups.

SODIUM HYPOCHLORITE CHEMICAL FEED EQUIPMENT

Odyssey will furnish and install four Stenner S3005 peristaltic feed pumps on welded PVC shelves in the Chlorine Building. The pumps are rated for 85 gpd@30 psi each. The pumps can run in the manual mode or can be flow-paced using a 4/20 ma signal from the flowmeters. The pumps are scalable on the 4/20 ma input signal. Each pump will have an inlet and outlet isolation ball valve. The valves will have a Kynar Jaco fitting to transition from hard-piping to ¼" inlet and outlet tubing. One pump will be dedicated to the east contact chamber, one to the west contact chamber, one to the east filters and one to the west filters. Since the filters are not required FDEP feeds, there are actually two installed spare pumps (three if only one contact chamber is in use). The pumps will be piped so that any pump can supply any feed point for redundancy. Each feed line will have a pressure gage on an isolation ball valve to check for calcification. The inlet feed header will have a strainer and a 200-ml calibration column to check the pump operation the vent of which will be piped back to the top of the sodium hypochlorite tank. The pumps will plug into a common outlet which will be protected by an EDCO surge suppression unit.

SODIUM HYPOCHLORITE CHEMICAL STORAGE EQUIPMENT

Odyssey will furnish and install one new Duracast single-walled 1,700-gallon HDLPE tank inside an HDLPE containment tub. The tank measures 76" in diameter and is 93" tall. The containment tub measures 94.5" in diameter and is 77" tall. Based on an average consumption of 60 gpd in the winter, this equates to about 28 days of on-site storage. The tank will have a 3" u-vent, a 2" hard-piped fill line, and an 18" threaded manway on top. There will be a 3" overflow fitting under the manway. The bottom sidewall fitting will be a 1" bulkhead fitting tied to a 1" isolation ball valve tied to a three-foot section of 1" flexible PVC tied to a 1" bulkhead fitting on the containment tied to another 1" isolation ball valve tied to a 1" Schedule 80 PVC header going into the Chlorine Building. The header will feed a 1" isolation ball valve inside the building, then a 1" strainer, then a "T" with a calibration column and then four T's for each of the feed pumps. Odyssey will also install a 1" hose on an isolation ball valve on either end at the end of the 1" header to fill 2.5-gallon jugs for cleaning around the WTF. All valves will be Asahi Type 21 true union ball valves with viton O-rings. All connections will be solvent welded.

SODIUM HYPOCHLORITE INJECTION PIPING

Odyssey will furnish and install four new ½" Schedule 80 PVC lines to each of the four injection points: (1) East Filter Inlet; (2) West Filter Inlet; (3) East Contact Chamber Inlet; and (4) West Contact Chamber inlet. The end of each line will be placed into the effluent flow at the point where the flow goes into or comes out of the 10" piping. Before the line goes into the water it will have a ½" needle valve to create backpressure and a ½" union so the piping can be periodically removed to clean off the calcification (the pressure gages will alert the operator when it is time to clean off the calcification). All above ground portion of the piping will be painted yellow in accordance with FDEP directives. All piping will be properly labeled.

MATERIALS OF CONSTRUCTION

Because of the nature of the work, all piping will be field run. Piping will be Schedule 80 PVC. Pipe supports will be on minimum 48" centers and will be a combination of 1-5/8" 316 ss uni-strut with

rigid pipe clamps and/or polyethylene 'clics.' All ball valves will be Asahi Type 21 true union ball valves with viton o-rings.

SAFETY SHOWER/EYEWASH

Currently, the site has no eyewash and safety shower and this is required. Odyssey will furnish and install one Guardian 1902 safety shower/eyewash to include supply plumbing and a hose bib located at the Chlorine Building. The work includes painting the piping potable water blue and proper labeling.

ELECTRICAL/CONTROL WIRING

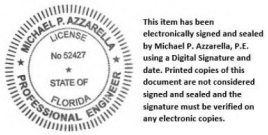
At the Chlorine Building, Odyssey will install a new 50-Amp Sub Panel inside the Building. Odyssey will rewire the Chlorine Building to have four circuits: (1) Lighting; (2) Outlets; (3) Outlet for Feed Pumps with surge suppression; (4) Exhaust Fan; and (5) Outlet for Flowmeters with surge suppression. A spare conduit to be installed can be used for a future electrical load or for control wiring back to a future SCADA system.

WATER QUALITY

Once the conversion is complete, the finished effluent water leaving the plant will continue meet all current and pending regulations for re-use water. Odyssey's sodium hypochlorite is certified to meet ANSI/NSF 60 standards. The addition of sodium hypochlorite will make the re-use water pH increase from 7.2 to 7.6.

Thank you for your consideration. Please call me if you have any questions at (813) 505-5684, or email mazzarella@odysseymanufacturing.com if I can be of further assistance.

Sincerely,



Michael P. Azzarella, P.E.
Azzarella, P.E.
2021.07.21
08:09:10
-04'00'

Michael P. Azzarella, P.E.

Enclosures



This item has been electronically signed and sealed by Michael P. Azzarella, P.E. using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Michael P. Azzarella, P.E. 2021.07.21 08:08:32 -04'00'

Michael P. Azzarella, P.E.
FL PE#: 52427
Odyssey Engineering Company, LLC
1484 Massaro Boulevard
Tampa, Florida 33619
CA# 30049

APPLICATION FOR A MINOR REVISION TO A WASTEWATER FACILITY OR ACTIVITY PERMIT

1. Instructions

a. In accordance with Rule 62-620.325, F.A.C., this form must be submitted to the appropriate Department district office or approved local program when requests for minor revisions to a permit or minor modifications to a facility are made by a permittee, except for transfer of a permit to a new permittee and addition of a major user of reclaimed water to a Part III reuse system. Application for transfer of a permit to a new permittee shall be made on DEP Form 62-620.910(11). Application for addition of a major user of reclaimed water shall be made on DEP Form 62-610.300(4)(a)1.
b. Each applicable item must be completed in full in order to avoid delay in processing of this form. Where attached sheets or other technical documentation are provided, indicate appropriate cross-references.
c. Three (3) copies of this application with supporting documentation shall be submitted with this form.
d. All information is to be typed or printed in ink. Dates are to be entered in MM/DD/YR format.
e. This application and attachments shall be signed in accordance with Rule 62-620.305, F.A.C. Also, as applicable, this application and all attachments shall be signed and sealed by a professional engineer registered in Florida in accordance with Rule 62-620.310, F.A.C.

2. Facility Information

a. Permit Number: FLA014478 b. Facility Identification Number: FLA014478
c. Project/Facility Name: Forest Utilities Wastewater Treatment Plant Sodium Hypochlorite Conversion
d. Contact Name: Mitch Gilbert
Number and Street: 15275 Collier Blvd., Suite 201-268
City/State/Zip Code: Naples, FL
Telephone 239-825-7818

3. Type of Revision

☐ **Correct Typographical Errors**[1] - Submit one copy of each page of the permit showing revisions being requested.

☐ **Change Improvement Schedule**[1] - Provide a description of the improvement, a list of the dates to be revised, and a reason for the proposed change in each date.

☐ **Change Expiration Date of Permit**[1] - Provide the current and proposed expiration dates for the permit and the reasons for the proposed change.

☐ **Change Staffing Requirements**[2] - Describe the proposed change and submit justification for the change in accordance with Chapter 62-699, F.A.C.

[1]A processing fee is not required.
[2]A processing fee is required with the application in accordance with Rule 62-4.050, F.A.C.

☐ **Change Monitoring and Reporting Requirements**[2] - Describe the proposed change and submit justification for the change in accordance with Chapter 62-601, F.A.C.

☐ **Modify Approved Pretreatment Program**[1] - Describe the proposed modification and provide the information required by Rule 62-625.540, F.A.C.

☐ **Delete Point Source Outfall**[1] - Identify the outfall and explain why the outfall is being eliminated.

☐ **Modify or Expand Approved Residuals Land Application Sites**[2] - Attach a new or updated Agricultural Use or Dedicated Site Plan as required by Chapter 62-640, F.A.C.

☒ **Minor Modification to the Facility**[2] - Provide a description of the proposed modification. If applicable, attach any reports, plans, and specifications which have been developed to implement this modification.

☐ **Other**[2] - Provide appropriate documentation. Describe.

4. Certifications

a. Applicant or Authorized Representative

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Judy Mallett — July 20, 2021

(Signature of Applicant or Authorized Representative[3]) (Date)

Name (please type) Judy Mallett Company Name Forest Utilities, Inc.
Title Treasurer Company Address: 6000 Forest Boulevard
Phone: 239-481-5333 City/State/Zip Code: Fort Myers, Florida 33908
Email (optional): forestu@aol.com

b. Professional Engineer Registered in Florida

I certify that the engineering features of this project have been (designed) (examined) by me and found to conform to engineering principles applicable to such projects. In my professional judgement, this facility, when properly constructed, operated, and maintained, will comply with all applicable statutes of the State of Florida and rules of the Department.

Name (please type): Michael P. Azzarella
Florida Registration Number: 52427
Company Name: Odyssey Engineering Company, LLC
Company Address: 1484 Massaro Boulevard
City/State/Zip Code: Tampa, FL 33619
Phone Number: 813-505-5684

MICHAEL P. AZZARELLA LICENSE No 52427 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Michael P. Azzarella, P.E. using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Michael P. Azzarella, P.E. 2021.07.21 08:09:36 -04'00'

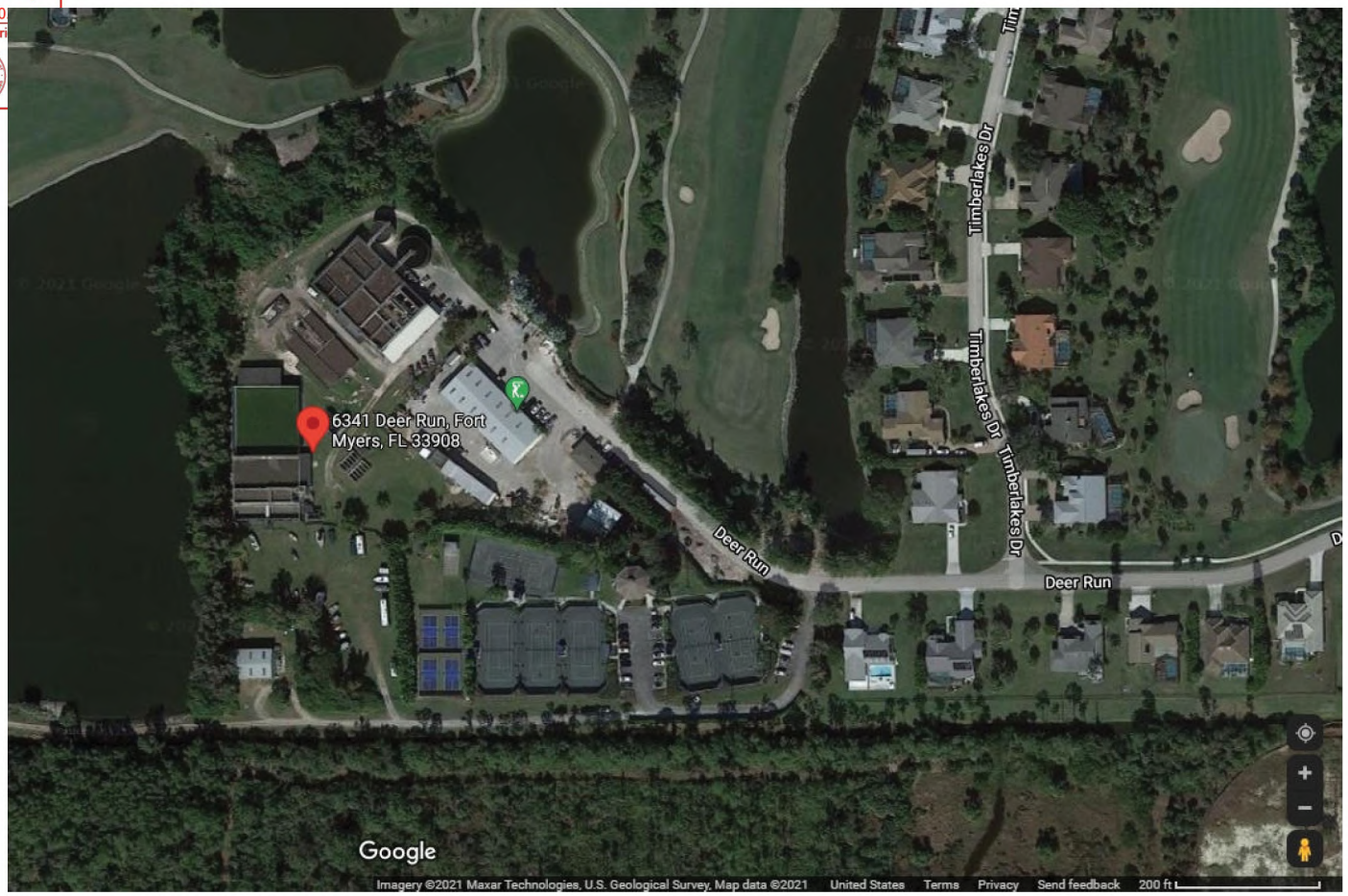
#52427

(Seal, Signature, Date, and Registration Number)

Email (optional): michael@odysseyengco.com

[3]If signed by the authorized representative, attach a letter of authorization in accordance Rule 62-620.305, F.A.C.

Received
Electronically
July 21, 20
South Distri





SITE LOCATION MAP
FOREST UTILITIES WWTP
6342 DEER RUN, S.W.
FT. MYERS, FL 33908
SCALE: AS NOTED

SOURCE: GOOGLE MAPS, 2021

Michael P. Azzarella, P.E.
2021.07.21 08:09:57 -04'00'

MICHAEL P. AZZARELLA, P.E.
FL P.E. NO. 52427

NO.	REVISION & DATE
1	

PROJECT:
FOREST UTILITIES WWTP
DISINFECTION SYSTEM CONVERSION

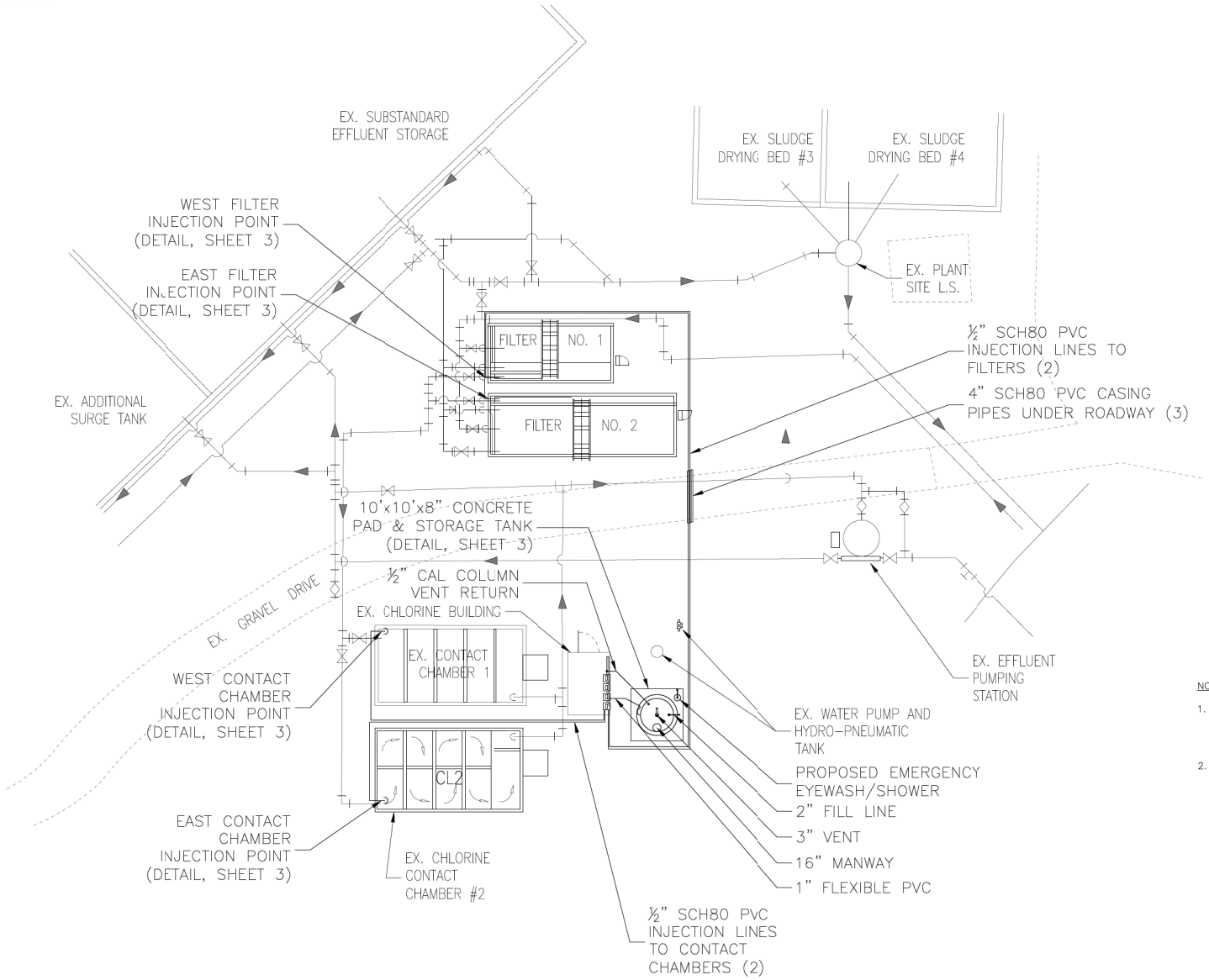
PREPARED FOR:
FOREST UTILITIES

SHEET TITLE:
SITE LOCATION MAP

ODYSSEY engineering company
1484 MASSARO BLVD., TAMPA, FL 33619
PH. (813) 505-5684 FAX (813) 630-2589

JOB NO.	
ACAD FILE:	
DRAWN BY:	
CHK'D BY:	MPA
SCALE:	AS NOTED
DATE:	JULY 2021
SHEET NO.	1

THE DESIGNS AND DRAWINGS CONTAINED HEREON ARE THE COPYRIGHTED PROPERTY OF ODYSSEY ENGINEERING COMPANY, LLC. CERTIFICATE OF AUTHORIZATION #30046. MICHAEL AZZARELLA, P.E. REGISTRATION #52427 AND SHOULD NOT BE DUPLICATED WITHOUT WRITTEN CONSENT OF THE ENGINEER.



5 0 10 20
1"=10' FULL SIZE
1"=20' 11" X 17"

NOTES

1. BASE MAP / PLAN PROVIDED BY SOURCE, INC. TITLED FOREST UTILITY WASTEWATER TREATMENT FACILITY – WWTP SITE PAN, SHEET NO. 3, DATED 8/25/20..
2. ALL UTILITIES SHALL BE LOCATED/VERIFIED BEFORE START OF WORK.

Michael P. Azzarella, P.E. 2021.07.21 08:10:19 -04'00'

MICHAEL P. AZZARELLA, P.E.
FL P.E. NO. 52427

REVISION & DATE:
NO.

PROJECT:
FOREST UTILITIES WWTP
DISINFECTION SYSTEM CONVERSION

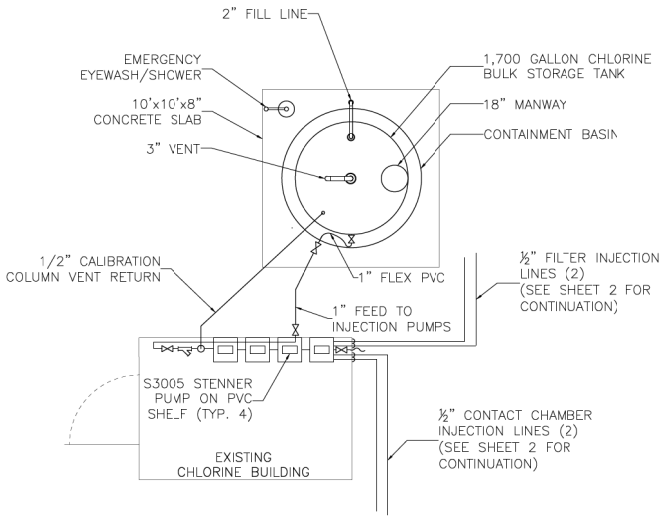
PREPARED FOR:
FOREST UTILITIES

SHEET TITLE:
DISINFECTION SYSTEM LAYOUT

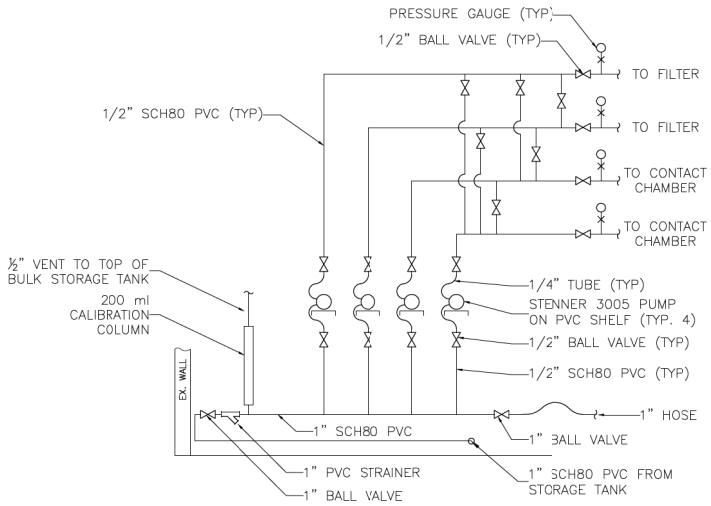
ODYSSEY engineering company
1484 MASSARO BOULEVARD TAMPA, FLORIDA 33619
PHONE (813) 635-0339 FAX (813) 630-2589

JOB NO.	
ACAD FILE	FOREST WWTP
DRAWN BY:	JCS
CHK'D BY:	MPA
SCALE:	N.T.S.
DATE:	JULY 2021
SHEET NO.	2

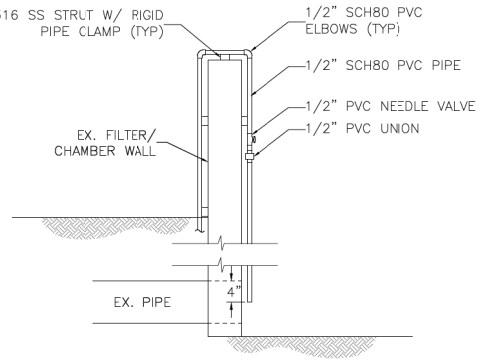
PROPRIETARY: THIS MATERIAL IS CONFIDENTIAL AND CONTAINS PROPRIETARY INFORMATION AND OTHER RIGHTS WHICH ARE THE SOLE AND EXCLUSIVE PROPERTY OF ODYSSEY ENGINEERING COMPANY, LLC. POSSESSION OF THIS MATERIAL DOES NOT CONVEY OR TRANSFER ANY RIGHTS AND ANY REPRODUCTIONS, USE, COPYING, OR DISCLOSURE TO OTHERS IS FORBIDDEN WITHOUT THE PRIOR WRITTEN CONSENT OF AN OFFICER OF ODYSSEY ENGINEERING COMPANY, LLC.



CHEMICAL STORAGE AND FEED SYSTEM PLAN
(NOT TO SCALE)



CHEMICAL FEED SYSTEM ELEVATION
(INSIDE CHLORINE BUILDING)
(NOT TO SCALE)



TYPICAL INJECTION POINT DETAIL
(NOT TO SCALE)

NO.	REVISION & DATE:

PROJECT:
FOREST UTILITIES WWTP
DISINFECTION SYSTEM CONVERSION

PREPARED FOR:
FOREST UTILITIES

SHEET TITLE:
SYSTEM DETAILS

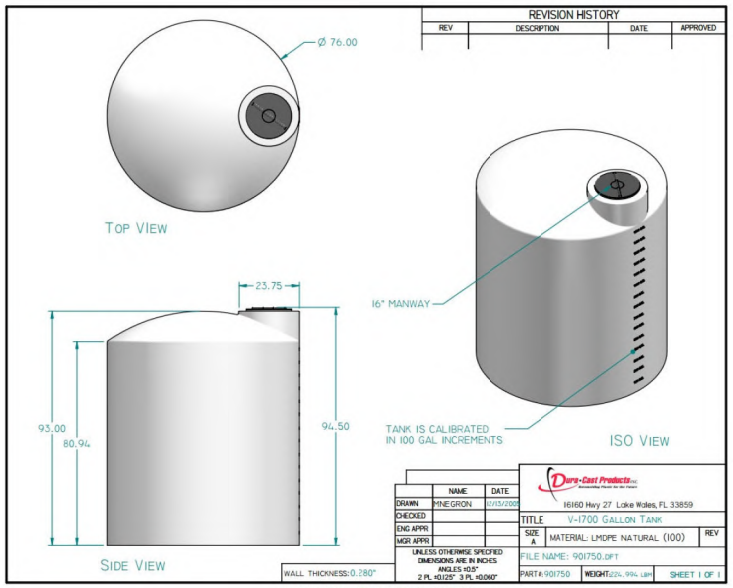
ODYSSEY engineering company
1484 MASSARO BOULEVARD TAMPA, FLORIDA 33619
PHONE (813) 635-0339 FAX (813) 630-2589

Michael P. Azzarella, P.E.
2021.07.21 08:10:45 -04'00'

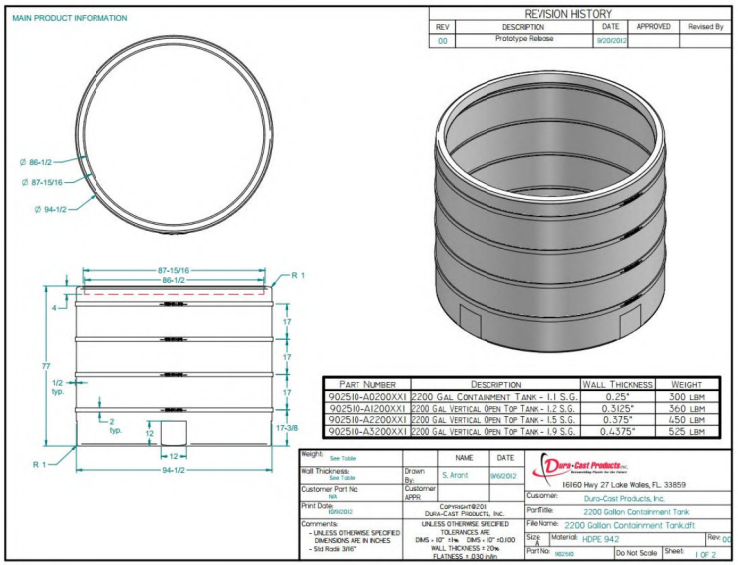
MICHAEL P. AZZARELLA, P.E.
FL P.E. NO. 52427

JOB NO.	
ACAD FILE	FOREST WWTP
DRAWN BY:	JCS
CHK'D BY:	MPA
SCALE:	AS NOTED
DATE:	JULY 2021
SHEET NO.	3

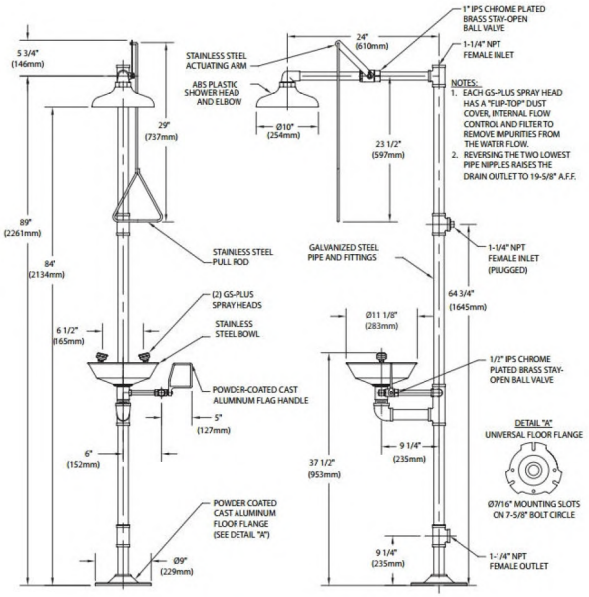
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BULK STORAGE TANK
NOT TO SCALE



CONTAINMENT TUB
NOT TO SCALE



EMERGENCY EYEWASH/SHOWER DETAIL
NOT TO SCALE

NOTES

1. EMERGENCY EYEWASH/SHOWER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

2. ALL POTABLE WATER PIPING FURNISHED AND INSTALLED SHALL BE PAINTED SAFETY BLUE AND LABELED IN ACCORDANCE WITH FDEP REGULATIONS.

3. BULK STORAGE TANK SHALL BE INSTALLED INSIDE CONTAINMENT TUB. SCHEDULE 80 PVC BULKHEADS SHALL BE USED FOR BOTTOM FITTING ON STORAGE TANK AND PASS THROUGH FITTING ON CONTAINMENT TUB. ALL GASKETS WILL BE VITON.

4. SCHEDULE 80 PVC BULKHEAD FITTINGS SHALL BE INSTALLED ON TOP OF TANK FOR 3" U-VENT, 2" FILL LINE, AND 1" CALIBRATION COLUMN VENT RETURN.

Michael P. Azzarella, P.E.
2021.07.21 08:11:07 -04'00'

MICHAEL P. AZZARELLA, P.E.
FL P.E. NO. 52427

NO.	REVISION & DATE
1	

PROJECT: FOREST UTILITIES WWTP DISINFECTION SYSTEM CONVERSION

PREPARED FOR: FOREST UTILITIES

SHEET TITLE: DETAILS

ODYSSEY engineering company
1484 MASSARO BLVD., TAMPA, FL 33619
PH. (813) 505-5684 FAX (813) 630-2589

JOB NO.	
ACAD FILE:	
DRAWN BY:	MPA
CHK'D BY:	
SCALE:	AS NOTED
DATE:	JULY 2021
SHEET NO.	4

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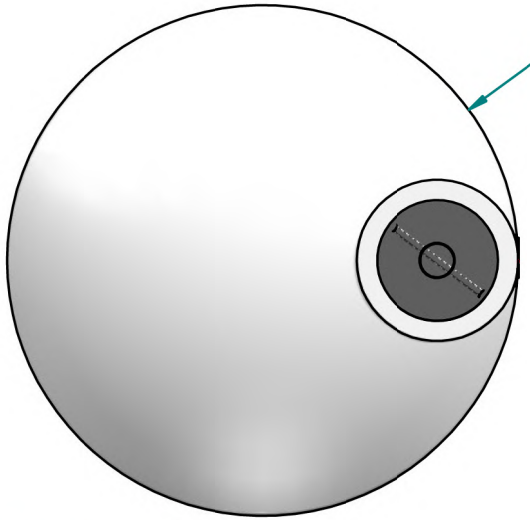
FOREST UTILITIES

WASTEWATER TREATMENT PLANT

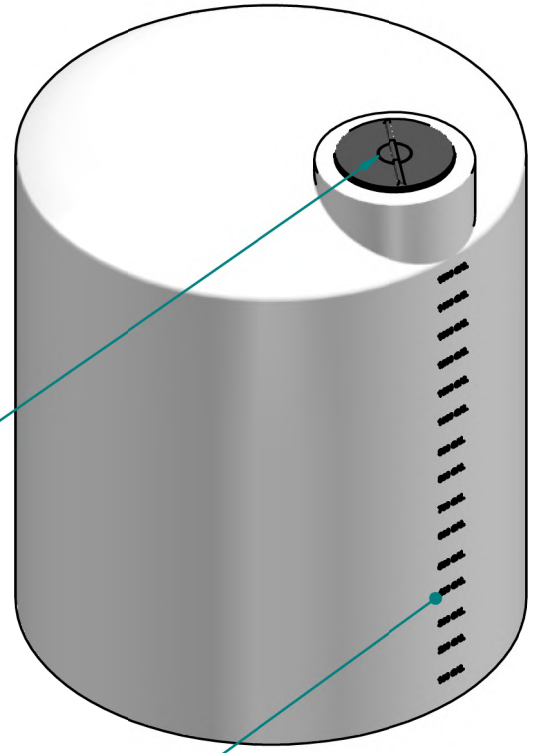
DISINFECTION SYSTEM CONVERSION

BULK STORAGE TANK DETAILS

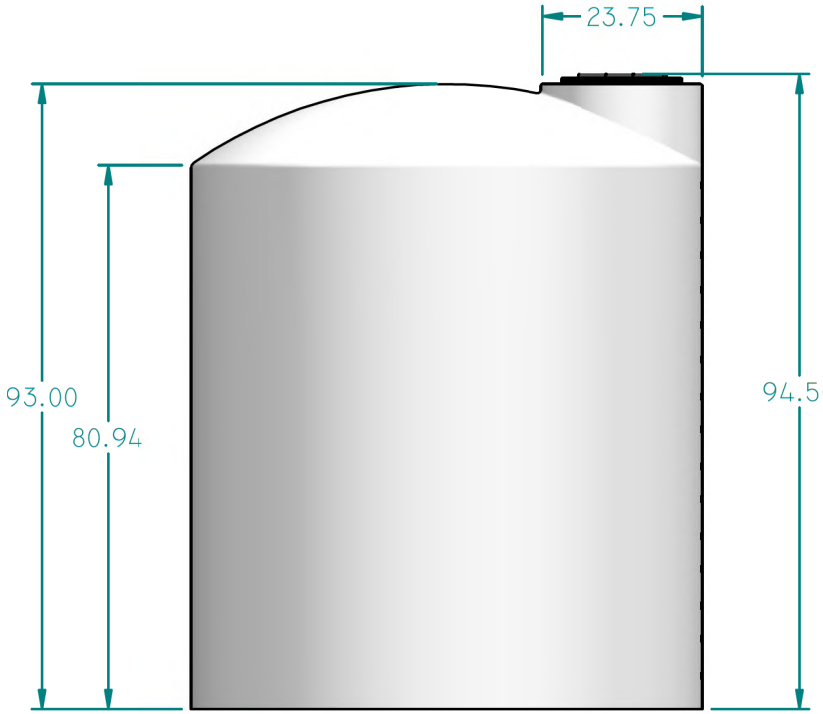
REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED



TOP VIEW



ISO VIEW



SIDE VIEW

	NAME	DATE
DRAWN	MNEGRON	12/13/2005
CHECKED		
ENG APPR		
MGR APPR		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
ANGLES ±0.5°
2 PL ±0.125" 3 PL ±0.060"

WALL THICKNESS: 0.280"

Dura-Cast Products INC.
Rotomolding Plastic for the Future

16160 Hwy 27 Lake Wales, FL 33859

TITLE V-1700 GALLON TANK

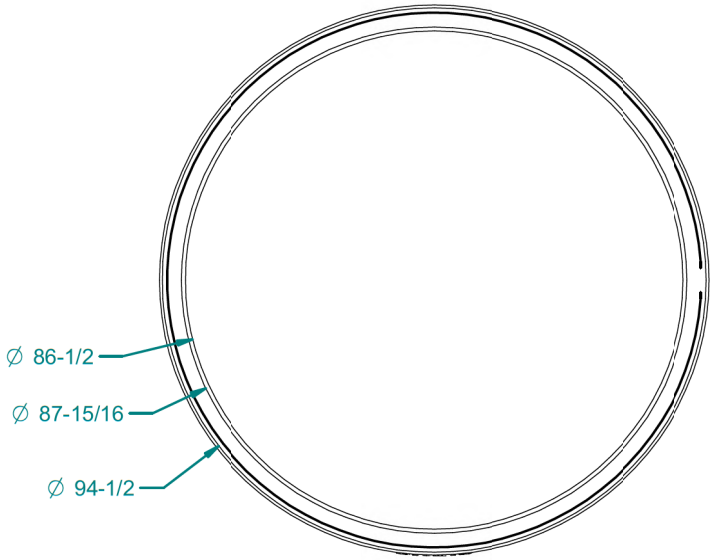
SIZE	MATERIAL: LMDPE NATURAL (100)	REV
A		

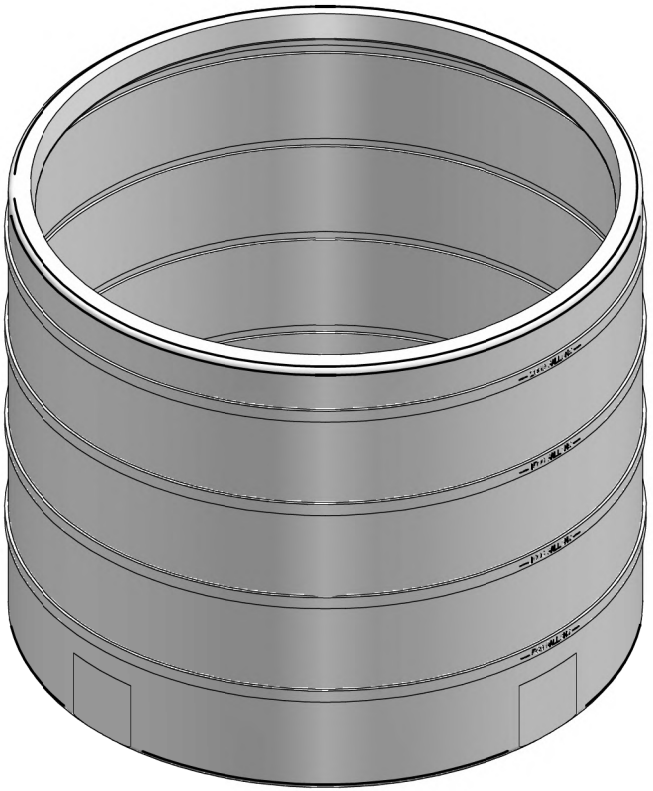
FILE NAME: 901750.DFT

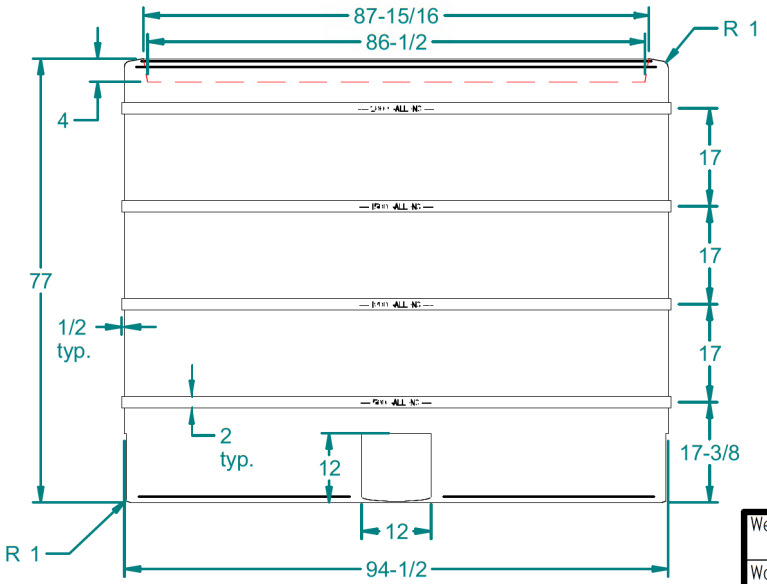
PART#: 901750	WEIGHT: 224.994 LBM	SHEET 1 OF 1

MAIN PRODUCT INFORMATION

REVISION HISTORY				
REV	DESCRIPTION	DATE	APPROVED	Revised By
00	Prototype Release	9/20/2012		







PART NUMBER	DESCRIPTION	WALL THICKNESS	WEIGHT
902510-A0200XX1	2200 GAL CONTAINMENT TANK - 1.1 S.G.	0.25"	300 LBM
902510-A1200XX1	2200 GAL VERTICAL OPEN TOP TANK - 1.2 S.G.	0.3125"	360 LBM
902510-A2200XX1	2200 GAL VERTICAL OPEN TOP TANK - 1.5 S.G.	0.375"	450 LBM
902510-A3200XX1	2200 GAL VERTICAL OPEN TOP TANK - 1.9 S.G.	0.4375"	525 LBM

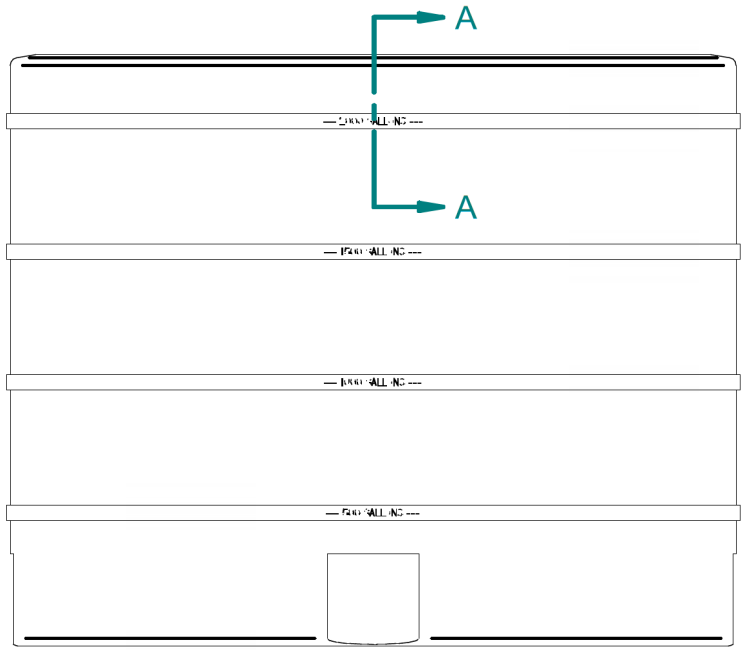
		NAME	DATE
Weight: See Table			
Wall Thickness: See Table	Drawn By:	S. Arant	9/6/2012
Customer Part No: N/A	Customer APPR		
Print Date: 10/9/2012	COPYRIGHT@2011 DURA-CAST PRODUCTS, INC.		
Comments: - UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES - Std Radii 3/16"	UNLESS OTHERWISE SPECIFIED TOLERANCES ARE DIMS > 10" ±1% DIMS < 10" ±0.100 WALL THICKNESS ± 20% FLATNESS ± .030 in/in		

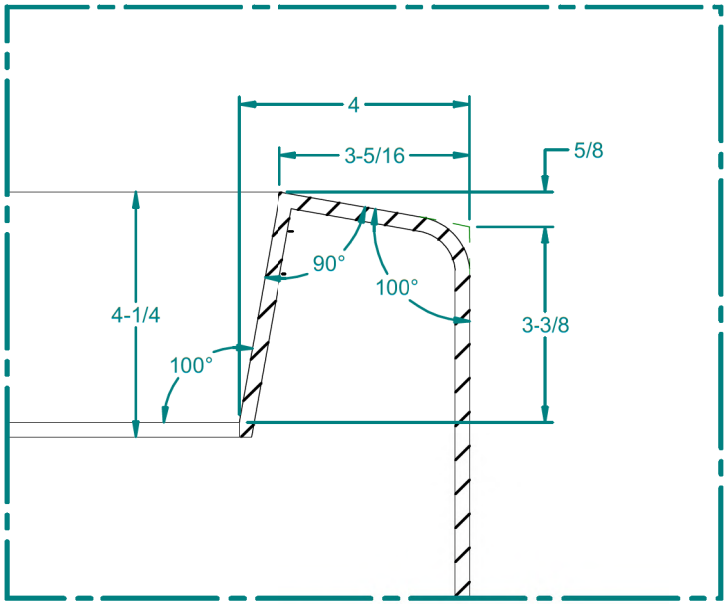
Dura-Cast Products INC. Rotomolding Plastic for the Future
16160 Hwy 27 Lake Wales, FL. 33859

Customer:	Dura-Cast Products, Inc.		
PartTitle:	2200 Gallon Containment Tank		
File Name:	2200 Gallon Containment Tank.dft		
Size: A	Material: HDPE 942		Rev: 00
Part No: 902510	Do Not Scale	Sheet: 1 OF 2	

SECONDARY PRODUCT INFORMATION

REVISION HISTORY				
REV	DESCRIPTION	DATE	APPROVED	Revised By
00	Prototype Release	9/20/2012		





SECTION A-A

Weight: See Table		NAME	DATE
Wall Thickness: See Table	Drawn By:	S. Arant	9/6/2012
Customer Part No: N/A	Customer APPR		
Print Date: 10/9/2012	COPYRIGHT@2011 DURA-CAST PRODUCTS, INC.		
Comments: - UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES - Std Radii 3/16"	UNLESS OTHERWISE SPECIFIED TOLERANCES ARE DIMS > 10" ±1% DIMS < 10" ±0.100 WALL THICKNESS ± 20% FLATNESS ± .030 in/in		

Dura-Cast Products INC. Rotomolding Plastic for the Future
16160 Hwy 27 Lake Wales, FL. 33859

Customer:	Dura-Cast Products, Inc.		
PartTitle:	2200 Gallon Containment Tank		
File Name:	2200 Gallon Containment Tank.dft		
Size: A	Material: HDPE 942		Rev: 00
Part No: 902510	Do Not Scale	Sheet:	2OF 2

Dura-Cast Products INC.
Rotomolding Plastic for the Future

16160 Hwy 27 Lake Wales, FL 33859
800.683.4116 863.638.3200
Fax 863.638.2443
www.duracast.com

September 01, 2005

Dear Sir or Madam:

Please review the following approval qualification and the resin data sheet that is available for Dura-Cast polyethylene storage tanks that are manufactured with ExxonMobil LL 8460 resin.

Dura-Cast polyethylene storage tanks are rotationally molded with ExxonMobil LL 8460 Linear Low Density Polyethylene (LLDPE) resin. This resin provides outstanding chemical and environmental stress crack resistance. The LL 8460 resin also includes a fully formulated long-term ultra violet stability package to mitigate degradation from sunlight and harmful lighting.

ExxonMobil LL 8460 resin complies with FDA and HPB regulatory standards for potable water and food contact, is recognized by the Underwriters Laboratories (UL) for flammability standard 94HB, and is listed by the National Sanitation Foundation (NSF) for standards 51 and 61.

The chemical resistance of ExxonMobil LL 8460 resin enables the storage of a wide variety of chemicals, including water treatment chemicals. In the water treatment, industry Dura-Cast tanks are successfully storing such products as Sulfuric Acid, Sodium Hypochlorite, Fluosilicic Acid, Hydrogen Peroxide, Hydrochloric Acid, and Sodium Hydroxide. Polyethylene tanks have been approved for these storage applications by a number of private and government agencies, including the EPA, USDA, and DER.

All Dura-Cast polyethylene tanks meet or exceed the ASTM Designation #D1998-91 standard specifications for polyethylene upright storage tanks.

Please contact us if you have any questions that are not addressed in the above information.

Sincerely,

David Orcutt
CFO & Vice President
Dura-Cast Products, Inc.

FOREST UTILITIES

WASTEWATER TREATMENT PLANT

DISINFECTION SYSTEM CONVERSION

PUMP, VALVE, AND PIPE INFORMATION

S SERIES SPECIFICATIONS

STENNER PUMPS

S30 Models

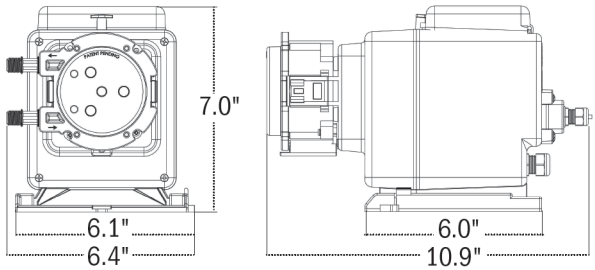


THIS PUMP IS TESTED AND CERTIFIED BY IAPMO ACCORDING TO ANSI/NSF 61 FOR CONTACT WITH SODIUM HYPOCHLORITE AND WATER ONLY AND NSF/ANSI 372.

Intertek 94247 CONFORMS TO ANSI/NSF STD. 50 Equipment for swimming pools, spas, hot tubs and other recreational water facilities.

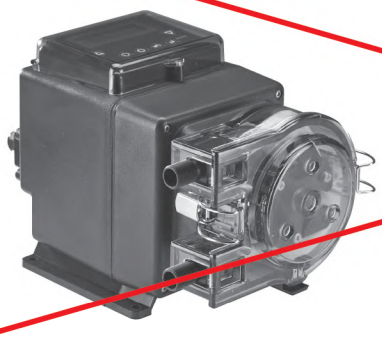
c UL us LISTED METERING PUMP 4TF1

IP65



SHIPPING WEIGHT 9 lbs (3.7 kg)

S40 Models

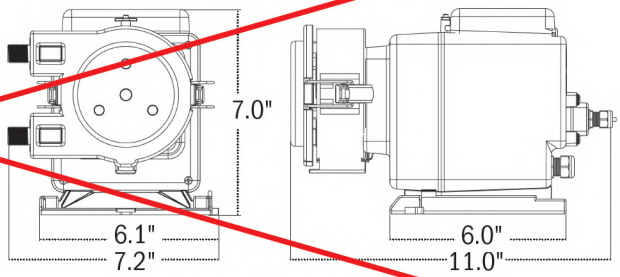


THIS PUMP IS TESTED AND CERTIFIED BY IAPMO ACCORDING TO ANSI/NSF 61 FOR CONTACT WITH SODIUM HYPOCHLORITE AND WATER ONLY AND NSF/ANSI 372.

Intertek 94247 CONFORMS TO ANSI/NSF STD. 50 Equipment for swimming pools, spas, hot tubs and other recreational water facilities.

c UL us LISTED METERING PUMP 4TF1

IP65



SHIPPING WEIGHT 9 lbs (3.7 kg)

FEATURES

- Digital keypad with OLED display
- Tube leak detector, Tube change timer, Password protection
- Multiple operational modes
- Totally enclosed housing, NEMA 4X
- Modbus RTU over RS-485 capable
- Brushless DC motor with ball bearing support
- Switch mode power supply
- 3-point roller design assists in anti-siphon protection
- Self-priming against maximum working pressure, foot valve not required
- Pump does not lose prime or vapor lock
- Pumps off-gassing solutions and can run dry
- Output volume is not affected by back pressure
- Tube replacement without tools
- IAPMO Listed, conforms to standard NSF/ANSI 61 & 372 (excludes any model with a Versilon® tube)
- INTERTEK/ETL Sanitation Listed, conforms to standard NSF/ANSI 50 (excludes any model with a 7X tube or a ball check valve with stainless steel spring)
- INTERTEK/ETL Sanitation Listed, conforms to standard CE IP65

SPECIFICATION

Flow Rate Output Control Varies per control mode; digital keypad
Reproducibility ±2%
Maximum Working Pressure 25 psi (1.7 bar), 100 psi (6.9 bar)
Maximum Operating Temperature 104°F (40°C)
Maximum Altitude 6562 ft. (2000 m)
Maximum Suction Lift 25 ft (7.6 m) vertical lift, based on water
Motor Type Brushless DC motor
Shaft rpm (average maximum) 45
Duty Cycle Continuous
Maximum Viscosity 1500 Centipoise
Motor Voltage (Amp Draw)
120V 60Hz 1PH (0.6), 230V 50Hz 1PH (0.3)
Hall Effect Max. Input Frequency 100 KHz
Pulse Duration Required 10 milliseconds
Minimum duration required for pump to read signal.
Power Cord Type 120V 60Hz SJTOWA, 230V 50Hz H05RN-F
Power Cord Plug End 120V 60Hz 5-15P, 230V 50Hz CEE7/7
Power Cord Length 6 ft (1.8 m)
Classification Indoor/Outdoor

This information is not intended for specific application purposes. Stenner Pump Company reserves the right to make changes to prices, products, and specifications at any time without prior notice.

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S SERIES SPECIFICATIONS

STENNER PUMPS®

S SERIES S30 Models

MATERIALS OF CONSTRUCTION

All Housings Polycarbonate
Pump Tube
Santoprene® (FDA approved), or Versilon®
Check Valve Duckbill
Santoprene® (FDA approved), or Pellethane®
Pump Head Rollers Polyethylene
Roller Bushings Oil impregnated bronze
Suction/Discharge Tubing, Ferrules 1/4" & 6 mm
Polyethylene (FDA approved)
Tube Fittings, Injection Fittings
PVC or Polypropylene (both NSF listed)
Connecting Nuts
PVC or Polypropylene (both NSF listed)
3/8" Adapter
PVC or Polypropylene (both NSF listed)
Suction Line Strainer and Cap PVC or Polypropylene (both NSF listed); ceramic weight
All Fasteners Stainless steel
Pump Head Latches Polypropylene
Leak Detect Components Hastelloy®
NOTE: Refer to the chemical guide for material compatibility.

ACCESSORIES

3 Connecting Nuts 1/4" or 3/8"
3 Ferrules 1/4" or 6 mm *Europe*
1 Injection fitting 25 psi (1.7 bar) max.
or Injection check valve 100 psi (6.9 bar) max.
1 Weighted suction line strainer
1/4", 3/8" or 6 mm *Europe*
1 20' Roll of suction/discharge tubing
1/4" or 3/8", white, UV black or 6 mm white *Europe*
1 Additional pump tube
2 Additional latches
1 Mounting bracket
1 Quick Start Guide
Download complete S Series Manual www.stenner.com

25 psi (1.7 bar) maximum FLOW RATE OUTPUTS

Model	Item Number Prefix	Pump Tube	Turndown Ratio	Gallons per Day	Gallons per Hour	Ounces per Hour	Ounces per Minute	Liters per Day	Liters per Hour	Milliliters per Hour	Milliliters per Minute
S3003	**S3003**	3	100:1	0.40–40.0	0.017–1.67	2.13–213.0	0.036–3.56	1.51–151.0	0.063–6.31	63.09–6309.0	1.05–105.0
S3004	**S3004**	4	100:1	0.60–60.0	0.025–2.50	3.20–320.0	0.053–5.33	2.27–227.0	0.095–9.46	94.64–9464.0	1.58–158.0
S3005	**S3005**	5	100:1	0.85–85.0	0.035–3.54	4.53–453.0	0.076–7.56	3.22–322.0	0.134–13.41	134.07–13,407.0	2.23–223.0

Approximate Outputs @ 50/60Hz

100 psi (6.9 bar) maximum FLOW RATE OUTPUTS

Model	Item Number Prefix	Pump Tube	Turndown Ratio	Gallons per Day	Gallons per Hour	Ounces per Hour	Ounces per Minute	Liters per Day	Liters per Hour	Milliliters per Hour	Milliliters per Minute
S3001	**S3001**	1	100:1	0.05–5.0	0.002–0.21	0.27–27.0	0.004–0.44	0.19–19.0	0.008–0.79	7.89–789.0	0.13–13.0
S3002	**S3002**	2	100:1	0.17–17.0	0.007–0.71	0.91–91.0	0.015–1.51	0.64–64.0	0.027–2.68	26.81–2681.0	0.45–45.0
S3007	**S3007**	7	100:1	0.40–40.0	0.017–1.67	2.13–213.0	0.036–3.56	1.51–151.0	0.063–6.31	63.09–6309.0	1.05–105.0

Approximate Outputs @ 50/60Hz

S SERIES S40 Models

MATERIALS OF CONSTRUCTION

All Housings Polycarbonate
Pump Tube Santoprene®, FDA approved
Ball Check Valve Components
Ceramic ball (FDA approved); Tantalum spring; FKM seat & O-ring
OR
Ceramic ball (FDA approved); Stainless steel spring; EPDM seat; Santoprene® O-ring
Pump Head Rollers Polyethylene
Roller Bushings Oil impregnated bronze
Suction/Discharge Tubing
Polyethylene (FDA approved)
Tube Fittings, Injection Fittings
PVC or Polypropylene (both NSF listed)
Connecting Nuts
PVC or Polypropylene (both NSF listed)
Suction Line Strainer and Cap
PVC or Polypropylene (both NSF listed); ceramic weight
All Fasteners Stainless steel
Pump Head Latches Stainless steel
Leak Detect Components Hastelloy®
NOTE: Refer to the chemical guide for material compatibility.

ACCESSORIES

3 Connecting nuts 3/8"
1 Injection ball check valve
1 Weighted suction line strainer 3/8"
1 20' Roll of suction/discharge tubing
3/8", white or UV black
1 Additional pump tube
1 Mounting bracket
1 Quick Start Guide
Download complete S Series Manual www.stenner.com

25 psi (1.7 bar) maximum FLOW RATE OUTPUTS

Model	Item Number Prefix	Pump Tube	Turndown Ratio	Gallons per Day	Gallons per Hour	Ounces per Hour	Ounces per Minute	Liters per Day	Liters per Hour	Milliliters per Hour	Milliliters per Minute
S405X	**S405X**	5X	100:1	1.5–150.0	0.06–6.25	8.0–800.0	0.13–13.33	5.7–567.0	0.24–23.66	236.59–23,659.0	3.94–394.0

Approximate Outputs @ 50/60Hz

100 psi (6.9 bar) maximum FLOW RATE OUTPUTS

Model	Item Number Prefix	Pump Tube	Turndown Ratio	Gallons per Day	Gallons per Hour	Ounces per Hour	Ounces per Minute	Liters per Day	Liters per Hour	Milliliters per Hour	Milliliters per Minute
S407X	**S407X**	7X	100:1	0.60–60.0	0.03–2.50	3.2–320.0	0.053–5.34	2.3–227.0	0.09–9.46	94.64–9464.0	1.58–158.0

Approximate Outputs @ 50/60Hz

Santoprene® is a registered trademark of Exxon Mobil Corporation. Versilon® is a registered trademark of Saint-Gobain Performance Plastics. Pellethane® is a registered trademark of Lubrizol Advanced Materials, Inc. Hastelloy® is a registered trademark of Haynes International, Inc. .

NOTICE: The information within this chart is solely intended for use as a guide. The output data is an approximation based on pumping water under a controlled testing environment. Many variables can affect the output of the pump. Stenner Pump Company recommends that all metering pumps undergo field calibration by means of analytical testing to confirm their outputs. The information contained in this flyer is not intended for specific application purposes. Stenner Pump Company reserves the right to make changes to prices, products, and specifications at any time without prior notice.

Xirtec®140

Submittal Data Sheet



Job or Customer: .....

Engineer: .....

Contractor: Odyssey Manufacturing Company

Submitted by: .....
Date

Approved by: .....
Date

Order No: .....
Date

Specification: .....

introduction

< STANDARDS >

ASTM D1784
ASTM D1785
ASTM D2672
ASTM F480
ASTM D2466
ASTM D2467
ASTM D2464
ASTM D2241
ASTM D672

NSF 14
NSF 61

CSA B137.0
CSA B137.3
CSA B181.2

PVC is the most frequently specified of all thermoplastic piping materials. It has been used successfully for over 60 years. PVC is characterized by distinctive physical properties, and is resistant to corrosion and chemical attack by acids, alkalis, salt solutions and many other chemicals. It is attacked, however, by polar solvents such as ketones and aromatics.

Of the various types and grades of PVC used in plastic piping, Type 1, Grade 1 PVC (Cell Classification 12454) conforming to ASTM D1784, is the most common. The maximum service temperature for PVC is 140°F (60°C), under pressure. PVC for drainage applications is also capable of handling near boiling temperatures for intermittent flow conditions. With a hydrostatic design basis of 4,000psi at 73°F (23°C) and a design stress of 2,000psi at 73°F (23°C), PVC has the highest long-term hydrostatic strength of any other major thermoplastic material used for piping.

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material properties

Properties	PVC	Standards
Specific gravity	1.42	ASTM D792
Tensile strength, psi at 73°F	7,000	ASTM D638
Modulus of elasticity tensile, psi at 73°F	400,000	ASTM D638
Flexural strength, psi	14,500	ASTM D790
Izod impact, ft.lbs./in. at 73°F, notched	0.65	ASTM D256
Compressive strength, psi	9,000	ASTM D695
Poisson's ratio	0.38	
Working stress, psi at 73°F	2,000	
Coefficient of thermal expansion in./in./°F (x 10^{-5})	3	ASTM D696
Linear expansion, in./10°F per 100' of pipe	0.36	
Maximum operating temperature under pressure	140°F (60°C)	
Deflection temperature under load, °F at 66 psi	173	ASTM D648
Deflection temperature under load, °F at 264 psi	160	ASTM D648
Thermal conductivity, BTU.in./hr.ft^2.°F	1.2	ASTM C177
Burning rate	Self extinguish	ASTM D635
Burning class	V-0	UL-94
Flash ignition, °F	730	
Limited oxygen index (%)	43	ASTM D2863-70
Water absorption, %, (24 hrs. at 73°F)	0.05	ASTM D570

pipe availability

Pipe Size		
Schedule 40 White	Schedule 40 Grey	Schedule 80 Grey
1/2" - 24"	2" - 16"	1/4" - 24"

fittings availability

Fittings	Size (inches)	
	Schedule 40	Schedule 80
Tee (Soc)	1/2 - 12	1/4 - 12
Fabricated Tee (Soc)	10 - 24	10 - 16
Reducing Tee (Soc)	1/2 - 8 x 1/2 - 8 x 1/2 - 6	3/4 - 8 x 3/4 - 8 x 1/2 - 6
Fabricated Reducing Tee (Soc)	10 - 24 x 10 - 24 x 4 - 20	8 - 16 x 8 - 16 x 4 - 14
Tee (Soc x Soc x Fpt)	1/2 - 4	1/2 - 1
Reducing Tee (Soc x Soc x Fpt)	1/2 - 8 x 1/2 - 8 x 1/2 - 4	N/A
Tee (Fpt)	1/2 - 2	1/4 - 4
90° Elbow (Soc)	1/2 - 12	1/4 - 12
Fabricated 90° Elbow (Soc)	10 - 18	10 - 16
90° Elbow (Soc x Fpt)	1/2 - 4	1/2 - 2
90° Elbow (Fpt)	1/2 - 2	1/4 - 4
90° Elbow Reducing (Soc)	3/4 - 2 x 1/2 - 1-1/2	N/A
90° Elbow Reducing (Soc x Fpt)	1/2 - 2 x 1/2 - 1-1/2	N/A
90° Elbow (Mpt x Soc)	1/2 - 2	N/A
90° Elbow (Spig x Soc)	1/2 - 2	N/A
90° Elbow (Mpt x Fpt)	1/2 - 2	N/A
90° Street Elbow (Spig x Soc)	1/2 - 2	N/A
90° Street Elbow (Mpt x Fpt)	1/2 - 2	N/A
Side Outlet Elbow (Soc)	1/2	N/A
Side Outlet Elbow (Soc x Soc x Fpt)	1/2 - 1 x 1/2 -1 x 1/2 - 3/4	N/A
45° Elbow (Soc)	1/2 - 12	1/4 - 12
Fabricated 45° Elbow (Soc)	10 - 18	10 - 16
45° Elbow (Fpt)	N/A	1/4 - 4
22-1/2° Elbow (Soc)	N/A	2 - 4
Fabricated 22-1/2° Elbow (Soc)	N/A	6 - 10
30° Elbow (Soc)	N/A	6
Hose Adapter (Insert x Soc)	1/2 - 4	N/A
Hose Adapter (Insert x Mpt)	1/2 - 4	N/A
Cross (Soc)	1/2 - 4	1/2 - 4
Fabricated Cross (Soc)	6 - 16	N/A
Fabricated Reducing Cross (Soc)	8 - 16 x 4 - 14	N/A
Coupling (Fpt)	1/2 - 1	1/4 - 4
Coupling (Soc)	3/8 - 8	1/4 - 8
Fabricated Coupling (Soc)	10 - 24	10 - 16
Reducer Coupling (Soc)	3/4 - 6 x 1/2 - 4	3/4 - 8 x 1/2 - 6
Reducer Coupling (Fpt)	N/A	1/2 - 2 x 1/4 - 1-1/2
Fabricated Concentric Reducing Coupling (Soc)	N/A	8 - 16 x 4 - 14
Fabricated Eccentric Reducing Coupling (Soc)	8 - 12 x 4 - 10	N/A

fittings availability con't

Fittings	Size (inches)	
	Schedule 40	Schedule 80
Female Adapter (Soc x Fpt)	1/2 - 8	1/4 - 4
Female Adapter Reducer (Soc x Fpt)	1/2 - 1 x 1/4 - 1	N/A
Female Adapter (Spig x Fpt)	1/2 - 4	1/2 - 4
Male Adapter (Soc x Mpt)	3/8 - 8	1/2 - 4
Male Adapter Reducing (Soc x Mpt)	1/2 - 4 x 1/2 - 3	N/A
IPS to PIP Adapter (Spig x Soc)	6 - 8	N/A
Riser Extension (Fpt x Mpt)	1/2 - 1	N/A
Reducer Bushing (Spig x Soc)	1/2 - 8 x 1/4 - 6	3/8 - 8 x 3/8 - 6
Fabricated Reducer Bushing (Spig x Soc)	10 - 12 x 4 - 10	10 - 16 x 4 - 14
Reducer Bushing (Spig x Fpt)	1/2 - 6 x 3/8 - 5	3/8 - 6 x 3/8 - 4
Reducer Bushing (Mpt x Fpt)	3/8 - 3 x 3/8 - 2-1/2	3/8 - 4 x 3/8 - 3
Cap (Soc)	3/8 - 8	1/4 - 8
Fabricated Cap (Soc)	10 - 24	10 - 16
Cap (Fpt)	3/8"- 6	1/4 - 4
Plug (Spig)	3/8 - 4	2
Plug (Mpt)	3/8 - 6	1/4 - 6
Union (Soc)	1/2 - 2	1/4 - 4
Union (Fpt)	1/2 - 2	1/4 - 4
Wye (Soc)	1-1/2 - 6	1-1/2 - 6
Reducer Wye (Soc)	6 x 6 x 4	6 x 6 x 4
Fabricated Wye (Soc)	8 - 16	8 - 14
Saddles (Soc)	2-1/2 - 10 x 3/4 - 4	N/A
Saddles (Fpt)	2-1/2 - 10 x 3/4 - 4	N/A
One Piece Flange (Soc)	N/A	1/2 - 8
One Piece Fabricated Flange (Soc)	N/A	10 - 16
One Piece Flange (Fpt)	N/A	1/2 - 6
Blind Flange	N/A	1/2 - 8
Fabricated Blind Flange	N/A	10 - 16
Heavy Duty Vanstone Flange (Spig)	N/A	1/2 - 8
Vanstone Flange (Spig)	N/A	3 - 12
Heavy Duty Vanstone Flange (Soc)	N/A	1-1/2 - 16
Vanstone Flange (Soc)	N/A	1/2 - 12
Fabricated Vanstone Flange (Soc)	N/A	18 - 24
Vanstone Flange (Fpt)	N/A	1/2 - 4
Fabricated No Leak/Waterstop Flange (Spig)	N/A	1/2 - 12
Nipples	N/A	1/4 - 4
Expansion Joints	N/A	1/2 - 4

Xirtec140 schedule 40 & 80 PVC industrial pipe & fittings

Scope

This specification sheet covers the manufacturers' requirements for PVC Schedule 40 and Schedule 80 IPS pressure pipe. The pipe and fittings meet or exceed all applicable ASTM, NSF and CSA standards and are suitable for potable water.

Xirtec140 PVC Materials

Rigid PVC (polyvinyl chloride) used in the extrusion of Schedule 40 & 80 pipe and fittings complies with the material requirements of ASTM D1784 (formerly Type 1, Grade 1) and has a cell classification of 12454. Raw material used in the extrusion shall contain the standard specified amounts of color pigment, stabilizers and other additives. The compounds used are listed to the requirements of NSF 61 for use in potable water service.

Dimensions

Physical dimensions and properties of Xirtec140 PVC Schedule 40 and 80 pipe and fittings shall meet the requirements of ASTM D1785 and/or be certified to CSA B137.3. Socket dimensions of belled end pipe shall meet the requirements of ASTM D2672 or F480.

Marking

Xirtec140 PVC Schedule 40 and 80 pipe is marked as prescribed in ASTM D1785, NSF 14 and/or CSA B137.0/137.3. The marking includes the following: IPEX; Xirtec140; IPS PVC and the Schedule and Pressure Rating at 73°F (23°C); ASTM D1785; CSA B137.3; NSF 14; and NSF 61 Potable.

Sample Specification

All Xirtec140 PVC Schedule 40 and 80 pipe shall conform to ASTM D1785, NSF 14, and/or CSA B137.0/B137.3. Xirtec140 Schedule 40 fittings shall conform to ASTM D2466. Xirtec140 Schedule 80 socket fittings shall conform to ASTM D2467 and Schedule 80 threaded fittings shall conform to ASTM D2464. All fittings must be third party certified to NSF 14.

All Xirtec Schedule 80 fabricated fittings shall be reinforced with fiberglass reinforced plastic (FRP). All PVC fittings shall be molded or fabricated from Xirtec140 PVC compound compatible with the pipe material.

Only Xirtec140 Schedule 80 pipe shall be threaded and the pressure rating shall be reduced by 50%. Belled end pipe socket dimensions shall conform to ASTM D2672 or F480. All pipe, fittings and valves shall be compatible Xirtec140 and produced by one manufacturer; as supplied by IPEX.

Handling & Storage

PVC is a strong, lightweight material, about one fifth the weight of steel or cast iron. Piping made of this material is easily handled and, as a result, there is a tendency for them to be thrown about on the jobsite. Care should be taken in handling and storage to prevent damage to the pipe.

PVC pipe should be given adequate support at all times. It should not be stacked in large piles, especially in warm temperature conditions, as bottom pipe may become distorted and joining will become difficult.

For long-term storage, pipe racks should be used, providing continuous support along the length. If this is not possible, timber supports of at least 3" bearing width, at spacings not greater than 3' centers, should be placed beneath the piping. If the stacks are rectangular, twice the spacing at the sides is required. Pipe should not be stored more than seven layers high in racks. If different classes of pipe are kept in the same rack, pipe with the thickest walls should always be at the bottom. Sharp corners on metal racks should be avoided.

For temporary storage in the field when racks are not provided, care should be taken that the ground is level and free of sharp objects (i.e. loose stones, etc.). Pipe should be stacked to reduce movement, but should not exceed three to four layers high.

Most pipe is now supplied in crates. Care should be taken when unloading the crates; avoid using metal slings or wire ropes. Crates may be stacked four high in the field.

The above recommendations are for a temperature of approximately 80°F (27°C). Stack heights should be reduced if higher temperatures are encountered, or if pipe is nested (i.e. pipe stored inside pipe of a larger diameter). Reduction in height should be proportional to the total weight of the nested pipe, compared with the weight of pipe normally contained in such racks.

Since the soundness of any joint depends on the condition of the pipe end, care should be taken in transit, handling and storage to avoid damage to these ends. The impact resistance and flexibility of PVC pipe is reduced by lower temperature conditions. The impact strength for both types of piping materials will decrease as temperatures approach 32°F (0°C) and below. Care should be taken when unloading and handling pipe in cold weather. Dropping pipe from a truck or forklift may cause damage. Methods and techniques normally used in warm weather may not be acceptable at the lower temperature range.



When loading pipe onto vehicles, care should be taken to avoid contact with any sharp corners (i.e. angle irons, nail heads, etc.), as the pipe may be damaged.

While in transit, pipe should be well secured and supported over the entire length and should never project unsecured from the back of a trailer.

Larger pipe may be off-loaded from vehicles by rolling them gently down timbers, ensuring that they do not fall onto one another or onto a hard, uneven surface.

Prolonged Outdoor Exposure

Prolonged exposure of PVC pipe to the direct rays of the sun will not damage the pipe. However, some mild discoloration may take place in the form of a milky film on the exposed surfaces. This change in color merely indicates that there has been a harmless chemical transformation at the surface of the pipe. A small reduction in impact strength could occur at the discolored surfaces but they are of a very small order and are not enough to cause problems in field installation.

Protection – Covering

Discoloration of the pipe can be avoided by shading it from the direct rays of the sun. This can be accomplished by covering the stockpile or the crated pipe with a light colored opaque material such as canvas. If the pipe is covered, always allow for the circulation of air through the pipe to avoid heat buildup in hot summer weather. Make sure that the pipe is not stored close to sources of heat such as boilers, steam lines, engine exhaust outlets, etc.

Protection – Painting

PVC pipe and fittings can be easily protected from ultraviolet oxidation by painting with a heavily pigmented, exterior water-based latex paint. The color of the paint is of no particular importance; the pigment merely acts as an ultraviolet screen and prevents sunlight change. White or some other light color is recommended as it helps reduce pipe temperature. The latex paint must be thickly applied as an opaque coating on pipe and fittings that have been well cleaned and very lightly sanded.

ODYSSEY
MANUFACTURING CO.

ODYSSEY MANUFACTURING CO. SOCKET WELDING PROCEDURES

The following installation instructions are recommended to ensure "leak-free" joints for sodium hypochlorite PVC piping:

- Machine cut the PVC pipe. Completely "debur" and sand the edges of the pipe.
- To fit the tapered socket, bevel the end of the PVC pipe between .0625 and .0938 inches (1.563 to 2.345 mm) for pipes up to 8 inches (200 mm) in diameter.
- Lightly sand tapered socket to ensure that it is completely "deburred".
- Use industrial grade cleaner to clean the end of the pipe such as MEK cleaner.
- Apply primer to the female fitting.
- Apply primer to the male fitting.
- Reapply primer to the male fitting (surface must be kept wet from previous steps).
- Apply glue to the pipe using a brush with a width half the diameter of the pipe (too small of a brush will let the primer or glue evaporate before the application can be finished; too large of a brush can result in excess glue in the pipe after assembly).
- Apply glue to the female fitting.
- Reapply glue to the pipe.
- Insert pipe to bottom of fitting with a quarter turn.
- Hold for 30 seconds.

Note: Use the gray IPS Weld.On CPVC 724 plastic pipe cement if time permits. The glue should be allowed to cure for at least 24 hours. If time more critical, use E-Z Weld.On Wet "R" Dry 725 glue (for PVC). This glue will thoroughly dry in about two hours and piping can be put into service in 10 minutes for low pressure applications. When gluing the K-flex or flexible PVC into a PVC union or connector, the 725 glue should be used because it is more flexible and springy.

PVC Performance Engineered & Tested



SPEARS® Schedule 80 PVC product designs combine years of proven experience with computer generated stress analysis to yield the optimum physical structure and performance for each fitting. Material reinforcement is uniformly placed in stress concentration areas for substantially improved pressure handling capability. Resulting products are subjected to numerous verification tests to assure obtaining the very best PVC fittings available.

1/4" Through 12" Availability

Spears® comprehensive line of PVC injection molded fittings and extruded pipe offers a variety of configurations in sizes 1/4" through 12". Schedule 80 fittings are manufactured to ASTM D 2467 and pipe is produced to ASTM D 1785. Spears® exclusive CL150 Flanges are produced in sizes 1/2" - 18" with ANSI B16.5 bolt patterns, plus numerous Unions, Saddles, Transition and Specialty fittings in a variety of sizes.

Exceptional Chemical & Corrosion Resistance

Unlike metal, PVC fittings and pipe never rust, scale, or pit, and will provide many years of maintenance-free service and extended system life.

High Temperature Ratings

PVC thermoplastic can handle fluids at service temperatures up to 140°F (60°C), allowing a wide range of process applications, including corrosive fluids.

Lower Installation Costs

Substantially lower material costs than steel alloys or lined steel, combined with lighter weight and ease of installation, can reduce installation costs by as much as 60% over conventional metal systems.

Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal fittings.

Additional Fabricated Configurations through 36"

Extra large, hard-to-find, and custom configurations are fabricated from NSF® Certified pipe. Fittings are engineered and tested to provide full pressure handling capabilities according to Spears® specifications.

Advanced Design Specialty Fittings

Spears® wide range of innovative, improved products include numerous metal-to-plastic transition fittings and unions with Spears® patented special reinforced (SR) plastic threads.

PVC Valves

SPEARS® PVC Valve products are available for total system compatibility and uniformity.

1/8" Through 24" Industrial Pipe Availability

Spears® premium quality Industrial CPVC pipe is offered in Schedule 80 sizes 1/8" through 24". Schedule 40 CPVC pipe is also available.

PVC Sample Engineering Specifications

All PVC Schedule 80 pipe and fittings shall be produced by Spears® Manufacturing Company from PVC Type I, cell classification 12454, conforming to ASTM Standard D 1784. All PVC injection molded Schedule 80 fittings and extruded pipe shall be Certified for potable water service by NSF International. All Schedule 80 fittings shall be manufactured in strict compliance to ASTM D 2467 and Schedule 80 pipe shall be manufactured in strict compliance to ASTM D 1785. All fabricated fittings shall be produced in accordance with Spears® General Specifications for Fabricated Fittings. All PVC flanges shall be designed and manufactured to meet CL150 bolt pattern per ANSI Standard B16.5 and rated for a maximum internal pressure of 150 psi, non-shock at 73°F.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

General Information

Recommendations For Installers And Users

Plastic piping systems should be **ENGINEERED, INSTALLED** and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. **PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability. Consult all applicable codes and regulations for compliance prior to installation.**

Solvent Weld Connections — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturers for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

Threaded Connections — Use a quality grade thread sealant. **WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC.** Spears® Manufacturing company recommends the use of Spears® **BLUE 75™** Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond **FINGER TIGHT** is generally all that is required to make a sound plastic threaded connection. Unnecessary **OVERTIGHTENING** will cause **DAMAGE TO BOTH PIPE AND FITTING.**

Standards and Specifications

Molded Schedule 80 PVC products are manufactured to ASTM D 2467 for use with pipe manufactured to ASTM D 1785. Molded Schedule 80 CPVC products are manufactured to ASTM F 439 for use with pipe manufactured to ASTM F 441. Certain products carry reduced pressure handling capability and have maximum internal pressure ratings at 73°F noted.

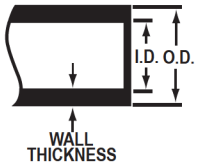
Fabricated Schedule 80 PVC pressure fittings (part numbers ending with **"F"**) are manufactured to Spears® specifications for use with pipe manufactured to ASTM D 1785. Schedule 80 CPVC fabricated fittings for use with pipe manufactured to ASTM F 441. See publication FAB-7, General Specifications for Standard Fabricated Fittings for additional information.

All specified Schedule 80 PVC and CPVC products are manufactured from materials certified by NSF® for use in potable water service.

"Lead Free" low lead certification – unless otherwise specified, all Spears® Schedule 80 fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%. Spears® PVC and CPVC Pipe, Fittings and Valves have always been lead-free and Certified by NSF International for use in potable water systems. Spears® offers a wide range of lead-free specialty fittings and transition adapters for plumbing applications. However, certain brass threaded adapter fittings for applications that are not intended to convey water for human consumption through drinking or cooking are still produced and available.

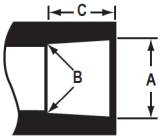
ASTM STANDARD DIMENSIONS

SCHEDULE 80 PIPE DIMENSIONS ASTM D 1785



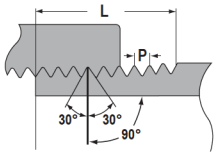
Nominal Pipe Size In.	Mean Outside Diameter In.	O. D. Tolerance In.	Minimum Wall Thickness In.
1/8	0.405	± 0.004	0.095
1/4	0.540	± 0.004	0.119
3/8	0.675	± 0.004	0.126
1/2	0.840	± 0.004	0.147
3/4	1.050	± 0.004	0.154
1	1.315	± 0.005	0.179
1-1/4	1.660	± 0.005	0.191
1-1/2	1.900	± 0.006	0.200
2	2.375	± 0.006	0.218
2-1/2	2.875	± 0.007	0.276
3	3.500	± 0.008	0.300
4	4.500	± 0.009	0.337
5	5.563	± 0.010	0.375
6	6.625	± 0.011	0.432
8	8.625	± 0.015	0.500
10	10.750	± 0.015	0.593
12	12.750	± 0.015	0.687

SCHEDULE 80 SOCKET DIMENSIONS ASTM D 2467



Nominal Size In.	Diameter			Socket Length Minimum C
	Entrance A	Bottom B	Tolerance A	
1/8	0.417	0.401	± 0.004	0.500
1/4	0.552	0.536	± 0.004	0.625
3/8	0.687	0.671	± 0.004	0.750
1/2	0.848	0.836	± 0.004	0.875
3/4	1.058	1.046	± 0.004	1.000
1	1.325	1.310	± 0.005	1.125
1-1/4	1.670	1.655	± 0.005	1.250
1-1/2	1.912	1.894	± 0.006	1.375
2	2.387	2.369	± 0.006	1.500
2-1/2	2.889	2.868	± 0.007	1.750
3	3.516	3.492	± 0.008	1.875
4	4.518	4.491	± 0.009	2.250
5	5.583	5.553	± 0.010	2.625
6	6.647	6.614	± 0.011	3.000
8	8.655	8.610	± 0.015	4.000
10	10.780	10.735	± 0.015	5.000
12	12.780	12.735	± 0.015	6.000

AMERICAN NATIONAL STANDARD TAPER PIPE THREADS (NPT) ANSI B1 .20.1 ASTM F 1498



Nominal Size In.	Threads Per Inch	Effective Thread Length L	Pitch Of Thread P
1/8	27	0.2639	0.03704
1/4	18	0.4018	0.05556
3/8	18	0.4078	0.05556
1/2	14	0.5337	0.07143
3/4	14	0.5457	0.07143
1	11-1/2	0.6828	0.08696
1-1/4	11-1/2	0.7068	0.08696
1-1/2	11-1/2	0.7235	0.08696
2	11-1/2	0.7565	0.08696
2-1/2	8	1.1375	0.12500
3	8	1.2000	0.12500
4	8	1.3000	0.12500
5	8	1.4063	0.12500
6	8	1.5125	0.12500
8	8	1.7125	0.12500

STANDARD COMPARISONS

SPEARS® IPS-to-Metric transition unions are listed by nominal size. The chart below compares nominal and actual* pipe O.D. for each size according to the designated standard.

JIS K6741 (mm)		DIN 8062 (mm)		ASTM D1785 (in.)		NPT—ANSI B1.20.1** Tapered Thread		BSP—BS21,DIN 2999,ISO 7/1 Thread	
Nominal	Actual*	O.D.	Actual*	Nominal	Actual*	Designation	Threads/in.	Designation	Threads/25.4mm
16	22	15	20	1/2	.840	1/2	14	1/2	14
20	26	20	25	3/4	1.050	3/4	14	3/4	14
25	32	25	32	1	1.315	1	11.5	1	11
30	38	38	40	1-1/4	1.660	1-1/4	11.5	1-1/4	11
40	48	40	50	1-1/2	1.900	1-1/2	11.5	1-1/2	11
50	60	50	63	2	2.375	2	11.5	2	11
75	89	80	90	3	3.500	3	8	3	11
100	114	100	110	4	4.500	4	8	4	11

*Specified dimension, certain tolerances apply

**NPT and BSP have different thread angles and not compatible.



Type 21 Ball Valve

Specifications

Sizes: 1/2" – 6"

Models: PVC & CPVC: Socket, Threaded and Flanged (ANSI)
PP & PVDF: IPS and Metric (DIN) Socket, Threaded, Butt and Flanged (ANSI)

Bodies: PVC, CPVC, PP and PVDF

Seats: PTFE backed with EPDM or FKM

Seals: EPDM or FKM or AFLAS®‡

Sizes 1/2" - 4" PVC/EPDM/FKM Models available with NSF-61 Certification

‡ Trademark of Asahi Glass Co., Ltd.

Standard Features (Sizes 1/2" – 6")

- Pressure rated up to 230 psi (PVC, CPVC, PVDF)
- Double O-ring seals on stem for added protection.
- Full bore, sizes 1/2" – 2"
- Full vacuum rated, all sizes
- Blocks in two directions, upstream and downstream, leaving full pressure on the opposite end of the valve
- Integrally molded ISO mounting pad for both manual and actuated operations
- Integrally molded base pad to mount valves securely or panel mounting
- PTFE seats with elastomeric backing cushions ensure bubble-tight shut-off and a low fixed torque, while at the same time compensating for wear
- True Union design for easier installation or repairs without expanding the pipe system
- Built-in spanner wrench on the handle for valve disassembly and assembly
- Two sets of end connectors (socket and threaded) included with all PVC and CPVC valves in sizes 1/2"– 2"
- CPVC threaded end connectors on sizes 1/2" – 1" come with stainless steel reinforcing rings

Options

- Pneumatic and electric actuators & accessories
- Stem extensions
- 2" square operating nut or "T" nut
- Locking and/or spring return handles
- Limit switches
- Vented Ball

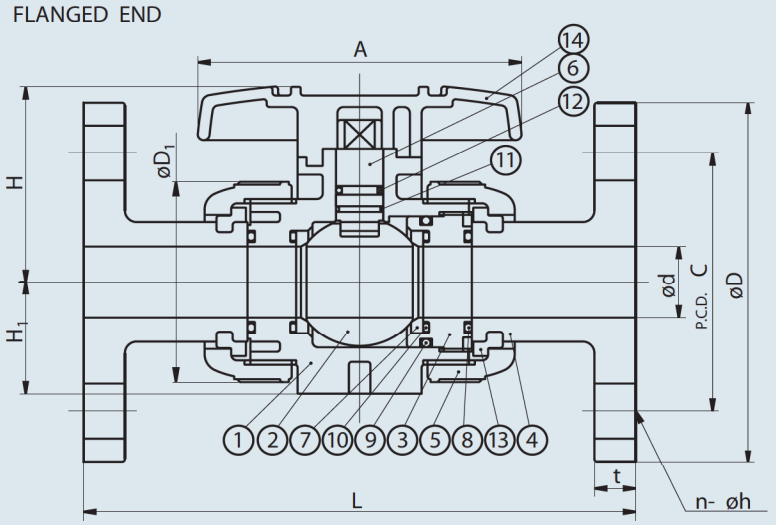
Parts List (Sizes 1/2" – 2")

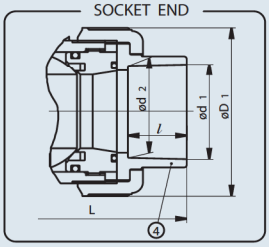
PARTS			
NO.	DESCRIPTION	PCS.	MATERIAL
1	Body	1	PVC, CPVC, PP, PVDF
2	Ball	1	PVC, CPVC, PP, PVDF
3	Carrier	1	PVC, CPVC, PP, PVDF
4	End Connector	2	PVC, CPVC, PP, PVDF
5	Union Nut	2	PVC, CPVC, PP, PVDF
6	Stem	1	PVC, CPVC, PP, PVDF
7	Seat	2	PTFE
8	O-Ring (A)	2	EPDM, FKM, Others
9	O-Ring (B)	1	EPDM, FKM, Others
10	O-Ring (C)	2	EPDM, FKM, Others
11	O-Ring (D)	1	EPDM, FKM, Others
12	O-Ring (E)	1	EPDM, FKM, Others
13	Stop Ring*	2	PVDF
14	Handle	1	ABS
4a	Ring**	2	304 Stainless Steel

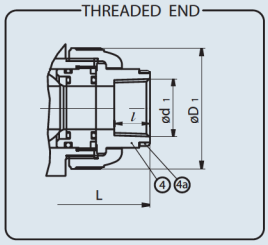
* Used for flanged end
** Used for CPVC body, threaded end, 1/2"–1"

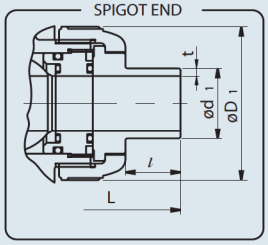


Type 21 Ball Valves









Dimensions (Sizes 1/2" – 2")

NOMINAL SIZE			FLANGED						SOCKET										
			ANSI CLASS 150						PVC, CPVC ASTM SCH 80				PP, PVDF (DIN) DIN 16962				PP, PVDF (IPS)		
INCHES	mm	d	D	C	n	h	L	t	d1	d2	l	L	d1	d2	l	L	d1	l	L
1/2	15	0.59	3.50	2.38	4	0.62	5.63	0.47	0.848	0.836	0.875	4.45	0.768	0.760	0.57	3.90	0.83	0.87	4.45
3/4	20	0.79	3.88	2.75	4	0.62	6.77	0.55	1.058	1.046	1.000	5.08	0.965	0.957	0.63	4.49	1.03	1.00	5.08
1	25	0.98	4.25	3.12	4	0.62	7.36	0.55	1.325	1.310	1.125	5.75	1.240	1.232	0.71	4.84	1.30	1.13	5.75
1 1/4	32	1.26	4.62	3.50	4	0.62	7.48	0.63	1.670	1.655	1.250	6.46	1.553	1.543	0.81	5.47	1.65	1.25	6.46
1 1/2	40	1.57	5.00	3.88	4	0.62	8.35	0.63	1.912	1.894	1.375	7.24	1.947	1.937	0.93	5.83	1.89	1.37	7.24
2	50	2.01	6.00	4.75	4	0.75	9.21	0.63	2.387	2.369	1.500	8.23	2.461	2.445	1.08	6.93	2.36	1.50	8.23

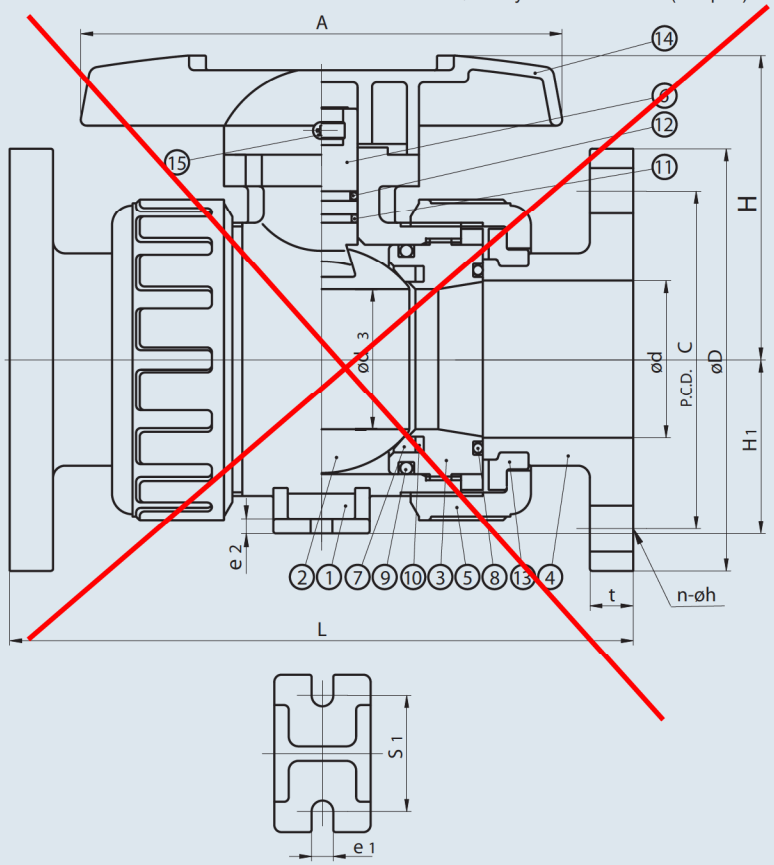
NOMINAL SIZE		THREADED							SPIGOT (BUTT END) PP,PVDF							
									DIN 3442		PP	PVDF				
INCHES	mm	d1	l	L	D1	H	H1	A	d1	l	t	t	L	S1	S2	S3
1/2	15	1/2-14 NPT	0.59	4.02	1.89	2.03	1.14	3.62	0.787	0.728	0.098	0.075	4.882	0.75	0.29	0.43
3/4	20	3/4-14 NPT	0.67	4.72	2.36	2.34	1.38	3.94	0.984	0.866	0.106	0.075	5.670	0.75	0.29	0.43
1	25	1-11 1/2 NPT	0.79	5.16	2.76	2.68	1.54	4.33	1.260	0.886	0.118	0.094	6.063	0.75	0.29	0.43
1 1/4	32	1 1/4-11 1/2 NPT	0.87	5.91	3.23	3.17	1.85	4.76	1.575	1.024	0.146	0.094	6.850	1.18	0.35	0.59
1 1/2	40	1 1/2-11 1/2 NPT	0.98	6.42	3.94	3.50	2.17	5.16	1.969	1.260	0.181	0.118	7.638	1.18	0.35	0.59
2	50	2-11 1/2 NPT	1.10	7.76	4.96	4.04	2.60	6.26	2.480	1.417	0.228	0.118	8.819	1.18	0.35	0.59

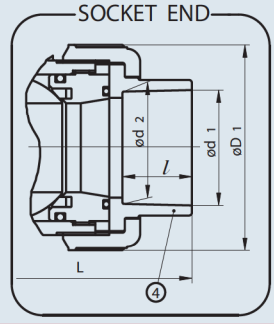
Type 21 Ball Valves

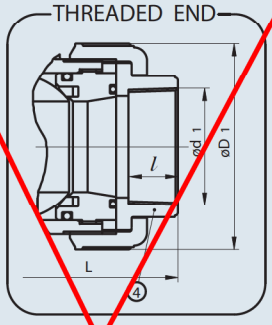
PARTS (DIFFERENT NUMBERS FROM 1/2" – 2")			
NO.	DESCRIPTION	PCS.	MATERIAL
10	Cushion	2	EPDM, FKM, Others
15	Screw	1	304 Stainless Steel

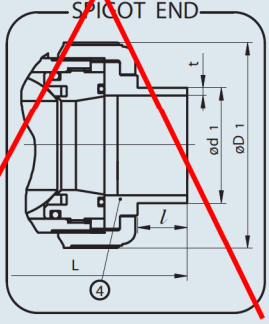
FLANGED END

NOTE: Quantity on Nos. 3 and 9 (see p. 6) is 2.









Dimensions (Sizes 2-1/2" – 4") FOR 6" SIZE CONSULT FACTORY

NOMINAL SIZE			FLANGED						SOCKET										
			ANSI CLASS 150						PVC, CPVC				PP, PVDF (DIN)				PP, PVDF (IPS)		
									ASTM SCH 80				DIN 16962						
INCHES	mm	d	D	C	n	h	L	t	d_1	d_2	l	L	d_1	d_2	l	L	d_1	l	L
21/2	65	2.56	7	5.5	4	0.75	10.2	0.71	2.889	2.868	1.75	9.45	2.923	2.911	1.22	8.15	2.88	1.752	9.45
3	80	3.07	7.5	6	4	0.75	11.97	0.71	3.516	3.492	1.875	11.1	3.512	3.498	1.4	9.88	3.48	1.874	11.1
4	100	3.94	9	7.5	8	0.75	14.65	0.71	4.518	4.491	2	13.9	4.293	4.278	1.63	12.2	4.48	2.252	14.37

NOMINAL SIZE		THREADED								SPIGOT (BUTT END)							
										PP,PVDF							
										DIN 3442		PP	PVDF				
INCHES	mm	d_1	l	L	d_3	D1	H	H_1	A	d_1	l	t	t	L	e_1	e_2	S_1
21/2	65	2 1/2 - 8NPT	1.26	8.46	2.28	5.24	4.96	2.83	7.87	2.953	1.496	0.272	0.142	9.72	0.35	0.24	1.89
3	80	3 - 8NPT	1.38	10.39	2.70	5.98	5.51	3.35	9.45	3.543	1.496	0.323	0.169	11.61	0.43	0.28	2.17
4	100	4 - 8NPT	1.77	14.17	3.54	8.27	7.01	4.33	11.81	4.331	1.752	0.394	0.209	12.72	0.43	0.31	2.56

ASAHI/AMERICA

Rev. E 09-08

Type 21 Ball Valves

Pressure vs. Temperature (PSI, WATER, NON-SHOCK)

NOMINAL SIZE		PVC				CPVC						PP				PVDF				
		30° F	71° F	106° F	121° F	30° F	71° F	106° F	121° F	141° F	176° F	-5° F	86° F	121° F	141° F	-5° F	71° F	106° F	141° F	176° F
INCHES	mm	70° F	105° F	120° F	140° F	70° F	105° F	120° F	140° F	175° F	195° F	85° F	120° F	140° F	175° F	70° F	105° F	140° F	175° F	210° F
1/2-2	15-50	230	170	150	30	230	170	150	120	75	55	150	110	90	55	230	185	150	115	85
2 1/2	65	230	170	150	NA	230	170	150	120	75	55	150	95	70	40	230	185	150	115	85
3	80	230	170	150	NA	230	170	150	85	55	40	150	95	70	40	230	185	150	100	70
4-6	100-150	150	150	150	NA	150	150	150	85	55	40	150	95	70	40	150	150	150	100	70

Sample Specification

All TYPE 21 Ball Valves, sizes 1/2" to 4", shall be of true union design with two-way blocking capability. All O-rings shall be EPDM or FKM with PTFE seats. PTFE seats shall have elastomeric backing cushion of the same material as the valve seals. Stem shall have double O-rings and be of blowout-proof design. The valve handle shall double as carrier removal and/or tightening tool. ISO mounting pad shall be integrally molded to valve body for actuation. PVC conforming to ASTM D1784 Cell Classification 12454-A, CPVC conforming to ASTM D1784 Cell Classification 23567-A, PP Conforming to ASTM D4101 Cell Classification PP0210B67272 and PVDF conforming to ASTM D3222 Cell Classification Type II. The ball valves, except PP, shall have a pressure rating of 230 psi for sizes 1/2" to 3" and 150 psi for 4" (150 psi for PP, all sizes) at 70 ° F. Type 21 Ball Valves must carry a two-year guarantee, as manufactured by Asahi/America, Inc.

Cv Values

NOMINAL SIZE		Cv
INCHES	mm	
1/2	15	14
3/4	20	29
1	25	47
1 1/4	32	72
1 1/2	40	155
2	50	190
2 1/2	65	365
3	80	410
4	100	680

Weight (POUNDS)

NOMINAL SIZE		SOCKET THREADED	FLANGED
INCHES	mm		
1/2	15	0.44	1.10
3/4	20	0.66	1.54
1	25	1.10	2.70
1 1/4	32	1.54	3.30
1 1/2	40	2.64	4.40
2	50	4.40	8.15
2 1/2	65	6.17	8.80
3	80	9.70	13.00
4	100	24.00	26.67

Caution

- Never remove valve from pipeline under pressure.
- Always wear protective gloves and goggles.
- Watch out for trapped fluid in valve. It is safe to close valve before removing it from the pipeline.

Caution

- Do not use ball valves where media has suspended particles. Use the following valves: *Butterfly Valves* – PVDF disc is most abrasion resistant and make sure of chemical compatibility. *Diaphragm Valves* – Elastomeric diaphragm is designed for handling suspended particles.
- Volatile fluids such as sodium hypochlorite (NaClO) and hydrogen peroxide (H_2O_2) could be trapped and gasified within the valve. We can provide you with a Type 21 ball valve with a *vented ball* to relieve pressure build-up inside the valve.

Troubleshooting

What if the fluid still flows when valve is closed?

1. Carrier is not properly tightened. Tighten it.
2. PTFE seat is damaged or worn. Replace seat.
3. Foreign material is caught between ball and PTFE seat. Remove material and clean.
4. Ball is damaged or worn. Change ball.

What if fluid leaks outside of valve?

1. Union nut not properly tightened. Retighten.
2. Carrier is not properly tightened. Thread it in firmly.
3. Carrier or face O-ring is damaged, worn, or missing. Replace O-ring.

What if handle does not rotate smoothly?

1. Foreign material has formed on the ball or seat. Clean both.
2. Internal part(s) chemically attacked or swollen. Refer to Asahi/America Chemical Resistance Chart for compatibility. Replace part(s) as required.
3. Carrier over-tightened. Retighten properly.

What if handle rotates too freely?

1. Stem is damaged. Replace stem.
2. Handle is not engaged with stem. Disassemble and reengage. Inspect.

BLUE PLANET ENVIRONMENTAL SYSTEMS, INC.
P.O. Box 360817
Melbourne, FL 32936

Toll Free: 888-859-9726
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Web: www.blueplanetenv.com

SPECIFICATION

PRESSURE GAUGE WITH ISOLATOR



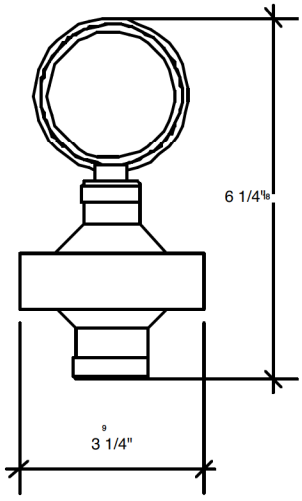
- OFFERS PROTECTION FROM CORROSION AND CLOGGING.
- INDUSTRIAL QUALITY ALL STAINLESS STEEL GAUGE WITH 2 1/2" DIAL.
- 1/2" FPT BOTTOM CONNECTION WITH SS REINFORCEMENT.

The Industrial quality gauge with isolator provides corrosion protection by isolating the gauge from the process media. They also offer protection against clogging from suspended solids or highly viscous fluids. The isolator features a flexible diaphragm which acts as a barrier between the gauge and the process. The internal space between the gauge and the diaphragm are filled with glycerin. Pressure/vacuum on the process side of the diaphragm causes it to flex against the liquid fill which transmits the same pressure to the gauge.

INSTALLATION

Industrial quality gauge with isolator is easily installed into a piping system with the use of a close nipple and tee. Teflon tape or a suitable thread sealant should be used as required by the process. Plastic models should be installed no more than hand tight. Plastic threads will expand as more pressure is applied. The use of tools may result in a cracked housing. Metal models should be tightened snug. A strap wrench may be used, but do not overtighten. The sharp edge of a nipple inserted too far into the isolator can rupture the diaphragm.
**DO NOT DISASSEMBLE GAUGE FROM ISOLATOR.*

Dimensions



Model Information

PG100-P-T

PG___ - _ - _
1 2 3

1 = Size	2 = Housing	3 = Diaphragm
V30 - Vacuum 0-30" Hg	P - PVC	E - EPDM
030 - Pressure 0-30 psi	PP - Polypropylene	V - Viton
060 - Pressure 0-60 psi	K - PVDF	T - PTFE
100 - Pressure 0-100 psi	S - Stainless	
160 - Pressure 0-160 psi	A - Alloy 20	
200 - Pressure 0-200 psi	H - Hastalloy C	
300 - Pressure 0-300 psi		

call 1-888-859-9726

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P.O. Box 360817
Melbourne, FL 32936

Toll Free: 888-859-9726
Fax: 321-255-3947
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Web: www.blueplanetenv.com

SPECIFICATION

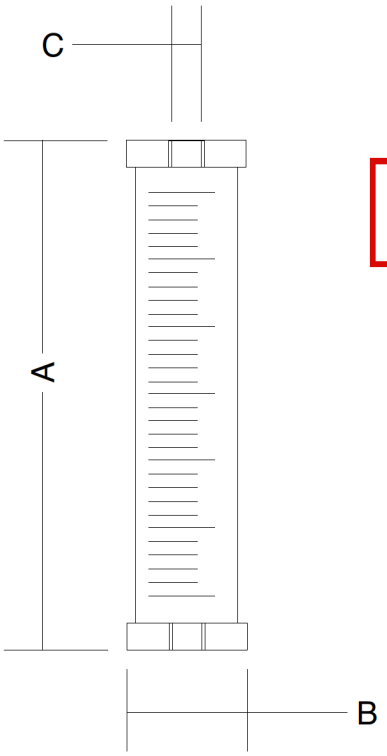
PVC CALIBRATION COLUMN



PVC calibraion columns provide verification of flow rate for chemical metering pumps. Manufactured from clear PVC with easy to read graduations in mL/sec and gph.

Install the calibration column with isolation valves as required in the suction line to the chemical metering pump. The top of the column should be vented back to the supply container.

To verify metering pump flow rate fill the column to the top mark then the close the chemical supply valve to the pump. Switch on the chemical pump and draw down the chemical in the column for 30 seconds. Switch the pump off and observe the reading on the calibration column. The left side of the column is calibrated in US ml/s and the right side in US gph.

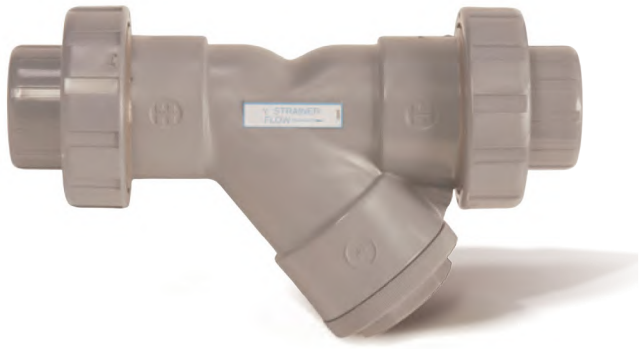


Model #	US gph	A(in)	B(in)	C(in)
CC0100-S	3.2	11	1.5	1/2
CC0200-S	6.4	19	1.5	1/2
CC0500-S	16	13	2.5	3/4
CC1000-S	32	22	2.5	3/4
CC2000-S	63	20	3.7	1
CC4000-S	127	37	3.7	1
CC10000-S	320	26	7.25	2
CC20000-S	640	48	7.25	2

*** Max. cylinder pressure is 15 psi.**

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YS Series Y-Strainers

1/2″, 3/4″, 1″, 1-1/2″ AND 2″ PVC, CPVC AND CLEAR PVC, 1-1/4″ PVC AND CLEAR PVC, 2-1/2″ PVC AND 3″-4″ PVC AND CPVC

KEY FEATURES

- PVC, CPVC and Clear PVC
- Horizontal or Vertical Installation
- FPM O-Ring Seals
- 2:1 Open Area Ratio
- Hex Cap for Easy Access to Screen
- Standard Screen has 1/32″ Perforation

OPTIONS

- Stainless Steel Perforated or Mesh Strainer Screens Available in Various Sizes
- True Union Connection

MATERIALS

- PVC Cell Class 12454 per ASTM D1784
- Clear PVC Cell Class 12454 per ASTM D1784
- CPVC Cell Class 23447 per ASTM D1784
- FPM and EPDM O-Ring Seals

TECHNICAL INFORMATION

BASKET OPTIONS

PERFORATION SIZES	MESH SIZES	BASKET MATERIAL
1/32″	20	SSTL, Hastelloy, Monel and Titanium
1/16″	40	
1/8″	60	
5/32″	80	
3/16″	100	
1/4″	200	
3/8″	325	
1/32″	N/A	PVC, CPVC and PP
1/16″		
1/8″		
3/16″		

SELECTION CHART

SIZE	MATERIAL	END CONNECTION	SEALS	PRESSURE RATING
1/2″ – 1″ (DN15 - DN25)	PVC, CPVC or Clear PVC	Socket, Threaded or True Union	FPM and EPDM	150 PSI @ 70°F Non-Shock
1 – 1/4″ (DN32)	PVC and Clear PVC			
1 – 1/2″ (DN40)	PVC, CPVC or Clear PVC			
2″ (DN50)				
2 – 1/2″ (DN65)	PVC	Socket, Threaded, Flanged or True Union		
3 – 4″ (DN80-DN100)	PVC and CPVC			

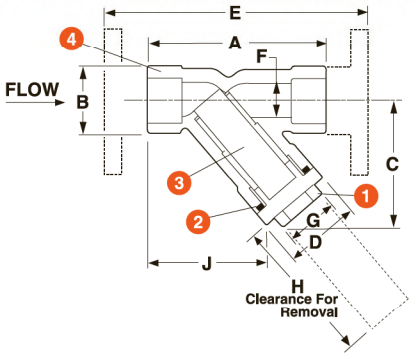
YS Series Y-Strainers

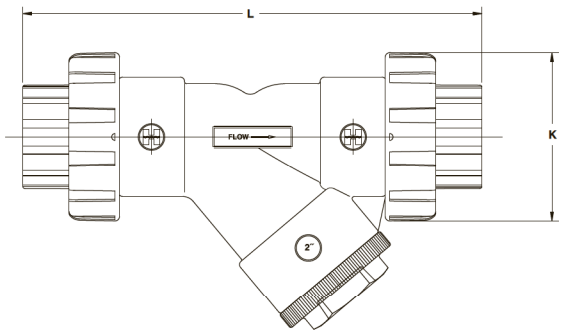
1/2″, 3/4″, 1″, 1-1/2″ AND 2″ PVC, CPVC AND CLEAR PVC, 1-1/4″ PVC AND CLEAR PVC, 2-1/2″ PVC AND 3″-4″ PVC AND CPVC

TECHNICAL INFORMATION, *CONTINUED*

PARTS LIST

1. Cap
2. O-Ring Seal
3. Screen
4. Body





DIMENSIONS

SIZE in/DN	A in/mm	B in/mm	C in/mm	D in/mm	E in/mm	F in/mm	G in/mm	H in/mm	J in/mm	K in/mm	L in/mm	WEIGHT lbs/kg SOC/THD	WEIGHT lbs/kg FLANGED
1/2/15	3.38/86	1.38/35	2.25/57	1.50/38	N/A	.56/14	1.00/25	2.13/54	2.50/64	2.25/57	6.64/167	.25/.11	N/A
3/4/20	4.18/106	1.69/43	2.88/73	2.00/51	N/A	.81/21	1.25/32	2.75/70	3.00/76	2.63/67	7.42/188	.63/.29	N/A
1/25	5.19/132	2.00/51	3.63/92	2.16/55	N/A	1.00/25	1.50/38	3.30/84	3.32/84	3.00/76	8.97/228	.88/.40	N/A
1-1/4/32	6.63/168	2.63/67	4.50/114	2.94/75	N/A	1.25/32	2.00/51	4.50/114	4.45/113	4.75/121	13.01/330	1.75/.79	N/A
1-1/2/40	6.63/168	2.63/67	4.50/114	2.94/75	N/A	1.56/40	2.00/51	4.50/114	4.45/113	4.75/121	12.07/307	1.63/.74	N/A
2/50	7.63/194	3.38/86	5.38/137	3.75/95	11.00/279	2.00/51	2.38/60	5.06/129	4.88/124	4.75/121	13.05/331	3.00/1.36	5.00/2.27
2-1/2/65	10.31/262	4.69/119	7.25/184	5.25/133	N/A	2.90/74	3.50/89	6.60/168	6.54/166	6.40/163	16.77/426	7.75/3.52	N/A
3/80	10.31/262	4.69/119	7.25/184	5.50/140	14.37/365	2.90/74	3.50/89	6.60/168	6.54/166	6.40/163	16.77/426	7.50/3.40	12.25/5.56
4/100	12.81/325	5.75/146	8.88/226	6.18 /157	17.73/450	3.78/96	4.25/108	8.00/203	8.58/218	8.56/217	21.23/539	9.50/4.30	17.50/7.94

Dimensions are subject to change without notice – consult factory for installation information

Cv VALUES*

SIZE in/DN	Cv VALUES	SIZE in/DN	Cv VALUES
1/2/15	4.0	2/50	28
3/4/20	6.8	2-1/2/65	40
1/25	9.0	3/80	65
1-1/4/32	12	4/100	100
1-1/2/40	28		

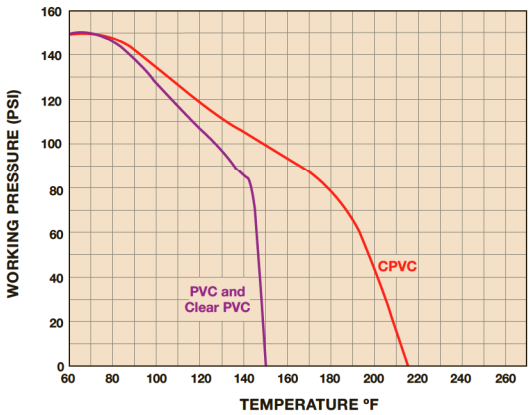
* With 1/32″ plastic screen

PRESSURE LOSS CALCULATION FORMULA

$$\Delta P = \left[\frac{Q}{Cv}\right]^2$$

ΔP = Pressure Drop
Q = Flow in GPM
Cv = Flow Coefficient

OPERATING TEMPERATURE/PRESSURE



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THROTTLE MASTER™
Series NG/NA

PLASTIC NEEDLE VALVES

MS.TMDS.2018

Materials: PVC, CPVC, Polypropylene, & PVDF

Port Connections: 1/4", 3/8", & 1/2" Fem NPT and Solvent Socket "Slip". Universally adaptable to pipe and tube.

Marquest Scientific's complete line of Throttle Master Needle Valves provide precise flow control with fine adjustment of corrosive and high purity fluids. The developed metering chamber provides for the most reliable stabilization and linearity of flow. Ultimate cross sectional geometry allows the manufacturing process to attain full material property potentials for the most demanding applications.

Features & Benefits

- Produced in two styles: Globe (straight) and angle pattern.
- 24 Pitch metering thread. 20% finer metering control. Excellent linearity of flow.
- Needle finish, SPI/SPE No. 1. bubble tight, low torque shutoff for long term performance.
- All injection molded, rugged design and construction.
- Needle Stem is Modified PTFE sealed for excellent chemical resistance & high purity. Modified PTFE for resilient sealing.
- Integrally designed panel mounting, no fasteners required, mounts to panel thicknesses from 1/16" to 1/2".
- No elastomers (O-Rings), metals or lubricants. No corrosion, no contamination. Zero Dead Leg.



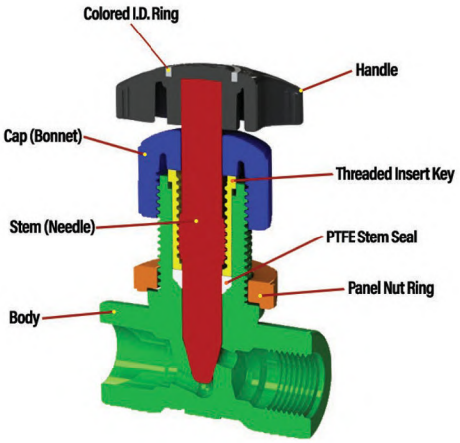
NA-250-PPR
1/4" Fem NPT x 1/4" Fem NPT
Angle Pattern
Polypropylene Body

NG-250-PVC
1/4" Fem NPT x 1/4" Fem NPT
Globe (Straight) Pattern
PVC Body

(1) Please see backside of data sheet for ordering info, including configuration & material options.

Specifications

Ports Connections: 1/4", 3/8", & 1/2" Fem NPT, Solvent Socket "Slip", Compression Tube Accessory Fittings
Materials of Construction:
Valve Body & Components: Injection molded in PVC, Glass & Mineral Reinforced Polypropylene, CPVC, and HP PVDF.
Stem Seal: Machined from 100% Virgin Modified PTFE
Working Pressure: 0 - 250 psi at 70° Deg Fahrenheit
Codes & Standards: ARRA Section 1605 "Buy American" Compliant. ASME A112.18.1M. ASTM D1599 & ASTM F610F 610M



Markets / Applications

- Wastewater Treatment
- Semiconductor Manufacturing
- Chemical Manufacturing
- Chemical Feed Systems
- Food & Beverage
- Desalination Plants
- Commercial Reverse Osmosis
- Farming & Agriculture
- Metal Plating
- Wet Processing
- Chemical Odor Control
- PCB Manufacturing
- Pharmaceutical Processing
- Alternative Fuel
- Photolithography
- Wet Bench & Fume Hoods
- NanoFluidics
- Many more..

MADE IN USA

Where Quality Meets Service & Value ™

MARQUEST SCIENTIFIC
Fluid Handling Products

THROTTLE MASTER is a Trademark of Marquest Scientific, Inc.

PLASTIC NEEDLE VALVES

THROTTLE MASTER™
Series NG/NA

Materials of Construction / Connections

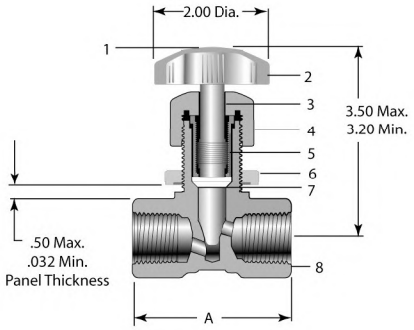
Body:
- PVC: Polyvinyl Chloride
- CPVC: Chlorinated Polyvinyl Chloride
- PPR: Polypropylene, unpigmented homopolymer, glass & mineral reinforced

Seal: Virgin Modified PTFE

Port Connections:
- 1/4", 3/8", & 1/2" Fem NPT
- 3/8" & 1/2" Solvent Socket Slip
- 16mm & 20mm Fusion Socket
- *BSP Threads

(1) Please contact factory for special connection requests

Dimensional Data / Parts List

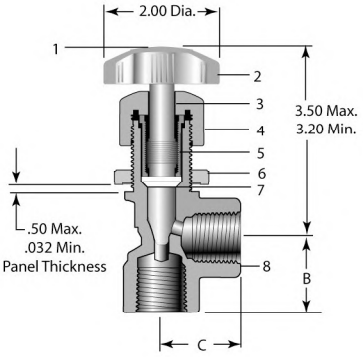


Dimensions (inches)

SIZE	A	B	C
1/4" Fem NPT	2.31	1.16	1.17
3/8" Fem NPT	2.39	1.19	1.21
1/2" Fem NPT	2.65	1.31	1.32

Parts List

1. Colored Ring I.D. Insert
2. Handle
3. Needle (Stem)
4. Cap (Bonnet)
5. Threaded Insert
6. Panel Nut
7. Stem Seal (PTFE)
8. Body



Pressure / Temperature Data

MAX WORKING PRESSURES PSI (water, non-shock) — WEIGHTS

Material	10°C 50°F	20°C 68°F	30°C 86°F	40°C 104°F	50°C 122°F	60°C 140°F	70°C 158°F	80°C 176°F	90°C 194°F	100°C 212°F	120°C 248°F	Net Weights Pounds*
PVC	200	250	250	220	140	135	----	----	----	----	----	0.387
CPVC	230	250	250	230	200	200	150	120	60	----	----	0.40
PP	200	240	240	210	145	125	75	60	----	----	----	0.318
PVDF	240	250	250	250	250	230	220	200	160	140	80	0.45

Temperature Ranges: PVC: 14 to 140°F (10 to 60°C), CPVC: 50 to 194°F (10 to 90°C), PP: 46 to 176°F (8 to 80°C), PVDF: -22 to 248°F (-30 to 120°C). * Weights are for unfilled 1/4" Female NPT x 1/2" Female NPT without gauge.

Flow Data

ORIFICE SIZES & Cv VALUES

SIZE	1/4" & 3/8"		1/2"	
	Globe Pattern	Angle Pattern	Globe Pattern	Angle Pattern
Inlet	0.187"	0.250"	0.218"	0.250"
Outlet	0.187"	0.187"	0.218"	0.218"
Cv	0.310	0.426	0.620	0.780

Flow Formula

$$Q = Cv\sqrt{\frac{\Delta P}{SG}}$$

Q = GPM (Gallons per Min)
Cv = Flow Coefficient
Δ P = Change in Pressure
SG = Specific Gravity

How to Order Throttle Master

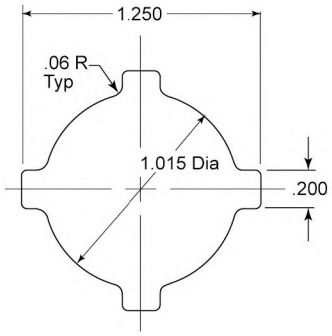
Part No: NG - 500 - PVC

BODY STYLE	PORT CONNECTION	MATERIAL
NG = Globe (Straight	250 = 1/4" Female NPT	PVC = Polyvinyl Chloride
NA = Angle (90 Deg)	375 = 3/8" Female NPT	CPVC = Chlorinated Polyvinyl Chloride
	500 = 1/2" Female NPT	PPR = Polypropylene, unpigmented glass & mineral reinforced
	375S = 3/8" Solvent Socket	PVD = 100% Virgin PVDF Polyvinylidene Flouride
	500S = 1/2" Solvent Socket	

Example: NG-500-PVC
PVC Throttle Master Needle Valve, 1/2" Fem NPT Inlet x 1/2" Fem NPT Outlet, Globe (Straight) Pattern, Modified PTFE Stem Seal, .620 Cv Value

Mounting Template

When required, the template provides the outline of the hole and orientation slots for a panel or bracket mounting. The orientation slots may be cut in multiple positions to allow versatility in mounting the valve to accomodate the piping alignment requirements.



Marquest Scientific, Inc.
2950 Airway Avenue, Costa Mesa, California 92626
Toll Free 866 452 2349 Fax 714 491 9199
www.marquestscientific.com | www.PlasticNeedleValves.com

MARQUEST SCIENTIFIC
Fluid Handling Products

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Polypropylene Cam Lever Couplings

FEATURES

- Stainless steel rings, arms & pins.
- Most complete line of polypropylene couplings available.
- Versatile — interchangeable with all types of cam lever couplers.
- Precision molded — insures a uniform and accurate fit.
- Durable — Polypropylene is glass reinforced for rugged strength and durability.
- Smooth operating — finger rings are designed for easy opening of cam levers.
- Complete series of ½", ¾", 1", 1¼", 1½", 2", 3" and 4" NPT thread.
- BSP threads available 1"- 3" sizes (excluding 1¼").
- Operating conditions:
  - ⅜" thru 2" — 100 P.S.I. at 0°F; 125 P.S.I. at 70°F; 70 P.S.I. at 150°F.
  - 2½", 3" & 4" Cap-50 P.S.I.; Couplings 75 P.S.I. max.
- Economical and superior in performance.
- Standard with EPDM gaskets. Buna "N", and FKM (viton type) also available.



WARNING: Couplings should not be disconnected under pressure or with liquid in the line.



















303B & 303C & All 4" Couplings have 3 Arms for POSITIVE SEAL!

Please order in bag/box quantities for quick and easy shipping and receiving of your order. All items priced each, not per bag or box quantity.

CAM LEVER COUPLINGS

ITEM	DESCRIPTION	¼" *	⅜" *	½" *	¾"	1"	1¼" **	1½" x 1¼" ***	1½"	2"	2½"	3"	3" 3 ARMS	4" 3 ARMS
A	Male Adapter-Female Thread	75A1/4	75A3/8	75A1/2	75A3/4	100A	125A	150125A	150A	200A		300A		400A
B	Female Coupler- Male Thread			75B1/2	75B3/4	100B	125B	150125B	150B	200B		300B	303B	400B
C	Female Coupler-Hose Shank			050C	075C	100C	125C	150125C	150C	200C		300C	303C	400C
D	Female Coupler-Female Thread		075D3/8	050D	075D	100D	125D	150125D	150D	200D		300D		400D
E	Male Adapter-Hose Shank			050E	075E	100E	125E	150125E	150E	200E		300E		400E
F	Male Adapter-Male Thread			050F	075F	100F	125F	150125F	150F	200F		300F		400F
PL	Plug for Female Coupler			75PL	75PL	100125PL	100125PL	150PL	150PL	200PL	250PL	300PL		400PL
CAP	Cap for Male Adapter			075CAP	075CAP	100125CAP	100125CAP	150CAP	150CAP	200CAP	250CAP	300CAP		400CAP (2 arms)
CAPSH	Cap w/Short Arms							200CAPSH						

NOTE: *¼", ⅜" and ½" series couplings interchange with ¾" size couplings. Coupling ends are ¾" size.
**1¼" series couplings interchange with 1" size couplings. Coupling ends are 1" size.
***1½" x 1¼" couplings interchange with 1½" size couplings. Coupling ends are 1½" size.

WELD-ON®
IPS CORPORATION

PRODUCT BULLETIN

P-70™

INDUSTRIAL GRADE

LOW VOC PRIMER FOR PVC AND CPVC PIPES

GENERAL DESCRIPTION:

WELD-ON® P-70™ is an industrial grade, low VOC emission, non-bodied, fast acting, primer. The strong, aggressive action of P-70 primer rapidly softens and dissolves the joining surfaces of PVC and CPVC pipe and fittings. The benefit of this priming action is especially noticeable on parts being joined together in cold weather. Available in clear and purple; the latter allows easy identification when used on the joining surfaces.

APPLICATION:

WELD-ON P-70 primer, when used in conjunction with appropriate WELD-ON solvent cements, will make consistently strong, well-fused joints. It is essential that the joining surfaces of pipe and fittings be softened and remains softened prior to assembly. The main function of the primer is to expedite the penetration and softening of the surfaces. Its rate of penetration into the joining surfaces is more rapid than that of solvent cement alone. P-70 primer is suitable for use with all types, classes and schedules of PVC and CPVC pipe and fittings. It is specially recommended for use on Schedule 80 and large pipe size.

Detailed directions on making solvent cemented joints are printed on the container label. An installation DVD/CD covering solvent cementing is available. It not only describes the basic principles of solvent cementing, but also covers the handling, storage and use of our products. It is highly recommended that the installer review the instructions supplied by the pipe and fitting manufacturer. **NOTE:** WELD-ON solvent cements must never be used in a CPVC system using or being tested by compressed air or gases; including air-over-water booster.

AVAILABILITY:

Both WELD-ON P-70 clear and purple primers are available in ¼ pint (118 ml), ½ pint (237 ml), pint (473 ml), quart (946 ml) and gallon (3.785 l) metal cans. For detailed information on containers and applicators, see our current Price List.

STANDARDS AND CERTIFICATION LISTINGS:

NSF® PW/DWV/SW

UPC® Purple Only

- Meets ASTM F 656 Standard
- Meets SCAQMD Rule 1168/316A
- Compliant with LEED® (Leadership in Energy and Environmental Design). When using this WELD-ON low VOC product, credit can be claimed for LEED Green Building Rating System – Indoor Environmental Quality.
- Listed by NSF International for compliance with ASTM F 656, NSF/ANSI Standard 14, and NSF/ANSI Standard 61 for use on potable water, drain, waste, vent and sewer applications.
- ***WELD-ON P-70 Purple Only*** - Listed by IAPMO for compliance with ASTM F 656 and applicable sections of the latest edition of the Uniform Plumbing Code®.

SPECIFICATIONS:

COLOR:	Clear or Purple
SPECIFIC GRAVITY:	0.858 ± 0.040
BROOKFIELD VISCOSITY:	Water Thin

SHELF LIFE:

3 years in tightly sealed containers. The date code of manufacture is stamped on the bottom of the container. Stability of the product is limited by the evaporation of the solvent when the container is opened. Adding of solvents is not recommended and may significantly change the properties of the primer.

QUALITY ASSURANCE:

WELD-ON P-70 primer is carefully evaluated to assure that consistent high quality is maintained. Fourier transform infrared spectroscopy, gas chromatography, and additional in depth testing ensures each batch is manufactured to exacting standards. A batch identification code is stamped on each can and assures traceability of all materials and processes used in manufacturing this product.

SHIPPING:

For One Liter and Above

Proper Shipping Name:	Flammable Liquid n.o.s. (Methyl Ethyl Ketone, Tetrahydrofuran)
Hazard Class:	3
Identification Number:	UN 1993
Packing Group:	II
Label Required:	Flammable Liquid

For Less than One Liter

Proper Shipping Name: Consumer Commodity
Hazard Class: ORM-D

SAFETY AND ENVIRONMENTAL PRECAUTIONS:

This product is flammable and considered a hazardous material. In conformance with the Federal Hazardous Substances Labeling Act, the following hazards and precautions are given. Purchasers who repackage this product must also conform to all local, state and federal labeling, safety and other regulations. VOC emissions do not exceed 550 grams per liter.

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DANGER: EXTREMELY FLAMMABLE. VAPOR HARMFUL.
MAY BE HARMFUL IF SWALLOWED. MAY IRRITATE SKIN OR EYES.

Keep out of reach of children. Do not take internally. Keep away from heat, spark, open flame and other sources of ignition. Vapors may ignite explosively. Solvent cement vapors are heavier than air and may travel to source(s) of ignition at or near ground or lower level(s) and flash back. Keep container closed when not in use. Store between 40°F (5°C) and 110°F (44°C). Avoid breathing of vapors. Use only in well-ventilated area. If confined or partially enclosed, use forced ventilation. When necessary, use local exhaust ventilation to remove harmful airborne contaminants from employee breathing zone and to keep contaminates below 25 ppm TWA. Atmospheric levels must be maintained below established exposure limits contained in Section II of the Material Safety Data Sheet (MSDS). If airborne concentrations exceed those limits, use of a NIOSH approved organic vapor cartridge respirator with full face-piece is recommended. The effectiveness of an air-purifying respirator is limited. Use it only for a single short-term exposure. For emergency and other conditions where short-term exposure guidelines may be exceeded, use an approved positive pressure self-contained breathing apparatus. Do not smoke, eat or drink while working with this product. Avoid contact with skin, eyes and clothing. May cause eye injury. Protective equipment such as gloves, goggles and impervious apron should be used. Carefully read Material Safety Data Sheet and follow all precautions. Do not use this product for other than intended use.

"SARA Title III Section 313 Supplier Notification": This product contains toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and of 40CFR372. This information must be included in all MSDS that are copied and distributed for this material.

FIRST AID:

Inhalation:	If overcome with vapors, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call physician.
Eye Contact:	Flush with plenty of water for 15 minutes and call a physician.
Skin Contact:	Wash skin with plenty of soap and water for at least 15 minutes. If irritation develops, get medical attention.
Ingestion:	If swallowed, give 1 or 2 glasses of water or milk. Do not induce vomiting. Contact physician or poison control center immediately.

SPECIAL PRECAUTION:

Do not use a dry granular calcium hypochlorite as a disinfecting material for water purification in potable water piping systems. The introduction of granules or pellets of calcium hypochlorite with PVC and CPVC solvent cements and primers (including their vapors) may result in a violent chemical reaction if a water solution is not used. It is advisable to purify lines by pumping chlorinated water into the piping system – this solution will be nonvolatile. Furthermore, dry granular calcium hypochlorite should not be stored or used near solvent cements and primers.

IMPORTANT NOTE:

This product is intended for use by skilled individuals at their own risk. These suggestions and data are based on information we believe to be reliable. Installers should verify for themselves that they can make satisfactory joints under varying conditions. Toward this end, it is highly desirable that they receive personal instruction from trained instructors or competent, experienced installers. Contact IPS® Corporation or your supplier for additional information or instructions.

WARRANTY:

IPS® Corporation ("IPS Corp.") warrants that all new IPS Corp. products shall be of good quality and free from defects in material and workmanship for the shelf life as indicated on the product. If any IPS Corp. product becomes defective, or fails to conform to our written limited warranty under normal use and storage conditions, then IPS Corp. will, without charge, replace the nonconforming product. However, this limited warranty shall not extend to, nor shall IPS Corp. be responsible for, damages or loss resulting from accident, misuse, negligent use, improper application, or incorporation of IPS Corp. products into other products. In addition, any repackaging of IPS Corp. products also shall void the limited warranty. IPS Corp. shall not be responsible for, nor does this limited warranty extend to, consequential damage, or incidental damage or expense, including without limitation, injury to persons or property or loss of use. Please refer to our standard IPS Corp. Limited Warranty for additional provisions.

IPS® CORPORATION

455 W. Victoria Street
Compton, CA 90220 U.S.A.
Tel: 310.898.3300
Fax: 310.898.3392

500 Distribution Parkway
Collierville, TN 38017 U.S.A.
Tel: 901.853.5001
Fax: 901.853.5008

Customer Service: 800.888.8312
www.ipscorp.com

CERTIFIED QUALITY MANAGEMENT SYSTEM ISO 9001 2008

PRODUCT DATA SHEET

724™

INDUSTRIAL GRADE

LOW VOC CPVC SOLVENT CEMENT

GENERAL DESCRIPTION:
WELD-ON® 724™ is an industrial grade, orange or gray, low VOC emission, heavy bodied, medium setting, high strength CPVC solvent cement for all classes and schedules of pipe and fittings with interference fit, including Schedule 80 through 12 inch (315 mm) diameter. Also recommended for PVC industrial piping systems for chemical applications.

APPLICATION:
WELD-ON 724 is especially formulated for use on industrial piping systems (CPVC or PVC) requiring chemical resistance to caustics, including hypochlorite solutions, mineral acids, aggressive water and aqueous salt solutions. Approved for use with Corzan™ Industrial Piping Systems.

AVAILABILITY:
WELD-ON 724 orange and gray are available in pint (473 ml), quart (946 ml) and gallon (3.785 l) metal cans. For detailed information on containers and applicators, see our current Price List.

STANDARDS AND CERTIFICATION LISTINGS:

NSF PW-G/ DWV/ SW

UPC ®

- Meets ASTM F493 Standard
- Meets SCAQMD Rule 1168/316A
- Compliant with LEED® 2009 (Leadership in Energy and Environmental Design). When using this Weld-On low VOC product, credit can be claimed for LEED Green Building Rating System - Indoor Environmental Quality.
- Listed by NSF International for compliance with ASTM F493, NSF/ANSI Standard 14, and NSF/ANSI Standard 61 for use on potable water, drain, waste, vent and sewer applications.
- Listed by IAPMO for compliance with ASTM F493 and applicable sections of the latest edition of the Uniform Plumbing Code®.

SPECIFICATIONS:

COLOR:	ORANGE or GRAY
RESIN:	CPVC
SPECIFIC GRAVITY:	0.984 ± 0.04
BROOKFIELD VISCOSITY:	Minimum 1600 Cp @ 73º ± 2ºF (23º ±1ºC)

SHELF LIFE:
2 years in tightly sealed containers. The date code of manufacture is stamped on the bottom of the container. Stability of the product is limited by the evaporation of the solvent when the container is opened. Adding of solvents is not recommended and may significantly change the properties of the primer.

QUALITY ASSURANCE:
Weld-On 724 is carefully evaluated to assure that consistent high quality is maintained. Fourier transform infrared spectroscopy, gas chromatography, and additional in depth testing ensures each batch is manufactured to exacting standards. A batch identification code is stamped on each can and assures traceability of all materials and processes used in manufacturing this product.

SPECIAL PRECAUTION:
Weld-On solvent cements must never be used in PVC or CPVC piping system using or being tested by compressed air or gases; including air-over-water booster. Do not use in conjunction with flue gas ventilation systems.

Do not use a dry granular calcium hypochlorite as a disinfecting material for water purification in potable water piping systems. The introduction of granules or pellets of calcium hypochlorite with PVC solvent cements and primers (including their vapors) may result in a violent chemical reaction if a water solution is not used. It is advisable to purify lines by pumping chlorinated water into the piping system – this solution will be nonvolatile. Furthermore, dry granular calcium hypochlorite should not be stored or used near solvent cements and primers.

This product is intended for use by skilled individuals at their own risk. Installers should verify for themselves that they can make satisfactory joints under varying conditions. Detailed directions on making solvent cemented joints are printed on the container label. It is highly recommended that the installer review the instructions supplied by the pipe and fitting manufacturer.

Weld-On Adhesives, Inc., a division of IPS Corporation
455 W. Victoria Street, Compton, CA 90220, U.S.A.
Tel: 310.898.3300 • Fax: 310.898.3392 • Customer Service: 800.421.2677
www.weldon.com

Refer to the current Weld-On 724 Safety Data Sheet for additional safety precautions, first-aid, storage, handling, transportation and disposal information.

WARRANTY:
Weld-On Adhesives, Inc., warrants to all original purchasers of Weld-On products that all new Weld-On products shall be of good quality and free from defects in material and workmanship for the product's shelf life. If any Weld-On product becomes defective, or fails to conform to this written limited warranty under normal use and storage conditions, and if the original purchaser complies with the terms of this limited warranty, then Weld-On will, without charge, replace the nonconforming product.

This limited warranty shall extend to all products manufactured and sold by Weld-On. However, this limited warranty shall not extend to, nor shall Weld-On be responsible for, damages or loss resulting from accident, misuse, negligent use, improper application, or incorporation of Weld-On products into other products. In addition, any repackaging of Weld-On products also shall void the limited warranty provided herein.

Any defective Weld-On products shall be replaced pursuant to the terms of this limited warranty by returning the defective product, with transportation charges prepaid, to Weld-On at the following address:

Weld-On Adhesives, Inc.
Attn: Customer Service
455 West Victoria Street
Compton, CA 90220

Any implied warranty in connection with any Weld-On product hereby is limited in duration to the period of this limited warranty. Weld-On shall not be responsible for, nor does this limited warranty extend to, consequential damage, or incidental damage or expense, including without limitation, injury to persons or property or loss of use. This limited warranty is in lieu of all other express warranties of Weld-On, and Weld-On does not assume, nor does it authorize any person to assume on its behalf, any other obligation or liability.

FOREST UTILITIES

WASTEWATER TREATMENT PLANT

DISINFECTION SYSTEM CONVERSION

FLOW SENSORS/TRANSMITTERS

TECHNICAL INFORMATION

Ultrasonic measurement Time-of-Flight Prosonic FDU90

Ultrasonic sensor for level and flow measurement for connection to FMU9x (measuring range up to 3m)



More information and current pricing:
www.us.endress.com/FDU90

Benefits:

- Integrated temperature sensor for Time-of-Flight correction. Accurate measurements are possible, even if temperature changes are present
- Hermetically welded PVDF sensor for highest chemical resistance
- Suited for rough ambient conditions thanks to separate installation from the transmitter (up to 300m)
- Reduced build-up formation because of the self-cleaning effect
- Integrated automatic sensor detection for transmitters FMU90 / FMU95 for simple commissioning
- Weather resistant and flood-proof (IP 68)
- Integrated heating against a build-up of ice at the sensor (optional) ensures reliable measurement

Specs at a glance

- **Process temperature** -40 °C ... 80 °C (-40 °F ... 176 °F)
- **Process pressure absolute / max. overpressure limit** 0.7 bar ... 4 bar abs (10 psi ... 58 psi)
- **Max. measurement distance** 1.2 m (3.9 ft)
- **Accuracy** +/- 2mm + 0.17% of measured distance
- **Main wetted parts** PVDF (IP68 / NEMA6P)

Field of application: The FDU90 ultrasonic sensor for continuous, non-contact and maintenance-free level measurement of fluids, pastes, sludges and powdery to coarse bulk materials. But also for flow measurement in open channels and measuring weirs. The measurement is unaffected by dielectric constant, density or humidity and also

unaffected by build-up due to the self-cleaning effect of sensors. Suited for explosion hazardous areas. Maximum measuring range in liquids 3m (9.8ft), solids 1.2m (3.9ft).

Features and specifications

Continuous / Solids

Measuring principle
Ultrasonic

Characteristic / Application
Separated version with field housing or top hat rail housing for control cabinet instrumentation, 300m in-between sensor and transmitter

Supply / Communication
4-wire (HART, PROFIBUS DP)

Accuracy
+/- 2mm + 0.17% of measured distance

Ambient temperature
-40 °C ... 80 °C
(-40 °F ... 176 °F)

Process temperature
-40 °C ... 80 °C
(-40 °F ... 176 °F)

Process pressure absolute / max. overpressure limit
0.7 bar ... 4 bar abs
(10 psi ... 58 psi)

Main wetted parts
PVDF (IP68 / NEMA6P)

Continuous / Solids

Process connection

Front side thread:

G / NPT 1 1/2"

Rear side thread:

G / NPT 1"

Ceiling mounting

Blocking distance

0.07 m (0.23 ft)

Max. measurement distance

1.2 m (3.9 ft)

Communication

Transmitter:
4 ... 20 mA HART
Profibus DP

Certificates / Approvals

ATEX, FM, CSA, IEC Ex, INMETRO, NEPSI, EAC Ex

Options

Second 4...20mA output

Components

Transmitter:
FMU90

Continuous / Liquids

Measuring principle

Ultrasonic

Continuous / Liquids

Characteristic / Application
Separated version with field housing or top hat rail housing for control cabinet instrumentation, 300m in-between sensor and transmitter

Specialities
Floating protection tube

Supply / Communication
4-wire (HART, Profibus DP)

Accuracy
+/- 2mm + 0.17% of measured distance

Ambient temperature
-40 °C ... 80 °C
(-40 °F ... 176 °F)

Process temperature
-40 °C ... 80 °C
(-40 °F ... 176 °F)

Process pressure absolute / max. overpressure limit
0.7 bar ... 4 bar abs
(10 psi ... 58 psi)

Main wetted parts
PVDF (IP68 / NEMA6P)

Process connection
Front side thread:

G / NPT 1 1/2"

Rear side thread:

G / NPT 1"

Ceiling mounting

Continuous / Liquids

Blocking distance
0.07 m (0.23 ft)

Application
Application

Max. measurement distance
Max. measurement distance

Communication
Transmitter:
4 ... 20 mA HART
Profibus DP

Certificates / Approvals
ATEX, FM, CSA, IEC Ex, INMETRO, NEPSI, EAC Ex

Options
Second 4...20mA output

Components
Transmitter:
FMU90, FMU95

Application limits
Foam / high turbulence possible:

FDU91

For tank farms scanner:

FMU95

Liquids

Measuring principle
Ultrasonic

Liquids

Product headline
Version with separate transmitter in field housing or top hat rail housing
Cost effective solution for open channel flow measurement in water / wastewater plants

Max. measurement error
accuracy:
distance measurement: +/- 2mm + 0.17%
resolution:
distance measurement: 1m

Measuring range
max measuring distance up to 3 m / 9.8 ft

Max. process pressure
atm.

Medium temperature range
-40 °C ... 80 °C
(-40 °F ... 176 °F)

Degree of protection
IP68

Display/Operation
Transmitter

Outputs
Transmitter:
4 ... 20 mA HART
PROFIBUS DP

Inputs
Transmitter

Digital communication
HART, PROFIBUS DP

Liquids

Hazardous area approvals

ATEX, FM, CSA, IEC Ex, INMETRO, NEPSI, EAC Ex

More information **www.us.endress.com/FDU90**

Endress+Hauser USA
United States

addresses.endress.com
info.us.sc@endress.com

Endress+Hauser

Ultrasonic measurement Time-of-Flight Prosonic FMU90

Transmitter in housing for field or top hat rail mounting for up to 2 sensors FDU90/91/92/93/95



More information and current pricing:
www.us.endress.com/FMU90

Benefits:

- Simple, menu-guided operation with 6-line plain text display, 15 languages selectable
- Envelope curves on the display for quick and simple diagnosis
- Easy operation, diagnosis and measuring point documentation with the supplied "FieldCare" operating program
- Time-of-Flight correction via integrated or external temperature sensors
- Linearisation (up to 32 points, freely configurable) for the most common flumes and weirs
  pre-programmed and selectable
- Online calculation of the flume-/weir-flows via integrated flow curves
- Automatic detection of the sensors FDU9x

Specs at a glance

- **Accuracy** +/- 2mm + 0.17% of measured distance

Field of application: Prosonic FMU90 separated version with field housing or top hat rail housing for control cabinet instrumentation are suited for continuous, non-contact level measurement of fluids, pastes, sludge and powdery to coarse bulk solids. Also the flow measurement in open channels and weirs is possible as the simultaneous measurement of level and flow in a storm water overflow basin with only 1 sensor. Up to 6 relays for tendency alarm, flow pulse output or backwater/sludge alarm, 1 or 2 channel version.

Features and specifications

Liquids

Measuring principle
Ultrasonic

Product headline
Separated version with field housing or top hat rail housing for control cabinet instrumentation, up to 6 relays for tendency alarm, flow pulse output or backwater / sludge alarm, 1 or 2 channel version

Sensor features
pre-programed flow curves for typical open channel measurement

Degree of protection
IP66 (Fieldhousing)
IP20 (top hat rail housing)

Display/Operation
Illuminated display, 6 line graphic display with country specific menu guidance, on-site diagnosis with envelope curve on display

Outputs
4...20mA HART
Optional:
second 4...20 mA output (e.g. for 2 times flow measurement
1 relay (standard)
Optional:
3 or 6 relays

Inputs
up to 2 FDU9x sensors

Digital communication
HART, Profibus DP

Hazardous area approvals
FMU allowed to operate FDU9x in Ex-zone

Continuous / Solids

Measuring principle
Ultrasonic

Characteristic / Application
Separated version with Field housing or top hat rail housing for control cabinet instrumentation, up to 6 relays for limit control, 1 or 2 channel version

Specialities
Protection Class IP 66 / NEMA 4x
automatic sensor recognition of FDU9x sensors

Supply / Communication
90 ... 253 VAC
10.5 ... 32 VDC
up to 2x 4...20mA HART
Profibus DP

Accuracy
+/- 2mm + 0.17% of measured distance

Ambient temperature
-40 °C ... 60 °C
(-4 °F ... 140 °F)

Communication
up to 2x 4 ... 20 mA HART
Profibus DP

Certificates / Approvals
ATEX, CSA

Options
Illuminated display, 6 line graphic display with country specific menu guidance, on-site diagnosis with envelope curve on display

Components
Sensors FDU9x

Continuous / Liquids

Measuring principle
Ultrasonic

Characteristic / Application
Separated version with Field housing or top hat rail housing for control cabinet instrumentation, up to 6 relays for pump / rake / limit control, 1 or 2 channel version

Specialities
Protection Class IP 66 / NEMA 4x
automatic sensor recognition of FDU9x sensors
option: flow measurement for open channel and weirs or additional pump control functions

Supply / Communication
90 ... 253 VAC
10.5 ... 32 VDC
up to 2x 4...20mA HART
Profibus DP

Accuracy
+/- 2mm + 0.17% of measured distance

Ambient temperature
-40 °C ... 60 °C
(-40 °F ... 140 °F)

Communication
up to 2x 4 ... 20 mA HART
Profibus DP

Certificates / Approvals
ATEX, CSA

Options
Illuminated display, 6 line graphic display with country specific menu guidance, on-site diagnosis with envelope curve on display

Continuous / Liquids

Components

Sensors FDU9x

More information **www.us.endress.com/FMU90**

Endress+Hauser USA
United States

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info.us.sc@endress.com

Endress+Hauser

FOREST UTILITIES

WASTEWATER TREATMENT PLANT

DISINFECTION SYSTEM CONVERSION

EMERGENCY EYEWASH/SHOWER INFORMATION

Guardian

Safety Stations with Eyewash

☐ G1902 Safety Station with Eyewash, Stainless Steel Bowl

Application: Combination eyewash and shower safety station. Two GS-Plus™ spray-type outlet heads deliver a flood of water for rinsing eyes.

Shower Head: 10" diameter orange ABS plastic.

Shower Valve: 1" IPS chrome plated brass stay-open ball valve. Valve is US-made with chrome plated brass ball and Teflon® seals. Furnished with stainless steel actuating arm and 29" stainless steel pull rod.

Spray Head Assembly: Two GS-Plus™ spray heads. Each head has a "flip top" dust cover, internal flow control and filter to remove impurities from water.

Eyewash Bowl: 11-1/2" stainless steel.

Eyewash Valve: 1/2" IPS chrome plated brass stay-open ball valve. Valve is US-made with chrome plated brass ball and Teflon® seals.

Pipe and Fittings: Schedule 40 galvanized steel. Furnished with orange polyethylene covers for vertical piping for high visibility and corrosion resistance.

Supply: 1-1/4" NPT female top or side inlet.

Waste: 1-1/4" NPT female outlet. Outlet can be positioned at either 9-1/4" or 19-5/8" above finished floor by reversing lower pipe nipples.

Sign: Furnished with ANSI-compliant identification sign.

Quality Assurance: Valve and spray head assemblies are factory assembled and water tested prior to shipment.



Available Options

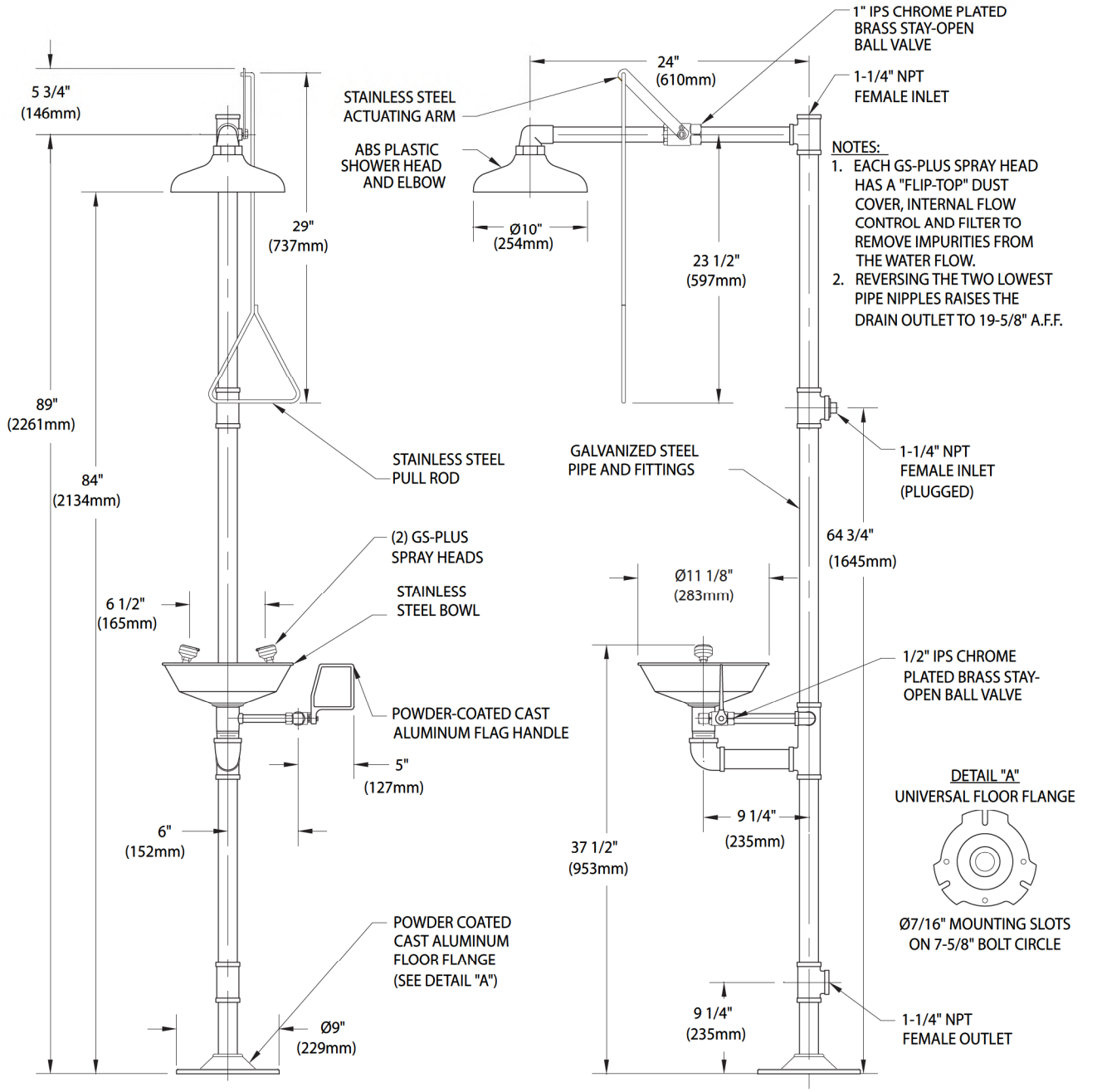
- ~~**GC** Powder coated finish on galvanized Pipe and Fittings:. Available colors include orange, yellow, red and green.~~
- ~~**FC20** Regulates shower flow rate to 20 GPM.~~
- ~~**GRN** Green ABS plastic shower head.~~
- ~~**YEL** Yellow ABS plastic shower head.~~
- ~~**SSH** Stainless steel shower head.~~
- ~~**AP275-100 Electric Light and Alarm Horn**~~
  ~~Light and alarm horn summon assistance when eyewash or shower is activated.~~
- ~~**AP250-015 Modesty Curtain**~~
  ~~Modesty curtain for mounting on safety station.~~
- ~~**TMV** G3800 thermostatic mixing valve precisely blends hot and cold water to deliver warm (tepid) water as required by ANSI Z358.1-2009.~~

Guardian Equipment
1140 N North Branch St
Chicago, IL 60642

312 447 8100 TELEPHONE
312 447 8101 FACSIMILE
gesafety.com

ETL Listed 101496.
Units have been tested to and comply with ANSI Z358.1-2009

☐ G1902 Safety Station with Eyewash, Stainless Steel Bowl



THIS SPACE FOR ARCHITECT/ENGINEER APPROVAL

Sign Included



Due to continuing product improvement, the information contained in this document is subject to change without notice. All dimensions are ± 1/4" (6mm). rev. 1013

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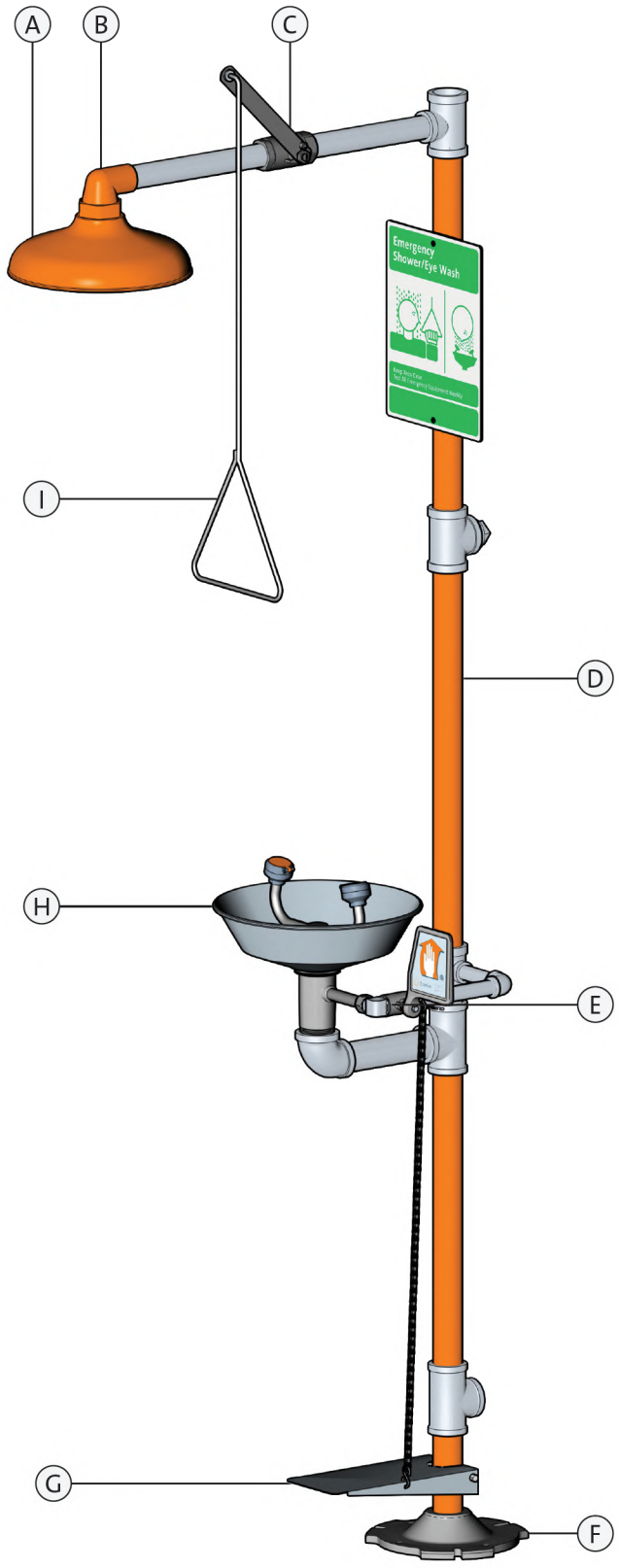
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ETL Listed 101496.
Units have been tested to and comply with ANSI Z358.1-2009

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Parts List
Safety Stations

Item	Part Number	Description
Shower Heads		
A	**AP450-032ORG**	Orange ABS Plastic Shower Head
	AP450-032GRN	Green ABS Plastic Shower Head
	AP450-032YEL	Yellow ABS Plastic Shqower Head
	AP450-048	10" Dia. Stainless Steel Shower Head
Shower Head Elbows		
B	**330-12-08RSE-OR**	Orange ABS Plastic Elbow
	330-12-08RSE-GR	Green ABS Plastic Elbow
	330-12-08RSE-YE	Yellow ABS Plastic Elbow
	300-08SE	1" IPS Galvanized Steel Street Elbow
Shower Valve Assembly		
C	**AP600-335H**	1" IPS Chrome Plated Brass Stay-Open Ball Valve, Single Activation. Furnished with stainless steel actualing arm.
Galvanized Pipe Packs		
D	**AP500-100**	Galvanized Steel Pipe Pack for Units with Eyewash Bowl
	AP500-170	Galvanized Steel Pipe Pack for Barrier-Free Units
	AP530-100	Orange Pipe Covers
Eyewash Valve Assemblies		
E	**AP600-101H**	1/2" IPS Chrome Plated Brass Ball Valve with Power Coated Aluminum Flag Handle
	AP600-101H-HFC	1/2" IPS Chrome Plated Brass Ball Valve with Power Coated Aluminum Flag Handle for Units with Hand/Foot Control
F	**150-032**	Powder Coated Cast Aluminum Floor Flange, 1-1/4" NPT Female Connection
G	**AP050-010**	Stainless Steel Foot Treadle and Return Spring with Aluminum Clevis Pin
H	**See Page 2**	Eyewash and Eye/Face Wash Assemblies
Shower Pull Rods		
I	**AP050-079**	29" Stainless Steel Pull Rod
	AP050-080	47 1/2" Stainless Steel Pull Rod



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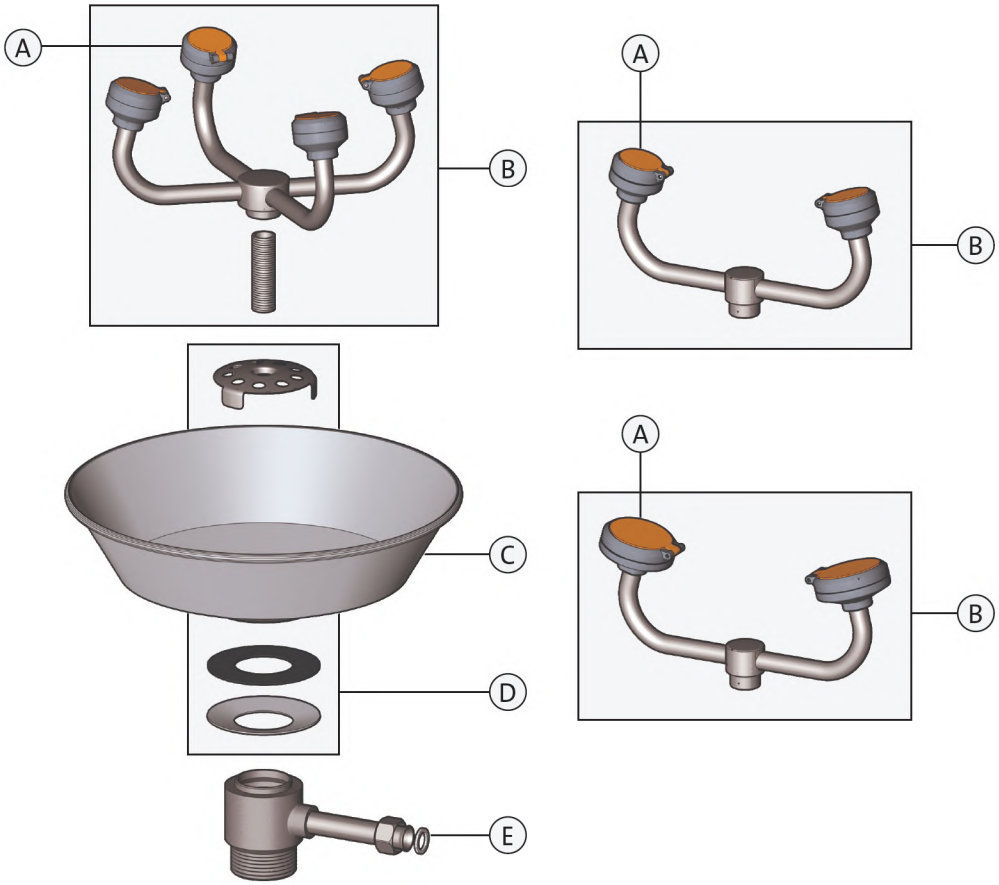
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Parts List

Eyewash and Eye/Face Wash Assemblies for Safety Stations

Item	Part Number	Description
Spray Head Dust Covers		
A	**AP470-001**	GS-Plus™ Spray Head Assy.
	AP470-021	FS-Plus™ Spray Head Assy.
Outlet Assemblies		
B	**AP470-100R**	(2) GS-Plus™ Spray Heads with Chrome Plated Brass Fittings
	AP470-110R	(2) FS-Plus™ Spray Heads with Chrome Plated Brass Fittings
	AP470-120R	(4) GS-Plus™ Spray Heads with Chrome Plated Brass Fittings
	AP470-127R	(4) GS-Plus™ Spray Heads with Chrome Plated Brass Fittings for Barrier-Free Units
	BI136-02-04	3/8" IPS X 2-1/4" Brass Shank

Item	Part Number	Description
Bowls		
C	**100-009ORG-R**	Orange ABS Plastic Bowl
	100-009GRN-R	Green ABS Plastic Bowl
	100-009YEL-R	Yellow ABS Plastic Bowl
	100-008R	Stainless Steel Bowl
	100-014R	Stainless Steel Bowl for Barrier-Free Units
Drain Plate Assemblies		
D	**AP150-012A**	Drain Plate Assembly for Plastic Bowls
	AP150-012B	Drain Plate Assembly for Stainless Bowls
	Note: Includes Drain Plate, Cupped Washer, And Gasket	
Waste Receptor		
E	**150-066-1R**	Waste Receptor with Flared Nipple Coupling and Gasket, 1 1/2" NPT Male Outlet



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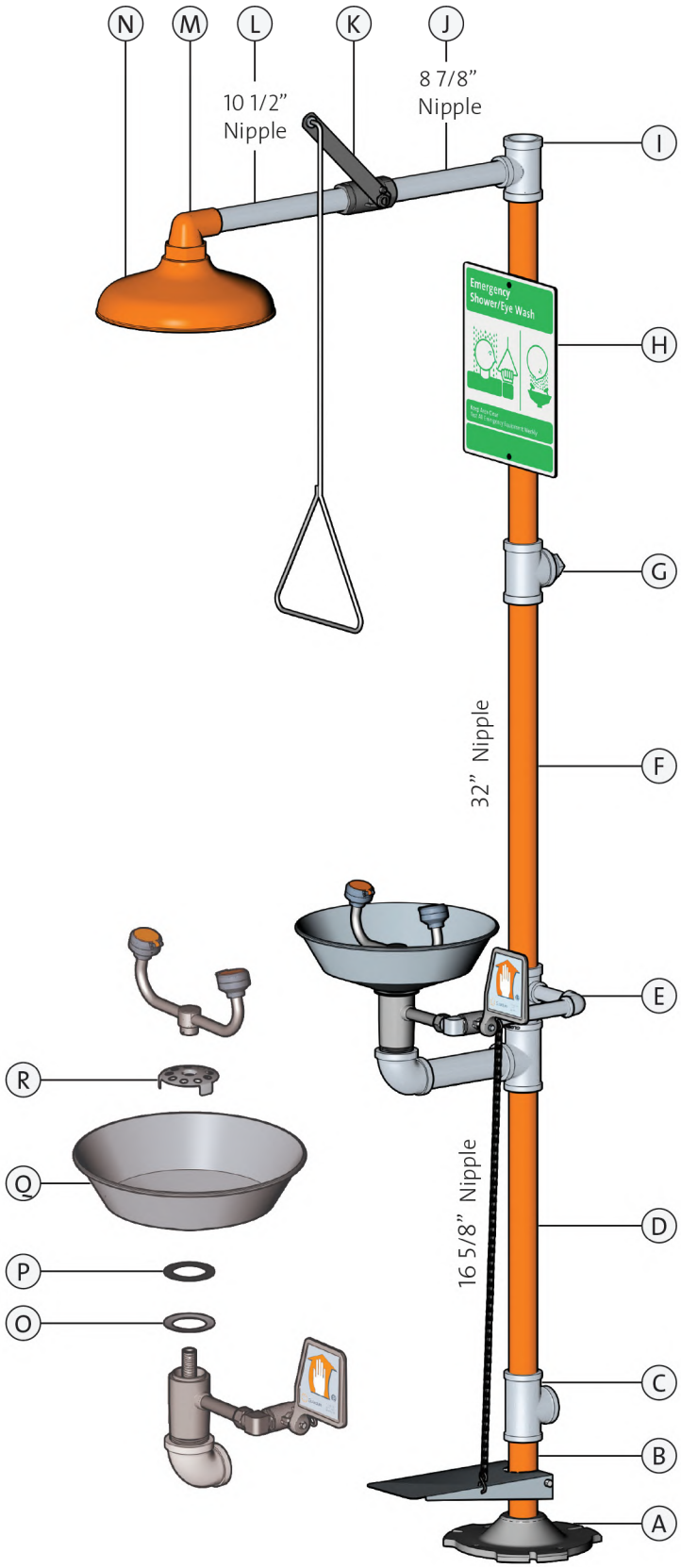
Assemby Instructions
Safety Stations

Safety stations are designed for easy assembly in the field. Essentially, these units are assembled from the "bottom up", as described below:

1. Assemble floor flange (A), 1 1/4" IPS x 6 1/4" nipple (B), and plugged outlet tee (C). If unit has a foot treadle, the floor flange and treadle are pre-assembled. Position foot treadle for proper access by users, and tee for connection to drain. *IMPORTANT: Plugged tee (C) must be oriented with plugged end down to assure proper drainage.*
2. Assemble 1 1/4" IPS x 16 5/8" nipple (D) and frame assembly (E). Position frame assembly for proper access by users.
3. Assemble 1 1/4" IPS x 32" nipple (F) and inlet tee (G). Position tee for connection to supply. If the top vertical inlet will be employed, plug tee with supplied 1 1/4" IPS square head plug.
4. Assemble 1 1/4" IPS x 22" nipple (H) and 1 1/4" x 1" IPS reducing inlet tee (I). Position tee forward for proper location of shower. If the back horizontal inlet will be employed, plug tee with supplied 1 1/4" IPS square head plug.
5. Assemble 1" IPS x 8 7/8" nipple (J), emergency shower valve (K), 1" IPS x 10 1/2" nipple (L), elbow (M), and shower head (N).
6. Place cupped, stainless steel washer (O), rubber gasket (P), and bowl (Q) onto waste receptor. Center components to assure a watertight seal.
7. Thread drain plate (R) down onto mounting shank as far as possible. If neccessary, rotate bowl clockwise to draw drain plate down onto mounting shank.
8. Thread eye or eye/face wash spray head assembly onto mounting shank. Position outlet heads for proper access by user.
9. Secure entire unit to floor and/or wall for stability.
10. If unit has foot treadle, connect foot treadle chain to valve/handle assembly.
11. Attach orange plastic pipe wrap and sign.

Notes:

1. All threads are tapered pipe and require pipe joint compound or Teflon tape to assure watertight connection.
2. If unit is furnished with corrosion-resistant powder coating, care must be taken to avoid damaging finish during assembly. For best results, a strap wrench should be used.
3. Test the entire unit for proper operation.
4. The use of dielectric unions is required when connecting to copper supply to avoid premature corrosion.



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FOREST UTILITIES

WASTEWATER TREATMENT PLANT

DISINFECTION SYSTEM CONVERSION

ANSI/NSF STANDARD 60 CERTIFICATION AND SDS
FOR
ODYSSEY ULTRACHLOR SODIUM HYPOCHLORITE

NSF International

789 N. Dixboro Road, Ann Arbor, MI 48105 USA

RECOGNIZES

Odyssey Manufacturing Company

Facility: Tampa, FL

AS COMPLYING WITH NSF/ANSI 60 AND ALL APPLICABLE REQUIREMENTS.
PRODUCTS APPEARING IN THE NSF OFFICIAL LISTING ARE
AUTHORIZED TO BEAR THE NSF MARK.

ISO/IEC 17065
Product Certification Body
#0216

Certification Program
Accredited by the
American National
Standards Institute

Certification Program
Accredited by the
Standards Council
of Canada

This certificate is the property of NSF International and must be returned upon request. This certificate remains valid as long as this client has products in NSF's Official Listings for the referenced standards. For the most current and complete Listing information, please access NSF's website (www.nsf.org).

Theresa Bellish

October 4, 2017
Certificate# C0354268 - 01

Theresa Bellish
General Manager, Water Systems

ODYSSEY
MANUFACTURING CO.

SAFETY DATA SHEET

REVISED 1/01/20

SECTION I - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier
Product name: Ultra-CHLOR
Product code(s): 8 (As classified by 49 CFR 173 due to destruction over time of steel and aluminum)
Synonyms: Sodium Hypochlorite Solution, Bleach Solution, Bleach Liquor, Hypo-solution, Bleach, Liquid Bleach
REACH Registration Number: The materials in this product have been registered according to Regulation (EC) 1907/2006.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Uses: Cleaner, Disinfectant, Biocide and Sanitizer
Uses Advised Against: None

1.3 Details of the Supplier and of the Safety Data Sheet (SDS)
Odyssey Manufacturing Co.
1484 Massaro Boulevard
Tampa, Florida 33619
+1-813-635-0339 (24 hours)

1.4 Emergency telephone number:
1-800-ODYSSEY (Florida)
1-813-635-0339 (Outside Florida)
1-813-340-9093 (Control Room Cell Phone)

SECTION II - HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture
Classification REGULATION (EC) No 1272/2008
Skin Corrosiveness: 1B; Skin Irritant: 2
Eye Irritant: 2
Aquatic Acute: 1
Description: Clear, greenish-yellow liquid; chlorine-like odor. Irritating to eyes, skin and respiratory system. Can cause burns to all areas contacted.

2.2 Label elements
Labeling Regulation (EC) No 1272/2008
Hazard pictograms



Signal word: **DANGER**
Hazard statements:

H314 – Causes severe skin burns and eye damage
H319 – Causes serious eye irritation
H400 – Very toxic to aquatic life
[Prevention] P260 – Do not breathe dusts or mists.
P264 – Wash hands or any exposed skin areas thoroughly after handling.
P273 – Avoid release to the environment.

P280 – Wear protective gloves/protective/clothing/eye protection/face protection.

[Response] P301 + P330 + P331 – IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363 – Wash contaminated clothing before reuse.
P304 + 340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310 – Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 – If eye irritation persists: Get medical advice/attention.
P391 – Collect spillage.

[Storage] P405 – Store locked up.

[Disposal] P501 – Dispose of container in accordance with local/regional/national/international regulations.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC




Risk phrases: R31 – Contact with acids liberates toxic gas.
R34 – Causes burns.
R36/38 – Irritating to eyes and skin.
R50 – Very toxic to aquatic organisms.

Safety phrases: S1/2 – Keep locked up and out of the reach of children.
S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 – After contact with skin, wash immediately with plenty of soap-suds.
S37/39 – Wear suitable gloves and eye/face protection.
S45 – In case of accident or if you feel unwell, seek medical advice immediately (Show the label whenever possible).
S50 – Do not mix with acids or other incompatible materials (refer to section 10).
S60 – This material and its container must be disposed of as hazardous waste.

Additional labeling: EUH031 – Contact with acids liberates toxic gas.

SECTION III - COMPOSITION, INFORMATION ON INGREDIENTS

c

Chemical nature: Sodium hypochlorite, aqueous solution

% by Weight	Ingredient	CAS Number	EC Number	Index Number	EC Classification
10.0 – 16.0	Sodium Hypochlorite	7681-52-9	231-668-3	017-011-00-1	C, R34; R31: N, R50
0.1 – 0.4	Sodium Hydroxide	1310-73-2	215-185-5	011-002-00-6	Xi, 36/38
83.6 - 89.9	Water	7732-18-5	231-791-2		

3.2 Mixtures - Not applicable

SECTION IV - FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: If product vapors or mists cause respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. If symptoms persist, seek medical attention immediately.

Eyes: Immediately flush eyes with large amounts of water for 15 minutes, occasionally lifting upper and lower lids. Remove contact lenses after the first 5 minutes and continue washing. Obtain immediate medical attention, preferably from an ophthalmologist.

Skin: Flush skin with large amounts of water while removing contaminated clothing. Wash affected area with soap and water. Wash contaminated clothing and shoes thoroughly before reuse. Seek prompt medical attention if rash develops.

Ingestion: Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

Potential health symptoms and effects

Eyes: Causes severe eye irritation and burns. Symptoms include redness, pain, itching, burning sensation and tearing. Material is extremely destructive to eyes, mucous membranes and surrounding tissues.

Skin: Causes severe skin irritation and burns. Symptoms include redness, pain, itching and burning sensation. May be harmful if absorbed through the skin.

Inhalation: Vapors and mists may be harmful is inhaled, causing sore throat and cough. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion: May cause severe gastrointestinal tract irritation with abdominal pain, burning sensation, cough, diarrhea, sore throat and vomiting. May cause burns and irritation to mucous membranes of the mouth and to tissues of the digestive tract.

Chronic: Repeated or prolonged contact with spray mist may produce chronic eye irritation, severe skin irritation and/or respiratory tract irritation leading to frequent attacks of bronchial infection.

SECTION V - FIRE FIGHTING MEASURES

5.1 Extinguishable media

Suitable methods of extinction: Material does not burn. Use fire extinguishing media appropriate for surrounding materials.

Unsuitable methods of extinction: None listed

5.2 Special hazards arising from the substance or mixture

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat. During emergency conditions overexposure to toxic decomposition products may cause a health hazard. Fire may cause the evolution of chlorine, hydrogen chloride gas and chlorine oxides. Symptoms may not be immediately apparent. Obtain immediate medical attention.

5.3 Advice for firefighters

Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If possible, firefighters should control run-off water to prevent environmental contamination.

SECTION VI - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors/mists. Avoid contact with skin and eyes. Wear appropriate protective clothing designated in Section 8. Ventilate the area. Evacuate personnel to safe areas.

6.2 Environmental precautions

Avoid dispersal of spilled material or run-off and prevent contact with soil and entry into drains, sewers or waterways. Contain and recover liquid when possible.

6.3 Methods and materials for containment and cleaning up

Cover drains. Cover with a large quantity of inert absorbent (e.g. sand, vermiculite, kitty litter, dry earth). Do not use combustible materials such as saw dust. Collect product using a shovel and place into approved container for proper disposal as hazardous waste. For large spills use water spray to divert vapor drift. Observe possible material restrictions (section 7.2 and 10.5). Clean contaminated area with water. Do not mix with other cleaning agents that may liberate chlorine gas vapors.

US Regulations (CERCLA) require reporting spills and releases to soil water and air in excel of reportable quantities. Reportable quantity (RQ) for hypochlorite solutions is 45.36 kg (100 lbs).

Reportable Quantity (RQ): 100 lbs or 45.36 kg (approximately 100 gal or 378.5 L of Odyssey Ultrachlor 12.5 Trade Percent sodium hypochlorite). In the event of a spill (e.g. defined as any release to the environment), call Odyssey Manufacturing and/or the emergency contact numbers as soon as possible for assistance.

*****For releases higher than the Reportable Quantity (RQ), you must notify the State Emergency Response Commission at *(800) 320-0519* ***AND*** the National Response Center at *(800) 424-8802 or (202) 267-2675* ***within 15 minutes*****!!!*****

In the event of a spill, contact either hazardous chemical response company or Odyssey Manufacturing for assistance. Odyssey Manufacturing Co. has a contract with American Compliance Technology, Inc. (ACT) out of Bartow, Florida to perform emergency response and hazardous material and environmental services cleanup for its facilities, its transportation vehicles and its customer's facilities and transportation vehicles. They can be reached at 800-226-0911.

6.4 Reference to other sections

For indications about waste treatment, see section 13.

SECTION VII - HANDLING AND STORAGE

7.1 Precautions for safe handling

Observe label precautions. Avoid contact with skin and eyes. Wear all appropriate protective equipment specified in Section 8. Wash thoroughly after handling. Keep containers closed when not in use. Use proper equipment for listing and transporting all containers.

Advice on protection against fire and explosion

Material is non-flammable and non-combustible.

7.2 Conditions for safe storage, including any incompatibilities

Keep in cool, dry, ventilated storage areas in closed containers. Protect against physical damage. Isolate from incompatible substances. Do not store near acids, heat, oxidizable materials or organics.

Store in a receptacle equipped with a vent. Transfer only to approved containers having correct labeling. Containers that have been opened should be carefully resealed and kept upright to prevent leakage. Do not take internally. Keep locked up and out of reach of children.

7.3 Specific end uses

Apart from the uses mentioned in section 1.2, no other specific uses are stipulated.

SECTION VIII - EXPOSURE CONTROLS AND PERSONNEL PROTECTION

8.1 Control parameters

Components	CAS Number	OSHA	ACGIH	AIHA (WEEL)
Sodium Hypochlorite	7681-52-9	2 mg/m^3 TWA; skin	0.5 ppm as CL_2 TWA; 1 ppm as CL_2 STEL, A4	2 mg/m^3 STEL
Sodium Hydroxide	1310-73-2	2 mg/m^3 TWA	2 mg/m^3 Ceiling	

8.2 Exposure controls

Engineering Measures: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable. See section 7.1.

Individual protection measures: Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

Hygiene measures: Facilities storing or using this material should be equipped with an eyewash station and safety shower. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking or using the lavatory and at the end of the workday.

Eye/face protection: Wear tightly fitting protective goggles and a face shield (8-inch minimum). Refer to 29 CFR 1910.133, ANSI Z87.1 or European Standard EN 166.

Hand Protection: Wear gloves recommended by glove supplier for protection against materials in section 3. Gloves must be inspected prior to use. Gloves should be impermeable to chemicals and oil. Breakthrough time of selected gloves must be

greater than the intended use period. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

Other protective equipment: Wear impervious, protective chemical resistant clothing including boots, gloves, lab coat, apron or coveralls as appropriate to the situation to prevent skin contact.

Respiratory Protection: Always use an approved respirator when vapor/aerosols are generated. Where risk assessment shows air-purifying respirators are appropriate use a full-faced respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental exposure controls: Do not empty into drains.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Clear, greenish yellow colored liquid
Odor	Pungent, chlorine-like
Odor Threshold	No data available
Molecular Weight	74.44 (sodium hypochlorite)
Chemical Formula	NaOCl (sodium hypochlorite)
pH	11 – 13
Freezing Point	-13.9° C (7° F)
Initial Boiling Point	100° C (212° F) – lowest known value
Evaporation Rate	<1 (BuAc = 1)
Flammability (solid, gas)	No data available
Flash Point	No data available
Autoignition Temperature	No data available
Decomposition Temperature	110° C (230° F)
Lower Explosive Limit (LEL)	No data available
Upper Explosive Limit (UEL)	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Relative Density	1.15 – 1.17 g/ml (9.597 – 9.764 lb/gal) @ 60 ° F
Viscosity	No data available
Solubility in Water	Complete
Partition Coefficient: n-octanol/water	No data available
Volatiles by Volume @ 70° F	No data available; decomposes leaving salt solution

9.2 Other data - No data available

SECTION X - STABILITY AND REACTIVITY

10.1 Reactivity

Slowly decomposes on contact with air. Rate increases with the concentration and temperature. Exposure to sunlight accelerates decomposition.

10.2 Chemical stability

Stable under recommended storage conditions. Slowly decomposes on contact with air. Rate increases with the concentration and temperature. Exposure to sunlight accelerates decomposition. Sodium hypochlorite becomes less toxic with age.

10.3 Possibility of hazardous reactions

Avoid excessive heat and sources of ignition. Flammable hydrogen may be generated from contact with metals such as: aluminum, brass, tin, zinc and alloys of these metals. Avoid contact with acids, halogenated organics, organic nitro compounds and glycols. Hazardous gases may be generated from contact with acids, ammonium hydroxide (aqua ammonia) or cleaners containing ammonia compounds. Violent reactions may occur with some organic compounds. Sodium hypochlorite reacts

readily with various reducing sugars (e.g. fructose, galactose, maltose, dry whey solids) to produce carbon monoxide. Precautions should be taken including atmospheric monitoring of the tank to ensure safety of personnel. Hazardous polymerization will not occur.

10.4 Conditions to avoid

Light, heat, air and contact with incompatible materials (see section 10.5).

10.5 Incompatible materials

Ammonia, amines, ammonium salts, aziridine, methanol, phenyl acetonitrile, cellulose, ethyleneimine, organic materials, oxidizable metals/powdered metals, acids, soaps and bisulfates. Forms shock-sensitive mixtures with certain other materials.

10.6 Hazardous decomposition products

Thermal decomposition products include chlorine gas, hydrogen chloride gas, hydrochloric acid, sodium oxide. Decomposition rate increases with temperature.

SECTION XI - TOXILOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Oral Toxicity (Sodium Hypochlorite)

TDLo - 1gm/ kg oral (woman)
TDLo - 45mg/kg intravenous (man)
LD_{50} - 5,800 mg/kg (mouse)
LD_{50} - 140 mg/kg - 9 week(s) continuous oral (rat)

Acute inhalation toxicity

May cause severe bronchial irritation, sore throat with possible blistering, coughing, stomatitis, nausea, labored breathing, shortness of breath and pulmonary edema. 10-20 mg/m3 causes burning of the nose and throat; 40-60 mg/m3 may be fatal. If sufficient amounts are absorbed, may cause effects as detailed in acute ingestion.

Acute dermal toxicity

Extent of damage depends on concentration, pH, and volume of solution and duration of contact. May cause redness, pain, blistering, itchy eczema and chemical burns. Sensitization reactions are possible in previously exposed persons.

Skin irritation

Skin irritation - 24 h (Rabbit)

Eye irritation

Rabbit, Adult – 10 mg, moderate irritation

May cause redness, pain, and blurred vision. Solutions of 5% splashed in human eyes have caused a burning sensation and later only slight superficial disturbance of the corneal epithelium which cleared completely in the next day or two without special treatment. However, one animal study reports a 5% solution causing only moderate irritation with clearing within 7 days. A higher concentration of 15% tested on rabbit eyes caused immediate severe pain, hemorrhages, rapid onset of ground-glass appearance of the corneal epithelium, moderate bluish edema of the whole cornea, chemosis and discharge for several days. Such eyes have sometimes healed in 2-3 weeks with slight or no residual corneal damage but they had neovascularization of the conjunctiva and distortion of the nictitating membrane by scarring.

Sensitization

May cause allergic skin reaction

Genotoxicity in vitro

No data available

Mutagenicity

Mutation in micro organisms – Salmonella typhimurium 1mg / plate (-S9)
DNA repair – Escherichiacoli 20 µg/ disc;
DNA damage – Esoherichiacoli 420 µmol/L;
Phage inhibition capacity – Esoherichiacoli 103 µg/ well

Micronucleus test - non-mammalian species multiple 200 ppb
Cytogenetic analysis - non-mammalian species multiple 120 µg/ L
Cytogenetic analysis – human lymphocyte 100 ppm 24hour(s)
Sister chromatid exchange – human embryo 149 mg/ L
Cytogenetic analysis – hamster lung 100 mg/ L

Aspiration hazard

No test data available. Risk of serious damage to lungs by aspiration.

Specific organ toxicity - single exposure

No data available

Specific organ toxicity - repeated exposure

May cause allergic skin reactions, dermatitis (allergic and contact) and asthma or bronchitis. Sensitization reactions are reported in individuals who are exposed in small amounts through their water supply. High doses have caused sperm abnormality in mice.

Additional information

RTECS: Not available

11.2 Further information

Ingestion: May cause irritation and erosion of the mucous membranes, vomiting (possibly bloody) and abdominal pain and spasms. A drop in blood pressure, shallow respiration, edema (possibly severe) of pharynx, larynx, and glottis, confusion, convulsions, delirium and coma may occur. Cyanosis and circulatory collapse are possible. Esophageal or gastric perforation and strictures are rare. Death may occur, usually due to complications of severe local injury such as toxemia, shock, perforations, hemorrhage, infection and obstruction. Massive ingestions may produce fatal hyperchloremic metabolic acidosis or aspiration pneumonitis.

Further data: Handle in accordance with good industrial hygiene and safety practice.

Chronic Effects

Persons with impaired respiratory function may be more susceptible to the effects of this substance.

Sodium Hypochlorite (hypochlorite salts) is listed by IARC as a Group 3 Carcinogen – Not classifiable as to its carcinogenicity to humans. Sodium Hydroxide is not listed by IARC. None of the components of this product are listed as carcinogens by ACGIH, IARC, NTP or OSHA. No data is available regarding its mutagenicity and/or teratogenicity of this material, nor is there any available data that indicates it causes adverse developmental and/or fertility effects.

SECTION XII - ECOLOGICAL INFORMATION

12.1 Toxicity Aquatic Ecotoxicity:

This product is very toxic to aquatic organisms.

Aquatic Ecotoxicity:

Acute and prolonged toxicity to fish:	LC_{50} – Pimephales promelas (Fathead minnow) 96 h: 0.22 – 0.62 mg/L
	LC_{50} – Oncorhynchus clarki (Cutthroat trout) 96 h: 0.94 µg/L (mortality)
Acute toxicity to aquatic invertebrates:	EC_{50} – Daphnia magna (Water flea), 96 h: 2.1 mg/L
	LC_{50} – Protozoan phylum (Protozoa), 7 h: 31.6 µg/L
Acute toxicity to aquatic plants:	LC_{50} – Algae, phytoplankton, algai mat (Algae), 96 h: 90 µg/L (mortality)
	EC_{50} – Desmodesmus subspicatus (Green algae), 24 h: 28 mg/L
Acute phytotoxicity, aquatic plants:	Biomass reduction – Potamogeton crispus (Curled pond weed), 35h: 23 µg/L
Acute toxicity, miscellaneous aquatic:	Chlorophyll Threshold, Aquatic community, 28 d: 2.1 µg/L

12.2 Persistence and degradability

Biodegradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulation potential

Partition coefficient, n-octanol in water: Data not available

Bioaccumulation is not expected

12.4 Mobility in soil

Product is mobile in water.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment is not available as chemical safety assessment was not conducted.

12.6 Other adverse effects

Additional ecological information

This material is a very toxic to aquatic life. Do not allow material to run into surface waters, wastewater or soil.

SECTION XIII - DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

The generation of waste should be avoided or minimized whenever possible. This material is subject to disposal regulations under U.S. EPA 40 CFR Parts 261 and 262. Container should be disposed of in a safe way as empty containers may contain product residue. Leave chemicals in original containers. No mixing with other waste. Handle unclean containers like the product itself. Incinerate in an approved facility. Do not incinerate closed container. Dispose of in accordance with the Directive 2008/98/EC as well as other national, federal, state/provincial and local laws and regulations.

No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

SECTION XIV - TRANSPORT INFORMATION

US DOT (Domestic Ground Transportation)

Proper Shipping Name:	Hypochlorite Solutions
Hazard Class:	8 (As classified by 49 CFR 173 due to destruction over time of steel and aluminum)
Packing Group:	III
NAERG:	Guide #154
Packaging Authorizations:	Non-Bulk: 49 CFR 173.203; Bulk: 49 CFR 173.241
Packaging Exceptions:	49 CFR 173.154

IMO/IMDG (Water Transportation)

Proper Shipping Name:	Hypochlorite Solutions
Hazard Class:	8 (As classified by 49 CFR 173 due to destruction over time of steel and aluminum)
UN/NA#:	UN1791
Packing Group:	III
Marine Pollutant:	NO
EMS Number:	F-A, S-B

ICAO/IATA (Air Transportation)

Proper Shipping Name:	Hypochlorite Solutions
Hazard Class:	8 (As classified by 49 CFR 173 due to destruction over time of steel and aluminum)
UN/NA#:	UN1791
Packing Group:	III
Quantity Limitations:	49 CFR 175.75 - Cargo Aircraft Only: 60L Passenger Aircraft: 5L

RID/ADR (Rail Transportation)

Proper Shipping Name:	Hypochlorite Solutions
Hazard Class:	8 (As classified by 49 CFR 173 due to destruction over time of steel and aluminum)
UN/NA#:	UN1791
Packing Group:	III

Marine Pollutant: Yes (Refer to Refer to 171.4 and 172.322 for further guidance)
Signal Word: DANGER
Hazard Symbols: GHS05, GHS09 (GHS); C, N (EEC)



SECTION XV - REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture

U. S. Federal Regulations

OSHA Hazard Communication Standard: This material contains "Hazardous Chemicals" as defined by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

OSHA PSM: Not regulated under OSHA Process Safety Management Standard (PSM) 29 CFR 1910.119

EPA RMP: Not regulated under EPA Risk Management Standard (RMP) 40 CFR Part 68

EPA FIFRA: This product is a registered Pesticide under the Federal insecticide, Fungicide and Rodenticide Act (FIFRA) 40 CFR Part 150

TSCA Status: All components of this product are listed on the Toxic Substance Control Act (TSCA) Inventory. This product not subject to TSCA 12(b) Export Notification.

Superfund Amendments and Reauthorization Act (SARA)

SARA Section 311/312 Hazard Categories: This product is subject to the reporting requirements of Section 311/312 of the Emergency Planning and Community Right-to Know Act of 1986.

Acute: Yes **Chronic:** No **Fire:** No **Reactive:** No

SARA 313 Information: None of the chemicals in this product exceed the threshold (de minimis) reporting levels established by Section 313 of the Emergency Planning and Community Right-to Know Act of 1986.

SARA 302/304 Extremely Hazardous Substance: No components of the product exceed the threshold (de minimis) reporting levels established by of these sections of Title III of SARA.

SARA 302/304 Emergency Planning & Notification: No components of the product exceed the threshold (de minimis) reporting levels established by of these sections of Title III of SARA.

Comprehensive Response Compensation and Liability Act (CERCLA): This product contains the following CERCLA reportable substances:

Sodium Hypochlorite (CAS # 7681-52-9), RQ – 45.36 kg (100 lbs)

Sodium Hydroxide (CAS # 1310-73-2), RQ – 453.59 kg (1,000 lbs)

**Special Note: The Reportable Quantity (RQ) of Ultra-CHLOR Solution is approximately 100 gallons*

Clean Air Act (CAA)

This product does not contain any chemicals that are listed as Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).

This product does not contain any Class 1 Ozone depletors.

This product does not contain any Class 2 Ozone depletors.

Clean Water Act (CWA)

Sodium hypochlorite, sodium hydroxide and hypochlorite solutions are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

U.S. State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains no chemical(s) known to the state of California to cause cancer or other reproductive harm.

Other U.S. State Inventories:

Sodium hypochlorite (CAS #7681-52-9) is found on the following State Hazardous Substance Inventories and/or Right-to-Know lists: CA, DE, MA, MN, NY, NJ, PA.

Sodium hydroxide (CAS #1310-73-2) is found on the following State Hazardous Substance Inventories and/or Right-to-Know lists: CA, DE, ID, MA, MN, NY, NJ, PA, WA, WI .

Canada

WHMIS Hazard Symbol and Classification:



Class E – Skin Irritant

Canadian Controlled Products Regulations (CPR): This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations, and the SDS contains all the information required by the Controlled Products Regulations.

Canadian Ingredient Disclosure List (IDL): Sodium hypochlorite and sodium hydroxide are listed on the IDL.

Canadian National Pollutant Release Inventory (NPRI): None of the ingredients in this product are listed on the NPRI.

European Economic Community

WGK, Germany (Water danger/protection): 2

Chemical Inventory Lists

Country	Inventory Name	Inventory Listing*
United States	Toxic Substance Control Act (TSCA)	Yes
Canada	Domestic Substance List (DSL).	Yes
Canada	Non-Domestic Substance List (NDSL)	Yes
Europe	Inventory of New and Existing Chemicals (EINECS)	Yes
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Philippines	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*"Yes" indicates that all components of this product are in compliance with the inventory requirements administered by the governing country.
*"No" indicates that one or more components of this product are not on the inventory and are not exempt from listing.

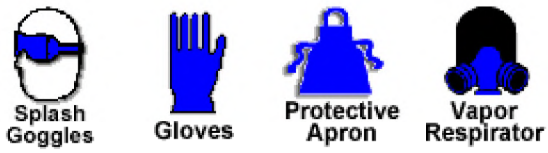
SECTION XVI - OTHER INFORMATION

Hazardous Material Information System (HMIS)

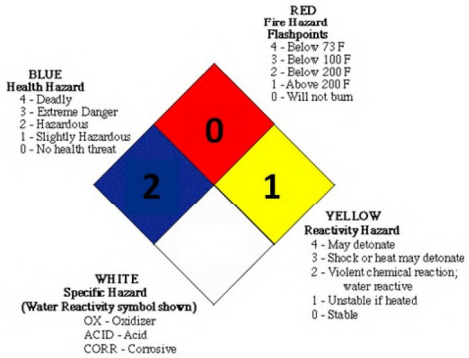
HEALTH	2
FLAMMABILITY	0
REACTIVITY	1
PERSONAL PROTECTION	H

HMIS / NFPA Hazard Rating Legend

* = Chronic Health Hazard	2 = MODERATE
0 = INSIGNIFICANT	3 = HIGH
1 = SLIGHT	4 = EXTREME



National Fire Protection Association (NFPA)



For additional information, contact our technical service department.

Information contained in this SDS refers only to the specific material designated and does not relate to any process or use involving other materials. This information is based on data believed to be reliable, and the Product is intended to be used in a manner that is customary and reasonably foreseeable. Since actual use and handling are beyond our control, no warranty, express or implied, is made and no liability is assumed by Odyssey Manufacturing in connection with the use of this information.

NOTIFICATION OF COMPLETION OF CONSTRUCTION FOR WASTEWATER FACILITIES OR ACTIVITIES

1. Instructions

a. In accordance with Rule 62-620.410, F.A.C., this form must be submitted to the Department's appropriate district office or approved local program prior to placing a newly constructed facility or modified portion of an existing facility into operation for any purpose other than testing for leaks and equipment operation.
b. Each applicable item must be completed in full. Where attached sheets or other technical documentation are used in lieu of the blank spaces provided, indicate appropriate cross-references in the spaces.
c. Three (3) copies of this notification with supporting documentation shall be submitted with this form.
d. All information is to be typed or printed in ink. Dates are to be entered in MM/DD/YR format.

2. Facility Information

a. Permit Number FLA014478-016-DW1-MR b. Facility Identification Number FLA014478

c. Project/Facility Name Forest Utilities Wastewater Treatment Plant Sodium Hypochlorite Conversion

d. Contact Name: Mitch Gilbert
Number and Street 15275 Collier Blvd., Suite 201-268
City/State/Zip Code Naples, FL 34119
Telephone 239-825-7818

3. Description of Facilities to be Placed into Operation:

New sodium hypochlroite storage and feed system for disinfection.

4. Description of Substantial Deviations from the Permit, Approved Preliminary Design Report, and Application Materials:

No substantial deviations. Minor relocation of sodium hypochlorite injection lines to injection points.

5. Implementation Dates

a. Actual Date Construction Began	8/16/21
b. Scheduled Date to Place Facilities into Operation	10/1/21
c. Scheduled Date to Attain Operational Level	10/4/21
d. Scheduled Date to Submit DEP Form 62-620.910(13)[1]	10/10/21

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OCT 05 2021
D.E.P. South District

[1]In accordance with Rule 62-620.410, F.A.C., DEP Form 62-620.910(13) Notification of Availability of Record Drawings and Final Operation and Maintenance Manuals must be submitted within six month after the facilities are placed into operation.

6. Certifications

a. Applicant or Authorized Representative

I certify that the statements made in this notification and all attachments are true, correct and complete to the best of my knowledge and belief. I agree to operate and maintain these facilities in such a manner as to comply with the provisions of Chapter 403, F.S., Chapter 62-620, F.A.C., and all other applicable rules of the Department.

Judy Mallett — 10/5/21
(Signature of Applicant or Authorized Representative[2]) (Date)

Name (Please Type) Judy Mallett Company Name Forest Utilities, Inc.
Title Treasurer Company Address 6000 Forest Boulevard
Phone 239-481-5333 City/State/Zip Code Fort Myers, Florida 33908
Email (optional) forestu@aol.com

b. Applicant or Authorized Representative (For Domestic Wastewater Facilities Only)

I certify that an appropriate draft operation and maintenance manual for these domestic wastewater facilities, which has been examined by a professional engineer as certified below, is available and located at Forest Utilities WWTP, 6341 Deer Run, Fort Myers, FL 33908 and can be submitted upon request.

Judy Mallett — 10/5/21
(Signature of Applicant or Authorized Representative[2]) (Date)

Name (Please Type) Judy Mallett Company Name Forest Utilities, Inc.
Title Treasurer Company Address 6000 Forest Boulevard
Phone 239-481-5333 City/State/Zip Code Fort Myers, Florida 33908
Email (optional) forestu@aol.com

c. Professional Engineer Registered in Florida

I certify that the facilities listed above have been completed to the point where the facilities are functionally complete. I further certify that construction on these facilities has proceeded substantially in accordance with the permit and the approved preliminary design report and application materials, or that deviations noted above will not prevent the system from functioning in compliance with all applicable statutes of the State of Florida and rules of the Department when properly operated and maintained. These determinations have been based upon on-site observation of construction, scheduled and conducted by me or by a project representative under my direct supervision, for the purpose of determining if the work proceeded in compliance with the permit and the approved preliminary design report and application materials.

Company Name: Odyssey Engineering Company, LLC Name (please type) Michael P. Azzarella, P.E.
Company Address: 1484 Massaro Boulevard
City/State/Zip Code Tampa, FL 33619
Phone Number: 813-505-5684

Michael P. Azzarella 10/1/21 #52427
(Seal, Signature, Date, and Registration Number)

Email (optional): michael@odysseyengco.com

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MICHAEL P. AZZARELLA LICENSE No 52427 STATE OF FLORIDA PROFESSIONAL ENGINEER

[2]If signed by the authorized representative, attach a letter of authorization.

d. Professional Engineer Registered in Florida (For Domestic Wastewater Facilities Only)

I certify that the draft operation and maintenance manual for these domestic wastewater facilities has been prepared or examined by me or by individual(s) under my direct supervision and that there is reasonable assurance, in my professional judgement, that the facilities, when properly operated and maintained in accordance with this manual, will comply with all applicable statutes of the State of Florida and rules of the Department.

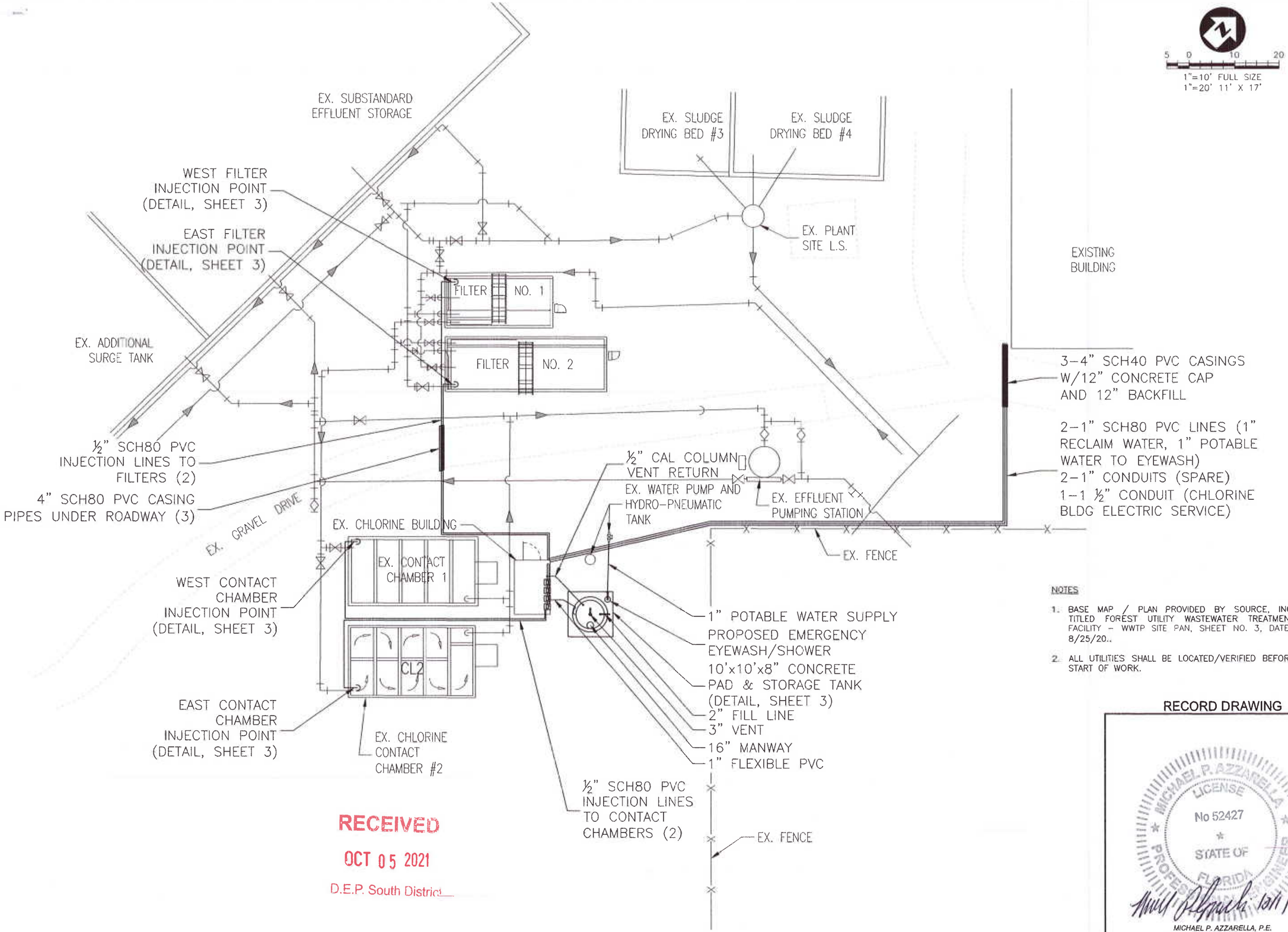
Company Name: Odyssey Engineering Company, LLC Name (please type) Michael P. Azzarella, P.E.
Company Address: 1484 Massaro Boulevard
City/State/Zip Code Tampa, Florida 33619
Phone Number: 813-505-5684

10/1/21 #52427
(Seal, Signature, Date, and Registration Number)

Email (optional): michael@odysseyengco.com



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NOTES

1. BASE MAP / PLAN PROVIDED BY SOURCE, INC. TITLED FOREST UTILITY WASTEWATER TREATMENT FACILITY – WWTP SITE PAN, SHEET NO. 3, DATED 8/25/20..
2. ALL UTILITIES SHALL BE LOCATED/VERIFIED BEFORE START OF WORK.

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RECORD DRAWING

MICHAEL P. AZZARELLA LICENSE No 52427 STATE OF FLORIDA PROFESSIONAL ENGINEER
10/1/21
MICHAEL P. AZZARELLA, P.E.
FL P.E. NO. 52427

NO.	REVISION & DATE:
1.	RECORD DRAWING 9/09/2021

PROJECT: FOREST UTILITIES WWTP DISINFECTION SYSTEM CONVERSION

SHEET TITLE: DISINFECTION SYSTEM LAYOUT

PREPARED FOR: FOREST UTILITIES

ODYSSEY ENGINEERING COMPANY
1484 MASSARO BOULEVARD TAMPA, FLORIDA 33619
PHONE (813) 635-0339 FAX (813) 630-2589

JOB NO.	
ACAD FILE:	FOREST WWTP_RECORD
DRAWN BY:	JCS
CHK'D BY:	MPA
SCALE:	N.T.S.
DATE:	JULY 2021
SHEET NO.	2

PROPRIETARY: THIS MATERIAL IS CONFIDENTIAL AND CONTAINS PROPRIETARY INFORMATION AND OTHER RIGHTS WHICH ARE THE SOLE AND EXCLUSIVE PROPERTY OF ODYSSEY ENGINEERING COMPANY, LLC. POSSESSION OF THIS MATERIAL DOES NOT CONVEY OR TRANSFER ANY RIGHTS AND ANY REPRODUCTIONS, USE, COPYING, OR DISCLOSURE TO OTHERS IS FORBIDDEN WITHOUT THE PRIOR WRITTEN CONSENT OF AN OFFICER OF ODYSSEY ENGINEERING COMPANY, LLC.

NOTIFICATION OF AVAILABILITY OF RECORD DRAWINGS AND FINAL OPERATION AND MAINTENANCE MANUALS

1. Instructions

a. In accordance with Rule 62-620.410, F.A.C., this form must be submitted to the appropriate Department district office or approved local program within six months after placing a newly constructed facility or modified portion of an existing facility into operation.
b. Each applicable item must be completed in full. Where attached sheets or other technical documentation are used in lieu of the blank spaces provided, indicate appropriate cross-references in the spaces.
c. Three (3) copies of this notification with supporting documentation shall be submitted with this form.
d. All information is to be typed or printed in ink. Dates are to be entered in MM/DD/YR format.

2. Facility Information

a. Permit Number: FLA014478-016-DW1-MR

b. Project/Facility Name: Forest Utilities Wastewater Treatment Plant Sodium Hypochlorite Conversion

c. Facility Identification Number: FLA014478

d. Contact Name: Mitch Gilbert
Number and Street: 15275 Collier Blvd., Suite 201-268
City/State/Zip Code: Naples, FL 34119
Telephone: 239-825-7818

3. Description of facilities for which Record Drawings, and for domestic wastewater facilities final Operation and Maintenance Manuals, are available

New sodium hypochlroite storage and feed system for disinfection.

4. Description of substantial deviations from the permit, approved Preliminary Design Report, and application materials

No substantial deviations. Minor relocation of sodium hypochlorite injection lines to injection points.

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DEP Form 62-620.910(13)
Effective October 23, 2000

5. Certifications

a. Applicant or Authorized Representative

I certify that the statements made in this notification and all attachments are true, correct and complete to the best of my knowledge and belief. I agree to operate and maintain these facilities in such a manner as to comply with the provisions of Chapter 403, F.S., and all applicable rules of the Department. A copy of the record drawings or other plans, as applicable, showing the newly constructed facilities or modified portion of the existing facilities, as applicable, is available at Forest Utilities WWTP, 6341 Deer Run, Fort Myers, FL 3:.

Judy Mallett — 10/5/21

Signature of Applicant or Authorized Representative[1] — Date

Name (Please Type) Judy Mallett — Company Name Forest Utilities, Inc.
Title Forest Utilities, Inc. — Company Address 6000 Forest Boulevard
Phone 239-481-5333 — City/State/Zip Code Fort Myers, Florida 33908
Email (optional): Fort Myers, Florida 33908

b. Applicant or Authorized Representative (For Domestic Wastewater Facilities Only)

I certify that an appropriate final operation and maintenance manual for these domestic wastewater facilities, which has been examined by a professional engineer as certified below, is available and located at Forest Utilities WWTP, 6341 Deer Run, Fort Myers, FL 33908 and can be submitted upon request.

Judy Mallett — 10/5/21

Signature of Applicant or Authorized Representative[1] — Date

Name (Please Type) Judy Mallett — Company Name Forest Utilities, Inc.
Title Forest Utilities, Inc. — Company Address 6000 Forest Boulevard
Phone 239-481-5333 — City/State/Zip Code Fort Myers, Florida 33908
Email (optional): Fort Myers, Florida 33908

c. Professional Engineer Registered in Florida

I certify that record drawings for the facilities have been reviewed by me or by individual(s) under my direct supervision for completeness and adequacy, and have been provided to the permittee. I further certify that the record drawings identify those substantial deviations noted above.

Name (please type): Michael P. Azzarella, P.E.
Company Name: Odyssey Engineering Company, LLC
Company Address: 1484 Massaro Boulevard
City/State/Zip Code: Tampa, FL 33619
Phone Number 813-505-5684

Michael P. Azzarella 10/1/21 #52427

(Seal, Signature, Date, and Registration Number)

Email (optional): michael@odysseyengco.com

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OCT 05 2021
D.E.P. South District

MICHAEL P. AZZARELLA LICENSE No 52427 STATE OF FLORIDA PROFESSIONAL ENGINEER

[1] If signed by the authorized representative, attach a letter of authorization.

d. Professional Engineer Registered in Florida (For Domestic Wastewater Facilities Only)

I certify that the final operation and maintenance manual for these domestic wastewater facilities has been prepared or examined by me or by individual(s) under my direct supervision and that there is reasonable assurance, in my professional judgement, that the facilities, when properly operated and maintained in accordance with this manual, will comply with all applicable statutes of the State of Florida and rules of the Department.

Name (please type): Michael P. Azzarella, P.E.
Company Name: Odyssey Engineering Company, LLC
Company Address: 1484 Massaro Boulevard
City/State/Zip Code: Tampa, FL 33619
Phone Number 813-505-5684

Email (optional): michael@odysseyengco.com

Michael P. Azzarella 9/1/21 #52427
(Seal, Signature, Date, and Registration Number)



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D.E.P. South District

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

Annual Reuse Report Electronic Submission

Report Accepted

12/27/2021

Dear Ivory Gilbert,

Reuse System Name:	Forest Utilities WWTP
WAFR ID:	FLA014478
Permittee:	Ivory Mitchell Gilbert
Address:	6341 Deer Run Road SW Fort Myers FL 33908
DEP District:	SOUTH DISTRICT
Water Management District:	South Florida Water Management District

The *Annual Reuse Report* for the Reuse System indicated above has been accepted by the Department.

Enclosures:
All supporting documentation can be found here:
https://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?facility.id=FLA014478
Please allow up to three (3) business days for the above documents to appear.

If you have any questions during this process, please contact please contact SOUTH DISTRICT via e-mail at SD_newapps@dep.state.fl.us for further information.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

E-mail Recipients:
mitchgilbert@floridautilitysolutions.com
SD_newapps@dep.state.fl.us
Sydney.Cummings@dep.state.fl.us
mitchgilbert@floridautilitysolutions.com
alana@floridautilitysolutions.com

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

Annual Reuse Report Electronic Submission

DEP Review Initiated

12/27/2021

Dear Ivory Gilbert,

Reuse System Name:	Forest Utilities WWTP
WAFR ID:	FLA014478
Permittee:	Ivory Mitchell Gilbert
Address:	6341 Deer Run Road SW Fort Myers FL 33908
DEP District:	SOUTH DISTRICT
Water Management District:	South Florida Water Management District

The *Annual Reuse Report* for the Reuse System indicated above has been submitted for DEP Review. Attached is a summary of the information you have submitted. DEP is in the process of reviewing the data sent. Additional information may be requested. **Once the DEP Review process is complete, you will receive confirmation of report acceptance in a seperate e-mail.**

If you have any questions during this process, please contact SOUTH DISTRICT via e-mail at SD_newapps@dep.state.fl.us for further information.

E-mail Recipients:
mitchgilbert@floridautilitysolutions.com
SD_newapps@dep.state.fl.us
rnevul@sfwmd.gov
mitchgilbert@floridautilitysolutions.com
alana@floridautilitysolutions.com

FLORIDA DEPARTMENT OF
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Bob Martinez Center
2600 Blair Stone Road
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Secretary

Receipt for Notification Submission

June 22, 2022

Lisa Giordano

FOREST UTILITIES WWTP - FLA014478
6341 DEER RUN
FORT MYERS, FL

This is to acknowledge that your Notification of Completion of Construction for a Domestic Wastewater Collection/Transmission System was received on **June 22, 2022**.

The form and supporting information fulfills the requirements to notify DEP the domestic wastewater collection/transmission system described below has been constructed in accordance with the associated DEP Permit Number and related plans and materials.

DEP may contact you for additional information. If you indicated substantial deviations and you do not hear from your district office, your project may be placed into service 10 days from the date of this letter. If you did NOT indicate substantial deviations and you do not hear from your district office, your project may be placed into service 3 days from the date of this letter.

This Clearance Notification Process does not relieve you from the responsibility of obtaining other permits or authorizations from other agencies (federal, state, city, etc.) that may be required for the project.

In support of your notification you provided the following information:

Construction Permit Number:	50149-023-DWC/CG
Project Name:	Coves of Estero Bay - Phases 3 and 4
Project Location:	Lee County
Permittee:	KB Home, Tampa Division
Collection System Owner:	Forest Utilities, Inc.
Treatment Facility:	FOREST UTILITIES WWTP - FLA014478
Clearance Type:	Final Clearance
Submitter Indicated Substantial Deviations?:	No
Substantial Deviations (when applicable):	

Attachments:
File Description: WW Clearance Form
File Name: COVES OF ESTERO BAY.pdf
File Hash: ee55401bb42b5e22d5a18e4139db6b044ac582b2aad230ba3a510fe9ecff94fb

All files related to your facility may be viewed at our Departmental Information Portal:
https://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents/FLA014478/facility!search
Please allow up to three (3) business days for the above documents to appear.

Staff will notify you of any additional information that may be required to complete your notification.

The Office for your project is:
South District
SD_newapps@floridadep.gov

Please contact this Office for any questions regarding your project.

WWTP MALFUNCTION / ABNORMAL EVENT REPORT

Please note for accordance with the Florida Administrative Code (F.A.C.) Rules. This form is provided for your convenience only. You may complete this form and FAX it to the Wastewater Section at (850)412-0590 or email to SD-AbnormalEvents@dep.state.fl.us. If spill is greater than 1000 gallons you MUST call State Watch Point at 1-800-320-0519. All items with an asterisk (*) are requirements by rule that must be completed.

*Facility Name:	Forest Utilities	*County:	Lee County
*Permit Number:	FLA014478	*Reporter Phone:	239-825-7818
*Reporter Name:	Mitch Gilbert	Method Of Contact:	phone
*Reporter Address:	15275 Collier Blvd. Suite 201-268 Naples, FL 34119	*Responsible Party Phone:	239-825-7818
*Responsible Party:	Mitch Gilbert	*Responsible Party Address:	15275 Collier Blvd. Suite 201-268 Naples, FL 34119

*DEP:	☒	*Date: 12/2/22	*Time: 5:30 PM	*Person Contacted: Email
*State Warning Point:	☐	*Date:	*Time:	Person Contacted:
*Other:	☐	*Date:	*Time:	Person Contacted:

Spill Information

*Spill Characteristic	*Source		*Area Affected
☒ Raw Wastewater	☒ Lift Station # 17	☐ Surge Tank	☐ Storm Water
☐ Effluent	☐ Line Break	☐ Aeration Tank	☐ Surface Water/ _____
☐ Mixed Liquor	☐ Filter	☐ Clarifier	☐ Ground
☐ Sludge	☐ Disposal System	☐ Digester	☐ Containment Area
☐ Other _____	☐ Other -Plugged Line	☐ Other	☒ Other/ AROUND AREA

*Date / Time Discharge Occurred: 12/2/22 2:00PM

*Amount of Discharge (1) 600 total gallons OR (2) _____ gallons per hour for _____ hours.

*Amount recovered 600 gallons

*Ongoing: ☐ * Ceased: ☒

*Physical location/ address/ other reference: Lift Station #17 - Front station in Terraverde Circle - 1700 Terraverde Circle, Fort Myers. Terraverde country club

* Malfunction/Cause

☐ Power Outage	☐ RAS Line	Weather
☒ Pump Failure	☐ Leak	☐ Lightning
☐ Disinfection System Failure	☐ Switch/Timer Failure	☐ Heavy Rainfall
☐ Clarifier Failure	☐ Filtration System Problem	☐ High Winds
☐ Filter Bypass	☐ Clog or blockage	☐ Tropical Storm: _____
☐ Blower Failure	☐ Line Break	☐ Hurricane:
☐ Other _____	☐ Other	☒ Other: clear

* Explain: Power outage, wind, rain…

* Effluent Limit Violations

☐ Cl_2 _____ mg/L	☐ Turbidity _____ NTU	☐ pH _____ SU
☐ TSS _____ mg/L	☐ NO_3 _____ mg/L	☐ $CBOD_5$ _____ mg/L
☐ Other _____	☐ fecal coliforms _____ CFU/100ml	☐ Abnormal Flow _____ MGD

* Corrective / Remedial Action Being Taken

☐ Auxiliary Power System On-Line	☒ Back-Up On-Line	☐ Notified Local Authorities
☒ Disinfect with LIME	☐ Samples Taken	☐ Notified State Warning Point
☐ Bypass	☐ Restore Power	☒ Notified DEP
☐ Contained On-site	☒ Replace Equipment/Supplies	☐ Line Repaired
☐ Other	☐ VAC Truck/Destination: _____	☐ Signs Posted Near Affected Waters

* Remedial Action Being Taken / Estimated Time for Completion of Repairs: Complete - spread hydrated lime on all affected areas, washed down completely to restore to normal conditions.

Florida Department of Environmental Protection

Annual Reuse Report

Part I – Instructions

1. This form is to be submitted on or before January 1 following the completion of each fiscal year (October 1 through September 30). Submittal is required by Rule 62-610.870, F.A.C. This report will be used to develop and maintain a reuse inventory. It will not be used for determination of compliance with permit limitations, other than requirements to submit this report. If flow monitoring information is not available for individual reuse types or types of users, please provide your best estimates of flows allocated to individual reuse types or types of users.

2. Submit the report (including all attachments):

   a. Electronically using the DEP Online Business Portal (https://www.fldepportal.com/DepPortal/go/home).

   b. To the appropriate water management district.

3. When submitting the form electronically through the DEP online business portal, you do not need to submit a hard copy of the form as well to the Department. Once the form is submitted and accept through the DEP online business portal, a copy of the report will be generated and available through the DEP online document warehouse. That copy of the report can be submitted to the appropriate water management district to fulfill reporting requirements.

4. Completion of this report is required for all domestic wastewater facilities having permitted capacities of 0.1 mgd or larger which contribute reclaimed water to one or more reuse systems permitted under Chapter 62-610, F.A.C. This form is to be completed annually for each separate reuse system. For purposes of this form, "reuse system" means a network of pipes, pumping facilities, storage facilities, and appurtenances designed to convey and distribute reclaimed water from one or more domestic wastewater treatment facilities to one or more users of reclaimed water.

5. Use the units specified in the form. For flows, show annual average flows (in mgd). This can be obtained by averaging daily flows over a 365-day period, dividing the total annual volume by 365, or by averaging the 12 monthly average flow values.

6. Be sure to submit the required attachments (see Part X on pages 8 and 9 of this form).

7. The cover sheet of your permit will identify portions of your project classified as "reuse" and portions classified as "effluent disposal." Rule 62-610.810, F.A.C., lists the criteria for classifying projects (or portions of projects) as "reuse" or "effluent disposal."

Part II - General Information

1. Reporting Period: October 1, 2021 through September 30, 2022
2. Date Submitted: _____
3. Person Completing This Form

   Name: Alana Faircloth

   Title: President

   Organization: Florida Utility Solutions

   Mailing Address: 15275 Collier Blvd. Suite 201-268

   City/State/Zip Code: Naples, FL 34119

   Telephone: (239) 825-7818

   E-mail: alana@floridautilitysolutions.com
4. Reuse System Name: Forest Utilities WWTP
5. Domestic Wastewater Treatment Facilities Providing Reclaimed Water to This Reuse System

   a. Location of Facilities

   City: Fort Myers County: Lee

DEP District (check one):

- ☐ Northwest (Pensacola)
- ☐ Northeast (Jacksonville)
- ☐ Southwest (Tampa)
- ☐ Central (Orlando)
- ☐ Southeast (West Palm Beach)
- ☑ South (Ft. Myers)

Water Management District (check one):

- ☐ Northwest Florida (Havana)
- ☐ Suwannee River (Live Oak)
- ☐ Southwest Florida (Brooksville)
- ☐ St. Johns River (Palatka)
- ☑ South Florida (West Palm Beach)

b. Domestic Wastewater Treatment Facility Information

Enter the name of the facility, the DEP identification number, disinfection level,[a] permitted capacity, and annual average flow for each treatment facility providing reclaimed water to this reuse system.

Table I. Facility Information

Facility Name	DEP Identification Number	Disinfection Level [a]	Permitted Capacity (mgd)	Average Flow (mgd)
Please see the attached sheet.	Please see the attached sheet.	Please see the attached sheet.	Please see the attached sheet.	Please see the attached sheet
Total Treated Wastewater				0.482

[a] Enter one of the following codes for disinfection level for each treatment facility:
HI = High-level disinfection, as described in Rule 62-600.440(6), F.A.C.
IM = Intermediate disinfection, as described in Rule 62-600.440(7), F.A.C.
BA = Basic disinfection, as described in Rule 62-600.440(5), F.A.C.
LL = Low-level disinfection, as described in Rule 62-600.440(8), F.A.C.
HB = High-level disinfection & basic disinfection for portions of the treated flow.
FT = Full treatment disinfection, as described in Rule 62-610.563(3)(b), F.A.C.

Part III - Reclaimed Water and/or Effluent Available for Reuse or Disposal

Table II. Available Reclaimed Water and/or Effluent

Source of Water	Average Flow (mgd)
Treated Wastewater [Enter the Total Average Flow from Table I]	0.482
Supplemental Water Supplies added by the utility - Surface Water	
Supplemental Water Supplies added by the utility - Stormwater	
Supplemental Water Supplies added by the utility - Ground Water	
Supplemental Water Supplies added by the utility - Drinking Water	
Demineralization Concentrate (Blended with final reclaimed water only)	
Water Recovered from ASR [b]	
Total Water Available for Reuse or Disposal [Should be equal to the Total Reuse Flow in Table III below]	0.4820

[b] Aquifer Storage and Recovery (ASR) - This activity is described in Rule 62-610.466, F.A.C. If you have an ASR system included in your permit for the reuse system, please make separate entries in

both Part III (for the total average flow withdrawn from the ASR well) and in Part VI (for the total average flow injected into the ASR well).

Part IV - Reuse

For each reuse activity, enter the permitted capacity, average flows, and acreage. Do not duplicate any of these entries in Part V of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the reuse types listed in this part. Make discrete entries (do not show ranges). Show totals at the bottom of the table.

Table III. Reuse Activities

Reuse Type	Reuse Sub-Type	Part	Capacity (mgd)	Flow (mgd)	Area (acres)
Public Access Areas & Landscape Irrigation	Golf Course Irrigation	III	2.0	0.482	280
	Residential Irrigation	III			
	Other Public Access Areas	III			
Agricultural Irrigation & Sprayfields	Edible Crops (Be sure to attach the inventory of edible crop irrigation. See Part X of this form.)	III			
	Grass, Pasture, Other Crops	II			
Ground Water Recharge & Indirect Potable Reuse	Rapid Infiltration Basins (Including Some Perc Ponds) [c]	IV			
	Absorption Fields [c]	IV			
	Surface Water Augmentation (Discharge to Class I Waters)	V			
	Injection to Potable Aquifers	V			
Industrial	At Treatment Plant	VII			
	At Other Facilities	VII			
Toilet Flushing		III			
Fire Protection		III			

Wetlands				
Other (Specify)				
Total Reuse **[Enter total flow on Line 1 in Part VI of this form.]**		2.0	0.482	280.0

[c] To be considered "reuse," either of the following conditions must exist:
* There are multiple basins or absorption fields that are routinely wetted, dried, and maintained in accord with Part IV of Chapter 62-610, F.A.C., or
* Continuously-loaded ponds must meet the higher treatment/disinfection requirements in Rule 62-610.525, F.A.C.

If neither condition is met, the perc pond or absorption field is "effluent disposal" and should be recorded in Part V in this form (under "Other").

Part V - Effluent Disposal

For each effluent disposal activity, enter the permitted capacity and average flow. Do not duplicate any of these entries in Part IV of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the effluent disposal types listed in this part. Make discrete entries (do not show ranges) for capacity and flow. Show totals at the bottom of the table.

Table IV. Disposal Activities

Disposal Type	Disposal Sub-Type	Permitted Capacity (mgd)	Average Flow (mgd)
Surface Water Discharges	Ocean Outfall		
	To Coastal or Estuarine Waters		
	To Wetlands	N/A	N/A
	To Other Surface Waters		
Deep Well Disposal			
Other (specify)			
Total Flow Disposed **[Enter total flow on Line 2 in Part VI of this form.]**		0.0	0.0

Part VI - Summary of Reuse and Disposal

Table V. Reuse and Disposal Summary

Reuse or Disposal Activity	Average Flow (mgd)
1. **Reuse** (From Total Flow of Table III)	0.482
2. **Effluent Disposal** (From Total Flow of Table IV)	0.0
3. **Flow Stored in ASR** (See note [b] on ASR in Part III.)	0
Total (Should equal Total Flow of Table II) [d]	0.482

[d] The totals in Tables II and V will not be equal if one of the following conditions exists (check as appropriate):

- ☐ The reuse system includes an ASR system and the amounts injected and withdrawn during the year differ.
- ☐ The reuse system includes one or more reuse activities in which reclaimed water is returned to the treatment facility after its use, where it is then available for reuse or disposal.

Part VII – Reuse Activities, Numbers of Customers, and Backup Discharges

1. How many single-family residences have reclaimed water service?
   0
2. How many golf courses are irrigated using reclaimed water?
   2
3. How many parks or playgrounds are irrigated using reclaimed water?
   0
4. How many schools are irrigated using reclaimed water?
   0
5. Is reclaimed water used to flush toilets? ☐ Yes ☑ No If yes, list locations where reclaimed water is used for toilet flushing: _____
6. Is reclaimed water used for fire protection? ☑ No ☐ Yes, in sprinkler systems
   ☐ Yes, in fire hydrants ☐ Yes, other (please describe): _____
7. How many cooling towers use reclaimed water from this reuse system? 0

8. List or describe any unique or unusual uses of reclaimed water. NA

9. Is there a surface water discharge that serves as a backup discharge for the reuse system?

☑ No ☐ Yes, a Limited Wet Weather Discharge permitted under Rule 62-610.860, F.A.C.

☐ Yes, permitted under the APRICOT Act [Section 403.086(7), F.S.]

☐ Yes, permitted under other rules governing surface water discharges

10. Do you require construction of reclaimed water piping in new residential or other developments?

☐ Yes ☑ No

11. Do you require connection to the reclaimed water system when reclaimed water service becomes available?

☐ Yes ☑ No

Part VIII – Cross-Connection Control Activities

Rule 62-610.469, F.A.C., imposes cross-connection control requirements on reuse systems permitted under Part III of Chapter 62-610, F.A.C. This includes requirements for the implementation of cross-connection control programs by all public water supply systems serving areas that are within the general reclaimed water service area. Color-coding, labeling, and separation distance requirements are included. In addition, inspections within the reclaimed water service area are required. For purposes of this form, "cross-connection" means a pipe-to-pipe connection between drinking water pipes and reclaimed water pipes.

1. Are all public water supply systems serving areas that are within the general reuse service area actively implementing and enforcing their cross-connection control programs?
   ☑ Yes ☐ No

   a. Have all of these cross-connection control programs been accepted by the DEP or the approved county health department? ☑ Yes ☐ No

2. How many illegal cross-connections have been identified during the reporting period? 0

   a. How many of these cross-connections have been eliminated? 0

   b. Please, attach a description of identified cross-connections and efforts taken to eliminate them.

3. How many new connections were made to the reclaimed water system during the reporting period? 0

   a. How many of the new reclaimed water connections were inspected at the time of initial connection? 0

4. How often are the reclaimed water connections of existing residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)?
Not Inspected

   a. How often are the reclaimed water connections of existing non-residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)? Not Inspected

5. In addition to the number of new connections inspected in Item 3 above, how many existing connections were inspected during the reporting period?
0

Part IX - Rates Charged for the Use of Reclaimed Water

Please, list the fees charged for the use of reclaimed water. Please do not enter wastewater or sewer charges. If reclaimed water is provided at no cost, enter zeroes in both blanks. If the fee structure includes both flat rate and gallonage charge components, make a positive entry in both spaces. Make all entries in the units shown.

1. How much do you charge a single-family residential customer (assume a 0.2-acre lot) for the use of reclaimed water?

Flat rate ($/month/connection) _____

Gallonage charge (cents/1000 gal.) _____

2. How much do you charge non-residential customers, such as golf courses, (assume 0.1 mgd on a 50-acre site) for the use of reclaimed water?

Flat rate ($/month/connection) 0

Gallonage charge (cents/1000 gal.) 0.15

Part X - Required Attachments

Check, as appropriate, and attach the required documentation.

☐ **Inventory of Edible Crop Irrigation** - If reclaimed water is used to irrigate edible crops at commercial agricultural sites, attach a copy of the current edible crop irrigation inventory as required by Rules 62-610.475 and 62-610.870, F.A.C. The inventory shall include the following information:

   a. Name of the agricultural operation.
   b. Name and telephone number of the owner or operator of the agricultural operation.
   c. Address of the agricultural operation.
   d. Edible crops irrigated using reclaimed water.
   e. Type of application (irrigation) method used.
   f. Approximate area (acres) under irrigation using reclaimed water on which edible crops are grown.

☑ **Inventory of Storage Facilities** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a copy of the current inventory of storage facilities, as required by Rules 62-610.464, 62-610.830, and 62-610.870, F.A.C. The inventory shall include the following information:

a. Name or identifier for the storage system.

b. Location.

c. Function of the storage system (system storage or reject storage).

d. Type of facility (covered tank, uncovered tank, lined pond, unlined pond).

e. Indication of whether or not the storage facility is a water of the state or discharges to a water of the state.

f. Distance to the nearest public water supply well.

g. Distance to the nearest potable water supply well, which is not a public water supply well.

h. Volume of each storage tank/pond and the total storage volume of all storage tanks and ponds (in units of million gallons).

☑ **Summary of Public Notification Program** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a summary of the public notification program activities during the reporting period, as required by Rule 62-610.468(6), F.A.C. The summary shall include the following:

a. Details of written public notification activities (include copies of written notices).

b. Summary of activities involving the news media.

c. Use of advisory signs.

d. Other public notification activities.

☑ **Summary of Metering and Rate Structure** – As noted in 403.064(16), Florida Statutes, utilities implementing reuse projects are encouraged to meter use of reclaimed water by all end users and to charge for the use of reclaimed water based on the actual volume used when such metering and charges can be shown to encourage water conservation. Metering and the use of volume-based rates are effective water management tools for the following reuse activities: residential irrigation, agricultural irrigation, industrial uses, landscape irrigation, irrigation of other public access areas, commercial and institutional uses such as toilet flushing, and transfers to other reclaimed water utilities. As required by 403.064(16), F.S., if this reuse system provides reclaimed water for any of the uses listed above, attach a summary of the utility's metering activities and the rate structure that the utility currently employs or plans to employ. The summary shall include the following:

a. Number of meters employed to monitor volume of reclaimed water used by customers.

b. If information is available, please provide per capita reclaimed water use for areas that meter and for unmetered areas. If available, please provide historical per capita usage data for before and after the utility began metering reclaimed water.

c. Provide information on the type of rate structure (i.e., inclining or declining block rates) for reclaimed water employed by the utility.

d. Provide a description of the utility's use of master meters (i.e., for a subdivision) or the use of individual meters (i.e., for single-family residential customers).

e. Provide a summary of the utility's plans for metering reclaimed water customers.

☐ **None of these items are required for this reuse system.**

Part XI - Permittee's Certification

I certify that the statements made in this report of reclaimed water utilization are true, correct, and complete to the best of my knowledge and belief.

Date: 12-30-22 _____ Signature

Phone: (239) 825-7818 Ivory M Gilbert, Lead Operator
Name and Title (please print/type)

Company Name: Florida Utility Solutions

Address: 15275 Collier Blvd. Suite 201-268

City/State/Zip Code: Naples, FL 34119

E-Mail: alana@floridautilitysolutions.com

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

DW Treatment Facilities

Facility Name	DEP Identification Number	Disinfection Level	Permitted Capacity (mgd)	Average Flow (mgd)
Forest Utilities WWTP	FLA014478	HI	.8	0.482

From: Devine, Nicole
To: SD-AbnormalEvents
Subject: FW: Forest (FLA014478)
Date: Friday, January 6, 2023 1:39:35 PM
Attachments: Outlook-Florida Ut.png

From: Alana - Florida Utility Solutions <alana@floridautilitysolutions.com>
Sent: Friday, January 6, 2023 11:07 AM
To: Devine, Nicole <Nicole.Devine@FloridaDEP.gov>; Mitch Gilbert FUS <mitchgilbert@floridautilitysolutions.com>
Subject: Re: Forest (FLA014478)

EXTERNAL MESSAGE
This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Good morning Nicole,

Regarding the SSO on 12/2/2022 for Forest Utilities (FLA014478)

1. The spill ceased on 12/2/22 by 3pm.
2. Control panel was damaged during the hurricane and we are still waiting for new panel to replace.
3. It was only a few hundred gallons and it was cleaned up with a vacuum trailer.

Just to double check - did I use the correct form for this reporting or is there a different form or method now?

Have a great day,

Alana Faircloth
Florida Utility Solutions, Inc
239.513.0445 - Office
239.963.7504 - Cell
888.862.0321 - Fax

From: Devine, Nicole <Nicole.Devine@FloridaDEP.gov>
Sent: Wednesday, January 4, 2023 10:51 AM
To: Alana - Florida Utility Solutions <alana@floridautilitysolutions.com>
Subject: Forest (FLA014478)

Good Morning Alana,

I am reaching out about the SSO on 12/2/2022 for Forest Utilities (FLA014478), and I have a couple question. Please see below,

1. Please confirm the date and time the spill ceased.
2. Please provide an explanation for the malfunction/cause of the spill – the submitted report states pump failure, but the explanation does not include this
3. Please confirm the amount of the spill, if any, was recovered
    a. The submitted report states that the spill was totally recovered, but the corrective/remedial actions section does not indicate that a vac truck was used or that any of the spill was recovered

Thanks,

Nicole Devine
Environmental Specialist II
2295 Victoria Avenue, Suite 364
Fort Myers, FL 33901
Main: (239) 344-5675
Office: (239) 344-5600

Dep Customer Survey

FLORIDA DEPARTMENT OF
Environmental Protection

South District
PO Box 2549
Fort Myers FL 33902-2549
SouthDistrict@FloridaDEP.gov

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

MEMO TO FILE

January 12, 2023

Forest Utilities
Facility ID# FLA014478
Lee County

Subject: Sanitary Sewer Overflow/Unauthorized Discharge

The Department acknowledges that Forest Utilities has reported a Sanitary Sewer overflow/Unauthorized Discharge of 600 gallons of raw wastewater during December, 2022. The Department acknowledges receipt of the necessary information related to the spill. The Department is not initiating formal enforcement proceedings at this time; however, this memorandum does not preclude the referenced spill from further action in the future in accordance with Sections 403.121, 403.131, 403.141 and 403.161, Florida Statutes.

Lucianne Blair
Environmental Consultant
South District

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

Annual Reuse Report Electronic Submission

Report Accepted

01/26/2023

Dear Ivory Gilbert,

Reuse System Name:	Forest Utilities WWTP
WAFR ID:	FLA014478
Permittee:	Ivory Mitchell Gilbert
Address:	6341 Deer Run Road SW Fort Myers FL 33908
DEP District:	SOUTH DISTRICT
Water Management District:	South Florida Water Management District

The *Annual Reuse Report* for the Reuse System indicated above has been accepted by the Department.

Enclosures:
All supporting documentation can be found here:
https://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?facility.id=FLA014478
Please allow up to three (3) business days for the above documents to appear.

If you have any questions during this process, please contact please contact SOUTH DISTRICT via e-mail at SD_newapps@dep.state.fl.us for further information.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

E-mail Recipients:
mitchgilbert@floridautilitysolutions.com
SD_newapps@dep.state.fl.us
Alexander.C.Weeks@FloridaDEP.gov
mitchgilbert@floridautilitysolutions.com
alana@floridautilitysolutions.com

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

Annual Reuse Report Electronic Submission

DEP Review Initiated

01/26/2023

Dear Ivory Gilbert,

Reuse System Name:	Forest Utilities WWTP
WAFR ID:	FLA014478
Permittee:	Ivory Mitchell Gilbert
Address:	6341 Deer Run Road SW Fort Myers FL 33908
DEP District:	SOUTH DISTRICT
Water Management District:	South Florida Water Management District

The *Annual Reuse Report* for the Reuse System indicated above has been submitted for DEP Review. Attached is a summary of the information you have submitted. DEP is in the process of reviewing the data sent. Additional information may be requested. **Once the DEP Review process is complete, you will receive confirmation of report acceptance in a seperate e-mail.**

If you have any questions during this process, please contact SOUTH DISTRICT via e-mail at SD_newapps@dep.state.fl.us for further information.

E-mail Recipients:
mitchgilbert@floridautilitysolutions.com
SD_newapps@dep.state.fl.us
rnevul@sfwmd.gov
mitchgilbert@floridautilitysolutions.com
alana@floridautilitysolutions.com

WWTP MALFUNCTION / ABNORMAL EVENT REPORT

Please note for accordance with the Florida Administrative Code (F.A.C.) Rules. This form is provided for your convenience only. You may complete this form and FAX it to the Wastewater Section at (850)412-0590 or email to SD-AbnormalEvents@dep.state.fl.us. If spill is greater than 1000 gallons you MUST call State Watch Point at 1-800-320-0519. All items with an asterisk (*) are requirements by rule that must be completed.

*Facility Name:	Forest Utilities	*County:	Lee County
*Permit Number:	FLA014478	*Reporter Phone:	239-825-7818
*Reporter Name:	Mitch Gilbert	Method Of Contact:	phone
*Reporter Address:	15275 Collier Blvd. Suite 201-268 Naples, FL 34119	*Responsible Party Phone:	239-825-7818
*Responsible Party:	Mitch Gilbert	*Responsible Party Address:	15275 Collier Blvd. Suite 201-268 Naples, FL 34119

*DEP:	☒	*Date: 6/30/23	*Time: 2:30 PM	*Person Contacted: Email
*State Warning Point:	☐	*Date: 6/30/23	*Time: 2:15 PM	Person Contacted: Lauren #317
*Other:	☐	*Date: _____	*Time: _____	Person Contacted: _____

Spill Information

*Spill Characteristic	*Source		*Area Affected
☒ Raw Wastewater	X Lift Station # 20	☐ Surge Tank	☐ Storm Water
☐ Effluent	☐ Line Break	☐ Aeration Tank	☐ Surface Water/ _____
☐ Mixed Liquor	☐ Filter	☐ Clarifier	☐ Ground
☐ Sludge	☐ Disposal System	☐ Digester	☐ Containment Area
☐ Other _____	Other -Plugged Line	☐ Other	☒ Other/ AROUND AREA

*Date / Time Discharge Occurred: 6/30/23 8:00AM

*Amount of Discharge (1) 1500 total gallons OR (2) _____ gallons per hour for _____ hours.

*Amount recovered 1200 gallons

*Ongoing: ☐ * Ceased: ☒

*Physical location/ address/ other reference: 7075 Spotted Fawn CT FT Myers, FL 33908

* Malfunction/Cause

☐ Power Outage	☐ RAS Line	Weather
☒ Pump Failure	☐ Leak	☐ Lightning
☐ Disinfection System Failure	☐ Switch/Timer Failure	☐ Heavy Rainfall
☐ Clarifier Failure	☐ Filtration System Problem	☐ High Winds
☐ Filter Bypass	☐ Clog or blockage	☐ Tropical Storm: _____
☐ Blower Failure	☐ Line Break	☐ Hurricane:
☐ Other _____	☐ Other	☒ Other: clear

* Explain: pump was clogged with construction debris

* Effluent Limit Violations

☐ Cl_2 _____ mg/L	☐ Turbidity _____ NTU	☐ pH _____ SU
☐ TSS _____ mg/L	☐ NO_3 _____ mg/L	☐ $CBOD_5$ _____ mg/L
☐ Other _____	☐ fecal coliforms _____ CFU/100ml	☐ Abnormal Flow _____ MGD

* Corrective / Remedial Action Being Taken

☐ Auxiliary Power System On-Line	☒ Back-Up On-Line	☐ Notified Local Authorities
☒ Disinfect with LIME	☐ Samples Taken	☐ Notified State Warning Point
☐ Bypass	☐ Restore Power	☒ Notified DEP
☐ Contained On-site	☒ Replace Equipment/Supplies	☐ Line Repaired
☐ Other	☐ VAC Truck/Destination: _____	☐ Signs Posted Near Affected Waters

* Remedial Action Being Taken / Estimated Time for Completion of Repairs: Complete - removed, cleaned and reinstalled pumps

FLORIDA DEPARTMENT OF Environmental Protection

South District
PO Box 2549
Fort Myers FL 33902-2549
SouthDistrict@FloridaDEP.gov

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Lt. Governor

Shawn Hamilton
Secretary

MEMO TO FILE

July 20, 2023

Forest Utilities
Facility ID# FLA014478
Lee County

Subject: Sanitary Sewer Overflow/Unauthorized Discharge

The Department acknowledges that Forest Utilities has reported a Sanitary Sewer overflows/Unauthorized Discharges of 1,500 gallons of raw wastewater during June, 2023. The Department acknowledges receipt of the necessary information related to the spills. The Department is not initiating formal enforcement proceedings at this time; however, this memorandum does not preclude the referenced spills from further action in the future in accordance with Sections 403.121, 403.131, 403.141 and 403.161, Florida Statutes.

Lucianne Blair
Environmental Consultant
South District

Florida Department of Environmental Protection

Annual Reuse Report

Part I – Instructions

1. This form is to be submitted on or before January 1 following the completion of each fiscal year (October 1 through September 30). Submittal is required by Rule 62-610.870, F.A.C. This report will be used to develop and maintain a reuse inventory. It will not be used for determination of compliance with permit limitations, other than requirements to submit this report. If flow monitoring information is not available for individual reuse types or types of users, please provide your best estimates of flows allocated to individual reuse types or types of users.

2. Submit the report (including all attachments):

   a. Electronically using the DEP Online Business Portal (https://www.fldepportal.com/DepPortal/go/home).

   b. To the appropriate water management district.

3. When submitting the form electronically through the DEP online business portal, you do not need to submit a hard copy of the form as well to the Department. Once the form is submitted and accept through the DEP online business portal, a copy of the report will be generated and available through the DEP online document warehouse. That copy of the report can be submitted to the appropriate water management district to fulfill reporting requirements.

4. Completion of this report is required for all domestic wastewater facilities having permitted capacities of 0.1 mgd or larger which contribute reclaimed water to one or more reuse systems permitted under Chapter 62-610, F.A.C. This form is to be completed annually for each separate reuse system. For purposes of this form, "reuse system" means a network of pipes, pumping facilities, storage facilities, and appurtenances designed to convey and distribute reclaimed water from one or more domestic wastewater treatment facilities to one or more users of reclaimed water.

5. Use the units specified in the form. For flows, show annual average flows (in mgd). This can be obtained by averaging daily flows over a 365-day period, dividing the total annual volume by 365, or by averaging the 12 monthly average flow values.

6. Be sure to submit the required attachments (see Part X on pages 8 and 9 of this form).

7. The cover sheet of your permit will identify portions of your project classified as "reuse" and portions classified as "effluent disposal." Rule 62-610.810, F.A.C., lists the criteria for classifying projects (or portions of projects) as "reuse" or "effluent disposal."

Part II - General Information

1. Reporting Period: October 1, 2022 through September 30, 2023
2. Date Submitted: _____
3. Person Completing This Form

   Name: Ivory Gilbert

   Title: Lead Operator

   Organization: Florida Utility Solutions

   Mailing Address: 15275 Collier Blvd STE 201-268

   City/State/Zip Code: Naples, FL 34119

   Telephone: (239) 825-7818

   E-mail: mitchgilbert@floridautilitysolutions.com
4. Reuse System Name: Forest Utilities WWTP
5. Domestic Wastewater Treatment Facilities Providing Reclaimed Water to This Reuse System

   a. Location of Facilities

   City: Fort Myers County: Lee

DEP District (check one):

- ☐ Northwest (Pensacola)
- ☐ Northeast (Jacksonville)
- ☐ Southwest (Tampa)
- ☐ Central (Orlando)
- ☐ Southeast (West Palm Beach)
- ☑ South (Ft. Myers)

Water Management District (check one):

- ☐ Northwest Florida (Havana)
- ☐ Suwannee River (Live Oak)
- ☐ Southwest Florida (Brooksville)
- ☐ St. Johns River (Palatka)
- ☑ South Florida (West Palm Beach)

b. Domestic Wastewater Treatment Facility Information

Enter the name of the facility, the DEP identification number, disinfection level,[a] permitted capacity, and annual average flow for each treatment facility providing reclaimed water to this reuse system.

Table I. Facility Information

Facility Name	DEP Identification Number	Disinfection Level [a]	Permitted Capacity (mgd)	Average Flow (mgd)
Please see the attached sheet.	Please see the attached sheet.	Please see the attached sheet	Please see the attached sheet	Please see the attached sheet
Total Treated Wastewater				0.459

[a] Enter one of the following codes for disinfection level for each treatment facility:
HI = High-level disinfection, as described in Rule 62-600.440(6), F.A.C.
IM = Intermediate disinfection, as described in Rule 62-600.440(7), F.A.C.
BA = Basic disinfection, as described in Rule 62-600.440(5), F.A.C.
LL = Low-level disinfection, as described in Rule 62-600.440(8), F.A.C.
HB = High-level disinfection & basic disinfection for portions of the treated flow.
FT = Full treatment disinfection, as described in Rule 62-610.563(3)(b), F.A.C.

Part III - Reclaimed Water and/or Effluent Available for Reuse or Disposal

Table II. Available Reclaimed Water and/or Effluent

Source of Water	Average Flow (mgd)
Treated Wastewater [Enter the Total Average Flow from Table I]	0.459
Supplemental Water Supplies added by the utility - Surface Water	0
Supplemental Water Supplies added by the utility - Stormwater	0
Supplemental Water Supplies added by the utility - Ground Water	0
Supplemental Water Supplies added by the utility - Drinking Water	0
Demineralization Concentrate (Blended with final reclaimed water only)	0
Water Recovered from ASR [b]	0
Total Water Available for Reuse or Disposal [Should be equal to the Total Reuse Flow in Table III below]	0.4590

[b] Aquifer Storage and Recovery (ASR) - This activity is described in Rule 62-610.466, F.A.C. If you have an ASR system included in your permit for the reuse system, please make separate entries in

both Part III (for the total average flow withdrawn from the ASR well) and in Part VI (for the total average flow injected into the ASR well).

Part IV - Reuse

For each reuse activity, enter the permitted capacity, average flows, and acreage. Do not duplicate any of these entries in Part V of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the reuse types listed in this part. Make discrete entries (do not show ranges). Show totals at the bottom of the table.

Table III. Reuse Activities

Reuse Type	Reuse Sub-Type	Part	Capacity (mgd)	Flow (mgd)	Area (acres)
Public Access Areas & Landscape Irrigation	Golf Course Irrigation	III	2.0	0.459	280
	Residential Irrigation	III			
	Other Public Access Areas	III			
Agricultural Irrigation & Sprayfields	Edible Crops (Be sure to attach the inventory of edible crop irrigation. See Part X of this form.)	III			
	Grass, Pasture, Other Crops	II			
Ground Water Recharge & Indirect Potable Reuse	Rapid Infiltration Basins (Including Some Perc Ponds) [c]	IV			
	Absorption Fields [c]	IV			
	Surface Water Augmentation (Discharge to Class I Waters)	V			
	Injection to Potable Aquifers	V			
Industrial	At Treatment Plant	VII			
	At Other Facilities	VII			
Toilet Flushing		III			
Fire Protection		III			

Wetlands				
Other (Specify)				
Total Reuse **[Enter total flow on Line 1 in Part VI of this form.]**		2.0	0.459	280.0

[c] To be considered "reuse," either of the following conditions must exist:
* There are multiple basins or absorption fields that are routinely wetted, dried, and maintained in accord with Part IV of Chapter 62-610, F.A.C., or
* Continuously-loaded ponds must meet the higher treatment/disinfection requirements in Rule 62-610.525, F.A.C.

If neither condition is met, the perc pond or absorption field is "effluent disposal" and should be recorded in Part V in this form (under "Other").

Part V - Effluent Disposal

For each effluent disposal activity, enter the permitted capacity and average flow. Do not duplicate any of these entries in Part IV of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the effluent disposal types listed in this part. Make discrete entries (do not show ranges) for capacity and flow. Show totals at the bottom of the table.

Table IV. Disposal Activities

Disposal Type	Disposal Sub-Type	Permitted Capacity (mgd)	Average Flow (mgd)
Surface Water Discharges	Ocean Outfall	0	0
	To Coastal or Estuarine Waters	0	0
	To Wetlands	N/A	N/A
	To Other Surface Waters	0	0
Deep Well Disposal		0	0
Other (specify)			
Total Flow Disposed **[Enter total flow on Line 2 in Part VI of this form.]**		0.0	0.0

Part VI - Summary of Reuse and Disposal

Table V. Reuse and Disposal Summary

Reuse or Disposal Activity	[a] Average Flow (mgd)
1. **Reuse** (From Total Flow of Table III)	0.459
2. **Effluent Disposal** (From Total Flow of Table IV)	0.0
3. **Flow Stored in ASR** (See note [b] on ASR in Part III.)	0
Total (Should equal Total Flow of Table II) [d]	0.459

[d] The totals in Tables II and V will not be equal if one of the following conditions exists (check as appropriate):

☐ The reuse system includes an ASR system and the amounts injected and withdrawn during the year differ.

☐ The reuse system includes one or more reuse activities in which reclaimed water is returned to the treatment facility after its use, where it is then available for reuse or disposal.

Part VII – Reuse Activities, Numbers of Customers, and Backup Discharges

1. How many single-family residences have reclaimed water service?
   0

2. How many golf courses are irrigated using reclaimed water?
   2

3. How many parks or playgrounds are irrigated using reclaimed water?
   0

4. How many schools are irrigated using reclaimed water?
   0

5. Is reclaimed water used to flush toilets? ☐ Yes ☑ No If yes, list locations where reclaimed water is used for toilet flushing: _____

6. Is reclaimed water used for fire protection? ☑ No ☐ Yes, in sprinkler systems

   ☐ Yes, in fire hydrants ☐ Yes, other (please describe): _____

7. How many cooling towers use reclaimed water from this reuse system? 0

8. List or describe any unique or unusual uses of reclaimed water. N/A

9. Is there a surface water discharge that serves as a backup discharge for the reuse system?

☑ No ☐ Yes, a Limited Wet Weather Discharge permitted under Rule 62-610.860, F.A.C.

☐ Yes, permitted under the APRICOT Act [Section 403.086(7), F.S.]

☐ Yes, permitted under other rules governing surface water discharges

10. Do you require construction of reclaimed water piping in new residential or other developments?

☐ Yes ☑ No

11. Do you require connection to the reclaimed water system when reclaimed water service becomes available?

☐ Yes ☑ No

Part VIII – Cross-Connection Control Activities

Rule 62-610.469, F.A.C., imposes cross-connection control requirements on reuse systems permitted under Part III of Chapter 62-610, F.A.C. This includes requirements for the implementation of cross-connection control programs by all public water supply systems serving areas that are within the general reclaimed water service area. Color-coding, labeling, and separation distance requirements are included. In addition, inspections within the reclaimed water service area are required. For purposes of this form, "cross-connection" means a pipe-to-pipe connection between drinking water pipes and reclaimed water pipes.

1. Are all public water supply systems serving areas that are within the general reuse service area actively implementing and enforcing their cross-connection control programs?
   ☑ Yes ☐ No

   a. Have all of these cross-connection control programs been accepted by the DEP or the approved county health department? ☑ Yes ☐ No

2. How many illegal cross-connections have been identified during the reporting period? 0

   a. How many of these cross-connections have been eliminated? 0

   b. Please, attach a description of identified cross-connections and efforts taken to eliminate them.

3. How many new connections were made to the reclaimed water system during the reporting period? 0

   a. How many of the new reclaimed water connections were inspected at the time of initial connection? 0

4. How often are the reclaimed water connections of existing residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)?
   Not Inspected

   a. How often are the reclaimed water connections of existing non-residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)? Not Inspected

5. In addition to the number of new connections inspected in Item 3 above, how many existing connections were inspected during the reporting period?
   0

Part IX - Rates Charged for the Use of Reclaimed Water

Please, list the fees charged for the use of reclaimed water. Please do not enter wastewater or sewer charges. If reclaimed water is provided at no cost, enter zeroes in both blanks. If the fee structure includes both flat rate and gallonage charge components, make a positive entry in both spaces. Make all entries in the units shown.

1. How much do you charge a single-family residential customer (assume a 0.2-acre lot) for the use of reclaimed water?

Flat rate ($/month/connection) _____

Gallonage charge (cents/1000 gal.) _____

2. How much do you charge non-residential customers, such as golf courses, (assume 0.1 mgd on a 50-acre site) for the use of reclaimed water?

Flat rate ($/month/connection) 0

Gallonage charge (cents/1000 gal.) 0.15

Part X - Required Attachments

Check, as appropriate, and attach the required documentation.

☐ **Inventory of Edible Crop Irrigation** - If reclaimed water is used to irrigate edible crops at commercial agricultural sites, attach a copy of the current edible crop irrigation inventory as required by Rules 62-610.475 and 62-610.870, F.A.C. The inventory shall include the following information:

   a. Name of the agricultural operation.
   b. Name and telephone number of the owner or operator of the agricultural operation.
   c. Address of the agricultural operation.
   d. Edible crops irrigated using reclaimed water.
   e. Type of application (irrigation) method used.
   f. Approximate area (acres) under irrigation using reclaimed water on which edible crops are grown.

☑ **Inventory of Storage Facilities** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a copy of the current inventory of storage facilities, as required by Rules 62-610.464, 62-610.830, and 62-610.870, F.A.C. The inventory shall include the following information:

a. Name or identifier for the storage system.

b. Location.

c. Function of the storage system (system storage or reject storage).

d. Type of facility (covered tank, uncovered tank, lined pond, unlined pond).

e. Indication of whether or not the storage facility is a water of the state or discharges to a water of the state.

f. Distance to the nearest public water supply well.

g. Distance to the nearest potable water supply well, which is not a public water supply well.

h. Volume of each storage tank/pond and the total storage volume of all storage tanks and ponds (in units of million gallons).

☑ **Summary of Public Notification Program** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a summary of the public notification program activities during the reporting period, as required by Rule 62-610.468(6), F.A.C. The summary shall include the following:

a. Details of written public notification activities (include copies of written notices).

b. Summary of activities involving the news media.

c. Use of advisory signs.

d. Other public notification activities.

☐ **Summary of Metering and Rate Structure** – As noted in 403.064(16), Florida Statutes, utilities implementing reuse projects are encouraged to meter use of reclaimed water by all end users and to charge for the use of reclaimed water based on the actual volume used when such metering and charges can be shown to encourage water conservation. Metering and the use of volume-based rates are effective water management tools for the following reuse activities: residential irrigation, agricultural irrigation, industrial uses, landscape irrigation, irrigation of other public access areas, commercial and institutional uses such as toilet flushing, and transfers to other reclaimed water utilities. As required by 403.064(16), F.S., if this reuse system provides reclaimed water for any of the uses listed above, attach a summary of the utility's metering activities and the rate structure that the utility currently employs or plans to employ. The summary shall include the following:

a. Number of meters employed to monitor volume of reclaimed water used by customers.

b. If information is available, please provide per capita reclaimed water use for areas that meter and for unmetered areas. If available, please provide historical per capita usage data for before and after the utility began metering reclaimed water.

c. Provide information on the type of rate structure (i.e., inclining or declining block rates) for reclaimed water employed by the utility.

d. Provide a description of the utility's use of master meters (i.e., for a subdivision) or the use of individual meters (i.e., for single-family residential customers).

e. Provide a summary of the utility's plans for metering reclaimed water customers.

☐ **None of these items are required for this reuse system.**

Part XI - Permittee's Certification

I certify that the statements made in this report of reclaimed water utilization are true, correct, and complete to the best of my knowledge and belief.

Date: 12/26/23 _____
Signature

Phone: (239) 825-7818 Ivory M. Gilbert, Lead Operator
Name and Title (please print/type)

Company Name: Florida Utility Solutions

Address: 15275 Collier Blvd STE 201-268

City/State/Zip Code: Naples, FL 34119

E-Mail: mitchgilbert@floridautilitysolutions.com

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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DW Treatment Facilities

Facility Name	DEP Identification Number	Disinfection Level	Permitted Capacity (mgd)	Average Flow (mgd)
Forest Utilities WWTP	FLA014478	HI	.8	0.459

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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Annual Reuse Report Electronic Submission

Report Accepted

12/27/2023

Dear Ivory Gilbert,

Reuse System Name:	Forest Utilities WWTP
WAFR ID:	FLA014478
Permittee:	Ivory Mitchell Gilbert
Address:	6341 Deer Run Road SW Fort Myers FL 33908
DEP District:	SOUTH DISTRICT
Water Management District:	South Florida Water Management District

The *Annual Reuse Report* for the Reuse System indicated above has been accepted by the Department.

Enclosures:
All supporting documentation can be found here:
https://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?facility.id=FLA014478
Please allow up to three (3) business days for the above documents to appear.

If you have any questions during this process, please contact please contact SOUTH DISTRICT via e-mail at SD_newapps@dep.state.fl.us for further information.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

E-mail Recipients:
mitchgilbert@floridautilitysolutions.com
SD_newapps@dep.state.fl.us
Alexander.C.Weeks@FloridaDEP.gov
mitchgilbert@floridautilitysolutions.com
mitchgilbert@floridautilitysolutions.com

FLORIDA DEPARTMENT OF
Environmental Protection

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Annual Reuse Report Electronic Submission

DEP Review Initiated

12/27/2023

Dear Ivory Gilbert,

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WAFR ID:	FLA014478
Permittee:	Ivory Mitchell Gilbert
Address:	6341 Deer Run Road SW Fort Myers FL 33908
DEP District:	SOUTH DISTRICT
Water Management District:	South Florida Water Management District

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If you have any questions during this process, please contact SOUTH DISTRICT via e-mail at SD_newapps@dep.state.fl.us for further information.

E-mail Recipients:
mitchgilbert@floridautilitysolutions.com
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rnevul@sfwmd.gov
mitchgilbert@floridautilitysolutions.com
mitchgilbert@floridautilitysolutions.com

FLORIDA DEPARTMENT OF Environmental Protection

South District
PO Box 2549
Fort Myers FL 33902-2549
SouthDistrict@FloridaDEP.gov

Ron DeSantis
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Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

January 18, 2024

Ivory Mitchell Gilbert
15275 Collier BLVD
Naples, FL 34119-6750
Email: mitchgilbert@floridautilitysolutions.com

Re: Warning Letter
Forest Utilities WWTP
Facility ID No. FLA014478
Lee County - DW

Dear Mr. Gilbert:

A Compliance Evaluation Inspection and a Sanitary Sewer Overflow Preventive Inspection were conducted at your facility on December 20, 2023. During these inspections, possible violations of Chapter 403, Florida Statutes, and Chapters 62-160, 62-520, 62-600, 62-610, and 62-620 of the Florida Administrative Code, were observed.

During these inspections, Department personnel noted the following:

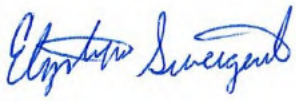
- The Facility did not have a NIST certified thermometer for composite sampling.
- A review of the Discharge Monitoring Reports revealed transcription and calculation issues.
- The Facility did not submit their monitoring results for Giardia and Cryptosporidium.
- The Facility had one inoperable surge blower and pump along with one inoperable aeration blower.
- There were multiple cracks, spalling and leaks on the tank walls.
- The digesters contained excessive foam.
- The surge tanks contained excessive foam and were turning septic.
- There were chronic effluent exceedances.
- The reclaimed water piping was not color-coded Pantone Purple.
- There were Groundwater exceedances.
- The Groundwater Monitoring Wells did not meet DEP requirements.

Violations of Florida Statutes or administrative rules may result in liability for damages and restoration, and the judicial imposition of civil penalties, pursuant to sections 403.121, Florida Statutes.

Please contact Alex McSurley, at (239) 344-5679, within **15 days** of receipt of this Warning Letter to arrange a meeting. The Department is interested in receiving any facts you may have that will assist in determining whether any violations have occurred. Any document submittals can be made to our email mailbox at SD-WWinspect@FloridaDEP.gov or may be mailed to the above address. You may bring anyone with you to the meeting that you feel could help resolve this matter.

Please be advised that this Warning Letter is part of an agency investigation, preliminary to agency action in accordance with Section 120.57(5), Florida Statutes. We look forward to your cooperation in completing the investigation and resolving this matter.

Sincerely,



Elizabeth A. Sweigert
Assistant Director of District Management
South District Office
Florida Department of Environmental Protection

Enclosure: Inspection Report

ec: Burke Young (burke@floridautilitysolutions.com)
Matt Gillispie (matt@floridautilitysolutions.com)

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
WASTEWATER COMPLIANCE INSPECTION REPORT

Facility Details

Facility Name	Forest Utilities WWTP			**WAFR ID**	FLA014478		
Physical Address	6341 Deer Run Rd. SW			**City, State, Zip**	Fort Myers, FL 33908-4318		
County	Lee			**Facility Phone #**	(239) 513-0445		
Permit Issued:	5/5/2021			**Permit Expiration:**	5/4/2026		
Facility Type	Domestic Wastewater			**Is the Facility NPDES (Y/N)**	No		
Latitude	**Degrees °**	26	**Minutes ‘**	29	**Seconds “**	49.7586	
Longitude	**Degrees °**	-81	**Minutes ‘**	52	**Seconds “**	11.9426	

Inspection Details

Inspection Type	**Entry Date**	**Exit Date**
CEI	12/20/2023	12/20/2023
	Entry Time (HH:MM AM/PM)	**Exit Time (HH:MM AM/PM)**
SSOP	12:00 PM	1:30 PM

Sampling Taken (Y/N)	No	**RQ#**	NA	**QA Conducted (Y/N)**	No

Name(s) and Title of Field Representatives(s)	**Operator Certification**	**Email**	**Phone Number**
Burke A. Young	WWC - 0020213	burke@floridautilitysolutions.com	(239) 825-7818
Name(s) and address of Permittee / Designated Rep.	**Title**	**Email**	**Phone Number**
Ivory Mitchell Gilbert 15275 Collier BLVD Naples, FL 34119-6750	President	mitchgilbert@floridautilitysolutions.com	(239) 513-0445

Inspector Information

Name(s) and Signature(s) of Inspectors(s)	**District Office/Phone Number**	**Date**
Alex McSurley	SD / (239) 344-5679	1/17/2024
Name and Signature of Reviewer	**District Office/Phone Number**	**Date**
Deanna Newburg	SD / (239) 344-5677	1/18/2024

Facility Compliance Eval Areas

***IC** = In Compliance; **MC** = Minor Out of Compliance; **NC** = Out of Compliance; **SC** = Significant Out of Compliance; **NA** = Not Applicable; **NE** = Not Evaluated*

Significant Non-Compliance Criteria Should be Reviewed when Out of Compliance Ratings Are Given in Areas Marked by a “”*

Overall Compliance Determination	Significant Out of Compliance						
IC	*Permit	IC	Laboratory	NC	Facility Site Review	SC	*Effluent Quality
NA	*Compliance Schedules	SC	Sampling	IC	Flow Measurement	NC	*Effluent Disposal
SC	*Records & Reports	IC	Biosolids	IC	*Operation & Maintenance	NC	*Groundwater
IC	SSO Survey	NE	Other	NA	Nutrient Management Plan	NA	Access Control
NA	Site Restrictions & Setbacks	NA	Odor/Nuisance	NA	Site Monitoring	NA	MLPW Disposal
NA	Manure Solids						

Clear Report | **Hide/Unhide Placeholders** | **Generate Blank Rows (for field paper setup)** | **Generate Deficiency & Observation Rows** | **Finish Inspection Report Form**

Single Event Violations ("∗" SNC SEVs)

Check for Yes	Evaluation Area	Description	Finding Description	Finding ID
☐	Permit	Effluent Violations - Unapproved Bypass	Wastewater was diverted from a portion of the treatment process without department approval.	UNBY
☐	∗Permit	Permit Violations - Discharge Without a Valid Permit	The facility was operating without a permit or with an expired permit.	UPHI
☐	Permit	Permit Violations - Failure to Submit Timely Permit Renewal Application	The permittee failed to submit an application to renew the existing permit at least 180 days prior to expiration.	PFSA
☐	Laboratory	Management Practice Violations - Laboratory Not Certified	The laboratory was not certified by the National Environmental Laboratory Accreditation Conference (NELAC).	LNCE
☒	Sampling	Monitoring Violations - Analysis not Conducted	The facility failed to collect and/or analyze samples as required by permit or enforcement action.	ANCV
☐	Sampling	Monitoring Violations - Failure to Monitor for Toxicity Requirements	The facility failed to collect and/or analyze routine or follow-up toxicity samples.	FTOX
☐	Records and Reports	Management Practice Violations - Failure to Develop Adequate SPCC Plan	The facility failed to develop or maintain their Spill Prevention Control and Countermeasures (SPCC) plan.	FSPC
☐	Records and Reports	Management Practice Violations - Failure to Maintain Records	The facility failed to maintain records for the required retention period.	FMRR
☐	Records and Reports	Reporting Violations - Failure to Notify	The permittee failed to notify the department of any event or activity that requires notification as required by permit or rule.	RSWP
☒	Records and Reports	Reporting Violations - Failure to Submit DMRs	The permittee failed to submit any DMR required by rule, permit, or enforcement action in a timely manner.	FDMR
☒	Records and Reports	Reporting Violations - Failure to submit required report (non-DMR, non-pretreatment)	The facility failed to submit any report required by rule, permit, enforcement action or inspection activity except for DMRs.	FRPT
☐	Facility Site Review	Management Practice Violations - Improper Land Application (non-503, non-CAFO)	The land application system was not being maintained.	LASN
☐	Flow Measurement	Monitoring Violations - No Flow Measurement Device	The facility failed to install a flow measurement device, an approved flow measurement device, or a working flow measurement device.	NOFL
☐	Operation and Maintenance	Management Practice Violations - Improper Operation and Maintenance	The facility failed to follow their operation and maintenance plan/manual.	IONM
☐	Operation and Maintenance	Management Practice Violations - Inflow/Infiltration (I/I)	The facility had an inflow and infiltration problem causing collection system issues and/or operational issues.	ININ
☐	Operation and Maintenance	Management Practice Violations - No Licensed/Certified Operator	The facility was being operated without a certified operator or by an operator that is not licensed for the size of plant.	ONCO
☐	∗Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent acute toxicity has been documented through follow-up tests.	EATX
☐	∗Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent chronic toxicity has been documented through follow-up tests.	ECTX
☐	∗Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent acute or chronic toxicity has been documented in the effluent through the use of routine and follow-up tests.	ETOX
☐	Effluent Quality	Effluent Violations - Narrative Effluent Violation	The facility violated a permit or enforcement narrative effluent limit.	XNEV
☐	Effluent Quality	Effluent Violations - Reported Fish Kill	The facility had a discharge of wastewater that resulted in a fish kill.	XFSH
☐	Sanitary Sewer Overflow Survey	WW SSO - Discharge to Waters	A sewage spill from any components of a collection/transmission system or from a treatment plant reached surface waters including stormwater conveyance system or drainage ditch.	SSO1
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to Maintain Records or Meet Record Keeping Requirements	The facility failed to keep routine documentation and reporting records of spills, and/or operation and maintenance activities on the collection/transmission system.	SSO2
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to monitor	The facility failed to collect and/or analyze bacteriological samples for sewage spills that reached surface waters.	SSO3
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to report violation that may endanger public health 122.41(l)(7)	The facility failed to report a sewage spill within 24 hours of discovery.	SSO4
☐	Sanitary Sewer Overflow Survey	WW SSO - Improper Operation and Maintenance	The facility failed to perform routine preventative maintenance to keep the collection/transmission system in good working order.	SSO5
☐	Sanitary Sewer Overflow Survey	WW SSO - Overflow to Dry Land	A sewage spill from any part of a collection/transmission system or treatment plant that did not make it to surface waters, i.e., stormwater collection system, drainage ditch, stream, pond, or lake.	SSO6

Permit

Compliance Rating	In Compliance
Does this section apply to the facility?	◉ **Yes** ○ **No**
Questions	
*Is the permit current?	**Yes**
Is a copy of the permit available onsite?	**Yes**
Is the facility operated in accordance with the permit?	**Yes**
*Was the facility constructed or modified with an appropriate or valid permit issued by the Department?	**Yes**
Has the facility submitted the permit renewal application 180 days prior to the expiration date?	**N/A**
If the permittee for the facility has changed did the department receive notification of this change?	**N/A**
If the permit is accompanied by a Consent Order or Administrative Order, are they abiding by the conditions of the order?	**N/A**
Is wastewater from a portion of the treatment process diverted with Department approval?	**N/A**
*Is the facility discharging to waters of the state with an appropriate FDEP permit?	**N/A**
*Was the facility free from unpermitted discharge, bypass, collection system, or residuals with a high potential for water quality or health impacts?	**Yes**
Is the facility free from any Permit violation not listed above that needs to be addressed?	**Yes**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Observations:

Department records indicate that the current operating permit will expire on May 4, 2026. F.A.C. Rule 62-620.335 (1) states that a Permittee shall submit an application to renew the existing permit at least 180 days before the expiration date of the existing permit. Timely and sufficient submittal of the renewal application and permit processing fee is important (and in your best interest) as it automatically extends the expiration date on the existing permit until the Department takes final action on the renewal application. A tardy application could result in non-compliance. Your renewal application and permit processing fee must be submitted no later than November 5, 2025.

Compliance Schedule

Compliance Rating	Not Applicable
Does this section apply to the facility?	○ **Yes** ◉ **No**
Questions	
If the facility has a compliance schedule in a permit, Administrative Order or Enforcement Action are they in compliance with the schedule?	**N/A**
*Are the Compliance Date(s), Construction Milestone(s), Enforcement Order Schedule(s) or Final Compliance Date started/completed within 90 days of the due date?	**N/A**
Has the facility completed construction and submitted a Notification of Completion of Construction for Wastewater Facilities or Activities (Form 62-620.910 (12)), if required?	**N/A**
Has the Notification of Availability of Record Drawings and Final Operation and Maintenance Manuals (Form 62-620.910 (13)) been submitted as required?	**N/A**
If the facility is under a Toxicity Corrective Action Plan, are they in compliance with the plan?	**N/A**
Is the facility free from any Compliance Schedule violation not listed above that needs to be addressed?	**N/A**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Observations:

Not applicable. This Facility does not currently have any compliance schedules in their permit.

Laboratory

Compliance Rating	In Compliance
Does this section apply to the facility?	◉ **Yes** ○ **No**

Questions	
Is there a current copy of the laboratory certification onsite?	**Yes**
If the facility has an onsite laboratory does it have a Florida Department of Health Environmental Laboratory Certification Program certification?	**N/A**
Facility DOH Certification #	N/A **N/A**
Contract Lab Name and DOH Certification #	Sanders Laboratory Inc. – E84380 **Yes**
Does the onsite laboratory use sample analysis methods prescribed in 40 CFR part 136 or a test method that has gone through the EPA alternative method approval process?	**N/A**
Does the facility have standard operating procedures that follow the methods set in 62-620.10 (18) F.A.C. including 40 CFR Part 136; including required instrumentation, glassware cleaning, reagent/standard use, and troubleshooting procedures?	**N/A**
Does the facility have a QA/QC program with a written QA/QC manual as required by 40 CFR 122.41 that is up to date and available for review?	**N/A**
Does the facility follow the procedures set in the QA/QC manual; including instrument calibration/maintenance, checks on standard solutions, sample analysis precision/accuracy limits on a prescribed bases and QC samples (duplicate, spiked, blank in at least 10%)?	**N/A**
Is the detailed record complete and available for review for each set of analyses performed including the order of calibration, QA/QC, bracketing, and samples analyzed?	**N/A**
Does the facility have QA/QC records on the reagent preparation, instrument calibration/maintenance, incubator temperature and purchase of laboratory supplies?	**N/A**
Does the facility's laboratory documentation of the sample results use qualifier codes when sample QA/QC fall outside acceptable precision and accuracy limits set in the QA/QC manual?	**N/A**
Does the facility's laboratory take and record corrective actions or trouble shooting steps when data falls out of the precision and accuracy limits?	**N/A**
Are records of standard(s) and reagent(s) preparation maintained at the laboratory?	**N/A**
Is the laboratory maintaining adequate records for reagent preparation(s)?	**N/A**
Does the laboratory have a system for uniformly recording, correcting, processing and reporting data; including formulas, significant figures, rounding rules, units, cross-checking calculations?	**N/A**
Is the facility's laboratory adequate for analyzing samples; including pure water, clean bench space for instrument use/storage free of contamination, necessary equipment, vibration free area, ventilation, humidity and temperature control?	**N/A**
Does the Laboratory meet NELAC and EPA standards including dry and clean sample storage locations, sample custodian(s) to ensure upon receipt of samples, proper sample storage, preservation and custody documentation?	**N/A**

Does the facility use appropriate standards that are prepared in volumetric glassware, checked against reliable primary standards, labeled properly, stored in clean containers, and discarded when expired or degraded?	**N/A**
Does the facility's laboratory analyst(s) demonstrate competency and appropriate training; including ability to follow procedures, ability to meet precision and accuracy limits, knowledge of equipment and analytical methods.	**N/A**
If the facility test requires temperature measurement, is there a thermometer present that is routinely calibrated against NIST thermometer within calibration date range?	**N/A**
Is the sample refrigerator temperature correct to meet the preservation requirements for the samples stored within?	**N/A**
Is the facility free from any Laboratory violation not listed above that needs to be addressed?	**Yes**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Observations:

The Facility's contracted laboratories' DOH certification will expire on June 30, 2024.

Sampling

Compliance Rating	Significant Out of Compliance
Does this section apply to the facility?	(•) **Yes** ( ) **No**
Questions	
In facility logbooks or other documentation, are the daily records appropriately recorded, including composite sampler or other temperatures, and daily calibration of meters.	**Yes**
Does the facility maintain records of their daily calibration of their pH meter, Chlorine meter, Dissolved Oxygen meter?	**Yes**
Does the facility maintain records of their daily checks of their in-line meter(s) with their field meter(s)?	**Yes**
Do field sheets document that the collection and analysis of field tests were analyzed within the 15-minute holding time.	**Yes**
Are meters calibrated and sample analysis conducted at the facility done in accordance with DEP SOP and NELAC guidelines? (Calibration frequency and sample bracketing for pH, Total Residual Chlorine (TRC), Turbidity, DO)	**Yes**
Are all the primary and secondary standards used to calibrate and verify meters, used prior to expiration dates and verified against primary standards appropriate for pH, TRC, Turbidity, DO?	**Yes**
Are the inline meters reading within established limits compared to the bench meters? (TRC ≤ 20%, Turbidity ≤ 20%, pH 0.2 SU)	**Yes**
Were safe access points for obtaining representative influent/effluent samples available?	**Yes**
Are influent sampling points put prior to internal facility return lines including supernatant, filter backwash and return activated sludge (RAS)?	**Yes**
Are samples being collected and analyzed as required by the permit or enforcement action; including location, type (grab/composite), time, and frequency?	**No**
Are samples being collected in the proper containers, preserved and analyzed in appropriate hold times in accordance with 40 CFR Part 136, Table II?	**Yes**
If the facility has a composite sampler with cooling system at the influent/effluent sampling location is there a thermometer present in the sampler that is annually checked against NIST thermometers?	**N/A**

Is composite sampling being conducted appropriately; including purging, sampling velocity at least 2fps, clean tubing, individual sample volume of at least 100 mL, sample storage of <6°C preservation, hold times and representative samples?	**No**
Did the facility have their Chain of Custody records?	**Yes**
If sampling was conducted and observed during the inspection did the sampling follow DEP SOP requirements?	**N/A**
Did the facility collect and/or analyze routine or follow-up toxicity samples as required by permit or enforcement action?	**N/A**
Is the facility free from any Sampling violation not listed above that needs to be addressed?	**Yes**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Deficiencies & Corrective Actions:

The facility failed to collect and/or analyze samples as required by permit or enforcement action. [62-600.650 (1) F.A.C., 62-620.610 (18) F.A.C., 62-160.210 (1) F.A.C., 62-600.660 (1) F.A.C., DEP SOP FS 2400, ANCV]	Deficiency: (Narrative) A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. *[62-610.463(4)]* If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020. October – December 2022 Groundwater DMR stated that the Background monitoring well MWB-21302 was "MNR" – monitoring not required. This well is required to be sampled by the permit.
	Corrective Action(s): (Narrative) Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future. Please provide documentation to the Department on why "MNR" was used for MWB-21302 well.
Is composite sampling being conducted appropriately; including purging, sampling velocity at least 2fps, clean tubing, individual sample volume of at least 100 mL, sample storage of =6°C preservation, hold times and representative samples? [62-160.210 (1) F.A.C., 62-160.800 (1)(a) F.A.C., DEP SOP FS 2400, 62-160.300	Deficiency: (Narrative) At the time of the inspection, the Facility did not have a NIST thermometer certification for the composite sampler.
	Corrective Action(s): (Narrative) During the inspection, the operator indicated that the composite sampler is not refrigerated. Please explain how samples are stored at <6°C, and how this temperature is verified.

F.A.C., 40 C.F.R. 136 Table II]	

Observations:

Please refer to Table A of the Appendix for additional details regarding lot numbers and expiration dates of buffers, standards and reagents. Please resend the Turbidity expiration date – record received was unreadable.

Records and Reports

Compliance Rating	Significant Out of Compliance
Does this section apply to the facility?	◉ **Yes** ○ **No**

Questions	
Are the entries in the operator logbook clear, concise, informative and relevant?	**Yes**
Was copy of the current O&M manual available at the time of the inspection?	**Yes**
Is there a current operator license?	**Yes**
Is there a current RPZ certification?	**N/A**
Is there a copy of the current Operating Protocol for Part 3 Reuse?	**Yes**
Does the facility have and maintain their Spill Prevention Control and Counter measurement (SPCC) Plan?	**N/A**
Are all required documents and reports available at the plant well organized and complete?	**Yes**
Does the facility maintain the records onsite for the required retention period?	**Yes**
Discharge Monitoring Reports (DMRs) Review Period	11/1/2020 – 11/30/2023 **Yes**
Are the discharge monitoring reports completed properly?	**No**
Are the DMRs submitted on the proper form?	**Yes**
Is an authorized representative signing the DMRs?	**Yes**
Has the permittee submitted an annual Reclaimed Water and/or Effluent Analysis Report?	**Yes**
Does the facility submit their monitoring results for Giardia and Cryptosporidium in a timely manner?	**No**
A review of the last toxicity test did not reveal any deficiencies?	**N/A**
Has the facility submitted all report(s) during the review period that are required by rule, permit, enforcement action or inspection activity, other than DMRs?	**No**
*Has the facility timely submitted DMRs as required by rule, permit, or enforcement action? (If either reports are >30 days late meets SNC criteria)	**No**
Has the facility submitted all final compliance schedule reports as required by rule, permit, or enforcement action?	**N/A**
Has the permittee notified the Department of any event or activity that requires notification as required by permit or rule?	**Yes**
*Are records or reports free from falsified data?	**Yes**
Is the facility free from any Records and Reports violation not listed above that needs to be addressed?	**Yes**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Deficiencies & Corrective Actions:

	Deficiency: (Narrative)

Are the discharge monitoring reports completed properly? [403.161(1)(b) F.S., 62-600.680 F.A.C.]	A review of the Discharge Monitoring Reports revealed deficiencies. Please refer to Table C in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please correct and resubmit all DMRs with noted calculation and/or transcription errors.
Does the facility submit their monitoring results for Giardia and Cryptosporidium in a timely manner? [62-610.463 (4) F.A.C., 62-600.680 F.A.C.]	Deficiency: (Narrative) A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. *[62-610.463(4)]* If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020.
	Corrective Action(s): (Narrative) Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future.
The facility failed to submit any report required by rule, permit, enforcement action or inspection activity except for DMRs. [62-610.870 (3) F.A.C., 62-610.865 (11) F.A.C., 62-600.405 F.A.C., 403.161(1)(b) F.S., FRPT]	Deficiency: (Narrative) A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. *[62-610.463(4)]* If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020.
	Corrective Action(s): (Narrative) Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future.
The permittee failed to submit any DMR required by rule, permit, or enforcement action in a timely manner. [403.161(1)(b)) F.S., 62-600.680 F.A.C., 62-620.610 (18)(a) F.A.C., FDMR]	Deficiency: (Narrative) A timeliness review of the DMRs revealed there was one late submission in April 2021. Please refer to Table E in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please ensure all DMRs are submitted timely going forward. No further action required at this time.
Observations:	
Please refer to Table B of the Appendix for additional details regarding operator licenses maintained onsite.	

Facility Site Review

Compliance Rating	Out of Compliance				
Does this section apply to the facility?	◉	**Yes**	○	**No**	
Questions					
The headworks was free from excessive corrosion.					**Yes**
The headwork is free from evidence of recent overflows.					**Yes**
Is the odor control system operational at the headworks?					**N/A**

Is the comminutor operational at the headworks?	**N/A**
Is the grit separator operational at the headworks?	**N/A**
Is the bar screen cleaned on a routine basis?	**N/A**
Is the mechanical bar screen functioning as intended?	**N/A**
Are screenings and grit being collected from the headworks in suitable containers?	**Yes**
Rags, grit and/or screening are being disposed of properly.	**Yes**
Are screenings and grit from the headworks being disposed at a Class I Landfill?	**Yes**
Are records of the disposal of the screenings and grit collected at the headworks available?	**N/A**
The leachate from the screening dumpster(s) is piped to the headworks and not onto the ground.	**Yes**
Is the clarifier free from solids discharging over the weir(s)?	**Yes**
Is the clarifier free from excessive sand and/or grit accumulation?	**Yes**
Is the clarifier free from excessive scum, algae and/or trash overflowing the weir?	**Yes**
Does the skimmer appear to be functional in the clarifier?	**Yes**
Is the sludge collector and pump functional in the clarifier?	**Yes**
Are the clarifier weir(s) level?	**Yes**
Is the clarifier free from short circuiting with loss over the weir?	**Yes**
Are the aeration basins diffusers free from clogs and providing adequate mixing?	**Yes**
Was the time clock or manual controls for the aeration system operational at the time of the inspection?	**Yes**
Is the RAS line properly located?	**Yes**
The RAS line was free from excessive splashing that could cause solids to be discharged outside the tank.	**Yes**
The mixed liquor (MLSS) in the oxidation ditch was appropriately colored with no black coloring.	**Yes**
Is even distribution of air observed in the aeration basin?	**Yes**
Are the air line(s) to the aeration basin(s) free from leaks?	**Yes**
The brushes and paddles in the oxidation ditch were all in good working order.	**N/A**
Is the velocity in the oxidation ditch sufficient to prevent settling of solids?	**N/A**
Are dual blower motors present as required by rule?	**Yes**
Are the blower motors equipped with belt guards?	**Yes**
The blower motors are free from excessive noise.	**Yes**
Are all the blower motors present and operational at the time of the inspection?	**No**
Are spare parts and a second standby blower motors stored onsite?	**Yes**
Is the electrical box wiring for the blower motors adequately protected?	**Yes**
Were the tank contents in the aerobic digester(s) well mixed?	**Yes**
Are the digester(s) free from excessive odors and/or foaming?	**No**
Is the digester at the appropriate operational capacity?	**Yes**
Are there two functioning pumps in the surge tank(s)?	**No**
What was the biomass color of the trickling filter at the time of the inspection?	N/A **N/A**
Is trickling filter media free from excessive ponding?	**N/A**
Are center columns and distribution arms of the trickling filter free from leaks?	**N/A**
Are the distribution arm orifices free from clogs, trash and/or scum resulting in uneven distribution of flow on the trickling filter media?	**N/A**
Is the RBC free from black biomass indicating solids and/or BOD loading?	**N/A**
Is the RBC free from white biomass indicating the presence of bacteria, which feed on sulfur compounds?	**N/A**

Is the RBC free from excessive grinding/whining noise(s) from the motor, drive shaft, and bearings?	**N/A**
Are all RBC rotating disks and/or paddles present and in good working?	**N/A**
Is the RBC unit drive shaft free from excessive vibration?	**N/A**
Are all the aerators in the lagoon operational at the time of the inspection?	**N/A**
Is the base of the lagoon free from lateral seepage at the time of the inspection?	**N/A**
Does the treatment lagoon have adequate freeboard space?	**N/A**
Is the treatment lagoon properly secured to prevent unauthorized access?	**N/A**
Is the treatment lagoon free from excessive foaming?	**N/A**
Are the treatment lagoon berms properly stabilized?	**N/A**
Is the Chlorine Contact Chamber (CCC) effluent clear and free from scum, solids accumulation and debris?	**Yes**
Are the baffles in the CCC functioning as intended?	**Yes**
Does the Chlorine injection point provide optimal mixing to occur in the CCC?	**Yes**
Is the CCC Chlorine pump operational, providing adequate Chlorine supply for disinfection and at the permitted location?	**Yes**
Is the Chlorine storage area protected from the elements?	**Yes**
Is the alarm indicator for the Chlorine system operational?	**N/A**
Is the Chlorine supply covered in frost indicating an issue with the system?	**N/A**
Is the fan inside the Chlorine room operational?	**N/A**
Are the Chlorine scales operational?	**N/A**
Is an operational Self-Contained Breathing Apparatus (SCBA) available for the Chlorine room?	**N/A**
Are the Chlorine gas cylinders properly secured?	**N/A**
Is a fresh supply of ammonia available to test for leaks in the gas chlorination system?	**N/A**
Do the UV ballast control boxes have adequate ventilation?	**N/A**
Does the plant staff have access to UV protective eyeglasses?	**N/A**
Is the facility maintaining adequate records of UV lamp operating hours?	**N/A**
Are the UV lamps and ballast being cleaned in accordance with the manufacturer's recommendation?	**N/A**
Does the facility have an adequate inventory of spare parts for the UV system?	**N/A**
Is the facility conducting routine performance checks on the UV system?	**N/A**
Is the UV intensity monitoring equipment operational?	**N/A**
Is the stilling well free from a thick layer of sludge and/or trash?	**Yes**
Is the Chlorine contact chamber providing a minimum contact time of 15 minutes?	**Yes**
Chlorine and SO2 cylinders marked with empty/full tags?	**N/A**
Is the automatic SO2 feed operational within de-chlorination process?	**N/A**
Is the SO2 system free from frost within de-chlorination process?	**N/A**
Are the bisulfite (SO2) gas cylinders properly secured for de-chlorination?	**N/A**
Was there adequate ventilation in the SO2 room?	**N/A**
Is the filter media free from solids that could cause plugging and/or overflow?	**Yes**
Is the land application system being maintained?	**Yes**
If an injection well was plugged or abandoned, was it completed appropriately with DEP approval?	**N/A**
If a well was constructed, was it permitted prior to beginning construction and constructed as required by permit?	**N/A**
Is the injection well Operation and Maintenance done satisfactorily?	**N/A**
Is there adequate access to all monitoring locations?	**Yes**

Is the exterior of the tanks, wall, and/or pipes of the facility free from leaks?	**No**
Are the facility grounds clean and well maintained?	**Yes**
Is the required signage adequate?	**Yes**
The facility was free from odors emanating from the facility.	**Yes**
The facility was free from excessive noise which could be heard beyond the boundaries of the facility.	**Yes**
Is the facility providing safety measures at all times including adequate lighting?	**Yes**
The facility is disposing of sludge appropriately, with no sludge being disposed of on the facility grounds.	**Yes**
Was an alternative power source available at the facility?	**Yes**
Is the onsite generator tested under load on a monthly basis?	**Yes**
Are records available for the testing of the generator?	**Yes**
Is the area around the lift station(s) maintained?	**Yes**
Are there warning signs with emergency contact information on and/or around the lift station(s)?	**Yes**
Does the facility have a fence around their lift station(s)?	**N/A**
Is the gate around the lift station and the cover to the lift station locked?	**Yes**
Is the cover to the lift station(s) free from safety hazards?	**Yes**
Are there two functioning pumps that alternate?	**Yes**
Is the electrical panel in good working order and free from needed repair and/or replacement?	**Yes**
Was the collection system or lift station free from offsite objectionable odors?	**Yes**
The lift station visual and audio alarm operating satisfactory?	**Yes**
Are the potable water supply lines and the facility free from cross connections?	**N/A**
Is an RPZ in place and free of leaks on all potable water supply lines?	**N/A**
Is there a record of testing available on the RPZ?	**N/A**
Is the facility free from any Facility Site Review violation not listed above that needs to be addressed?	**No**

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Deficiencies & Corrective Actions:

Are all the blower motors present and operational at the time of the inspection? [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, one of the surge blowers was not operational, and one of the aeration blowers was not operational.
	Corrective Action(s): (Narrative) Please submit documentation to the Department demonstrating that the non-operational blowers have been repaired and are functioning as intended.
Are the digester(s) free from excessive odors and/or foaming? [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, the digesters contained an excessive amount of foaming.
	Corrective Action(s): (Narrative) Please submit photos to the Department demonstrating that the digesters are free from excessive foam.
Are there two functioning pumps in the surge tank(s)? [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, it was noted that one of the transfer pumps from the surge tanks was not operational.
	Corrective Action(s): (Narrative) Please submit documentation to the Department demonstrating that the transfer pump has been repaired and is functioning as intended.

Is the exterior of the tanks, wall, and/or pipes of the facility free from leaks? [62-600.410 F.A.C., 62-620.300 (5) F.A.C., 62-620.610 (7) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, there were several cracks noted on the tank walls on the aerator and digester basins. There were also a couple of small leaks noted. Please refer to Photos 16, 17 and 18 in the Photo Log.
	Corrective Action(s): (Narrative) Please repair any areas of the tank walls with cracking, spalling, or leaking. Please submit documentation of these repairs to the Department.
Is the facility free from any Facility Site Review violation not listed above that needs to be addressed? [See Deficiency Narrative for Specific Rule Violated]	Deficiency: (Narrative) At the time of the inspection, the surge tanks contained excessive foam and appeared to be turning septic. It was also noted that one of the blowers for the surge tanks was inoperable, which may have caused these conditions. [Rules 62-600.410 and 62-620.300 (5), F.A.C.]
	Corrective Action(s): (Narrative) Please submit photos to the Department demonstrating that the surge tanks are operating as designed without excessive foaming.
Observations:	
Please note that the clarifier has a significant amount of pin floc, but it is not discharging over the weir. See photos 9 and 10.	

Flow Measurement

Compliance Rating	In Compliance			
Does this section apply to the facility?	◉	**Yes**	○	**No**
Questions				
Is there easy access to flow meter?	**Yes**			
Is the flow meter in the correct location?	**Yes**			
Is the flow measuring device installed properly?	**Yes**			
Is the flow meter calibrated at least annually and is it current?	**Yes**			
When was the flow meter last calibrated?	11-8-2023 **Yes**			
Is the flow measurement device operating within +/- 10% of the actual flow?	**Yes**			
Is the flow meter operating properly at the time of the inspection?	**Yes**			
The chart recorder and/or totalizer for the flow meter was operational at the time of the inspection.	**Yes**			
The elapsed time meters on the lift station pumps were functioning.	**Yes**			
The flow entering the convergence section of the Parshall Flume was free of excessive turbulence.	**Yes**			
Is the facility free from any Flow Measurement violation not listed above that needs to be addressed?	**Yes**			

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Observations:

The Facility's flow meter was last calibrated on 11/8/2023.

Operations and Maintenance

Compliance Rating	In Compliance
Does this section apply to the facility?	◉ **Yes** ○ **No**
Questions	
Does the facility have adequate plant staffing?	**Yes**
Is a certified operator operating the wastewater treatment facility with the appropriate license level for the size of the plant?	**Yes**
Is the operator performing treatment plant operation and maintenance duties in a responsible and professional manner?	**Yes**
Is the plant O&M log maintained in a hard-bound book with consecutive page numbering, or another approved format?	**Yes**
Does the facility have an O&M manual, and does the facility's O&M manual reflect the current configuration of the facility?	**Yes**
*Is the facility operated in accordance with the O & M Manual? (If there is a high potential for water quality or health impacts meets SNC criteria)	**Yes**
Is the facility maintaining a log that documents routine equipment maintenance?	**Yes**
Is the plant free of any treatment components that are in disrepair that would provide for unsafe operation?	**Yes**
Is the facility without an inflow and infiltration problem which would cause collection system and/or operational issues?	**Yes**
*Does the facility replace malfunctioning equipment, which can result in a high potential for water supply quality or health impacts?	**Yes**
Dike berms appeared to be in satisfactory condition.	**N/A**
Handrails/catwalks/ladders were in good working order providing for safe conditions.	**Yes**
The liner(s) in the containment pond(s) appeared to be functioning as intended.	**N/A**
The plant operator is fulfilling the minimum site requirements as required by the Permit.	**Yes**
Preventative maintenance is being performed in the accordance with the manufacturer's recommendations.	**Yes**
The facility maintains an adequate spare parts inventory.	**Yes**
Swales were being maintained.	**N/A**
Is the facility free from any Operations and Maintenance violation not listed above that needs to be addressed?	**Yes**

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- *Questions with "N/A" responses do not apply to the facility*

Observations:

No additional observations or deficiencies noted.

Effluent Quality

Compliance Rating	Significant Out of Compliance
Does this section apply to the facility?	○ **Yes** ○ **No**
Questions	
DMR review period:	11/01/2020 – 11/30/2023 **Yes**

A review of the Discharge Monitoring Reports revealed the following effluent exceedance(s).	Please refer to Table E in the Appendix for additional details. **No**
*Did the effluent limits exceed the Technical Review Criteria less than two times in six months?	**N/A**
*Are the effluent limits without exceedances four out of six months (chronic criteria)?	**No**
*Did the total residual Chlorine levels meet disinfection limits? (If below required minimum 10% or more of the time in a rolling 6-month period, meets SNC criteria)	**Yes**
Was the facility free of a discharge of wastewater that resulted in a fish kill?	**Yes**
*Is persistent acute toxicity documented through follow-up tests?	**N/A**
*Is persistent chronic toxicity documented through follow-up tests?	**N/A**
*Is persistent acute or chronic toxicity documented in the effluent through the use of routine and follow-up tests?	**N/A**
Does the facility meet the permit or enforcement narrative effluent limitation(s)? (Non-DMR visible sheen defined as iridescence present so as to cause taste or odor, or otherwise interfere with the beneficial use of the receiving water)	**Yes**
Is the effluent free from excessive (suspended solids, foam, grease, scum) in the discharge stream?	**Yes**
*Was the facility free from any other violation with a high potential for water quality or health impacts?	**Yes**
Is the facility free from any Effluent Quality violation not listed above that needs to be addressed?	**Yes**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "**"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Deficiencies & Corrective Actions:

A review of the Discharge Monitoring Reports revealed the following effluent exceedance(s).	Deficiency: (Narrative) Please refer to Table F in the Appendix for additional details regarding effluent exceedances. [Rule 62-600 and 62-610, F.A.C.]
	Corrective Action(s): (Narrative) Please explain how the Facility plans to address the effluent exceedances and prevent them going forward.
*Are the effluent limits without exceedances four out of six months (chronic criteria)? [40 CFR Part 123.45]	Deficiency: (Narrative) A review of the effluent exceedances revealed chronic exceedances.
	Corrective Action(s): (Narrative) Please explain how the Facility plans to address the effluent exceedances and prevent them going forward.

Observations:

The Fecal Coliform limit for the groundwater compliance wells at this Facility is 0.0 #/100ml. Because the laboratory has an MDL of 1.0 #/100ml, the Facility is being given an exceedance for Fecal Coliform samples even when they are undetectable because those results must be reported as "<1.0 #/100ml". Please contact the Department to have this issue on the permit corrected.

The Total Residual Chlorine was found to be 10 mg/L from the facility's inline Chlorine meter.

Effluent Disposal

Compliance Rating	Out of Compliance
Does this section apply to the facility?	(•) **Yes** ( ) **No**
Questions	
Are discharge location(s) as per permit?	**Yes**
What type of reuse is the facility approved for?	Part 4 Public Access Reuse **Yes**
Has a cross connection control program been implemented within the areas where reclaimed water is provided for use (Part III, VII)?	**Yes**
Is all reclaimed water piping and equipment color-coded Pantone purple (522C)?	**No**
Hose bibbs met access restrictions and other requirements.	**Yes**
Reclaimed water valves and outlets were appropriately tagged and /or labeled.	**Yes**
Are advisory signs posted in English and Spanish in areas where non-potable Public Access Reuse water is being applied (Part III, VII)?	**Yes**
Is the reclaimed water retained on the application site?	**Yes**
No significant ponding was observed on the reclaimed water application site.	**Yes**
There was no aerosol mist leaving the boundaries of the land application?	**Yes**
There was no evidence of solids loss in the treatment process or from the plant?	**Yes**
The RIBs and/or percolation ponds were free from excessive vegetation and sludge?	**N/A**
The percolation ponds were free from accumulated sludge.	**N/A**
Does the percolation ponds have at least 3 ft of freeboard?	**N/A**
The absorption field was free from excessive vegetation.	**N/A**
Do the reclaimed water storage ponds have adequate freeboard?	**Yes**
Are RIBs well maintained and free from excessive vegetation?	**N/A**
There was no evidence of a bypass or failure at the effluent storage and/or disposal site(s)?	**Yes**
Are all effluent disposal areas such as RIBs, ponds, and sprayfields being loaded and rested per permit conditions?	**Yes**
The disposal pond berms were free from excessive growth or vegetation.	**N/A**
There was no evidence of a bypass or failure from the storage ponds observed during the inspection.	**Yes**
No unauthorized discharge to waters of the state was observed during the inspection.	**Yes**
Are the sprinklers functioning as intended for the absorption field(s) or sprayfield(s)?	**N/A**
The facility is meeting the minimum setback distances.	**Yes**
Does the facility maintain a supply of spare parts for the absorption field(s) or sprayfield(s)?	**N/A**
The effluent disposal and/or storage area was free from sinkholes.	**Yes**
Are the sprayfields free from grazing dairy cattle?	**N/A**
The sprayfield was free from ponding.	**N/A**
The sprayfield was free from excessive vegetation.	**N/A**
Edible food crops were being properly irrigated with reclaimed water.	**N/A**
What cover crop and/or vegetation is planted on the reclaimed water area(s)?	N/A **N/A**
*The disposal system was being operated as designed with a low potential for water quality or health impacts.	**Yes**
*There was no unauthorized operation or modification of the disposal system.	**Yes**
Fencing around the effluent disposal site for access control was complete and in good repair.	**N/A**
There were no dead animals observed in the discharge stream.	**Yes**

Is the facility free from any Effluent Disposal violation not listed above that needs to be addressed?	**Yes**

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Deficiencies & Corrective Actions:	
Is all reclaimed water piping and equipment color-coded Pantone purple (522C)? [62-610.469 (7)(f) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, it was noted that the piping at one of the reuse pumping stations was not Pantone Purple.
	Corrective Action(s): (Narrative) Please submit photos to the Department demonstrating that the reuse piping has been appropriately color-coded Pantone Purple.

Observations:

No additional observations or deficiencies noted.

Biosolids

Compliance Rating	In Compliance
Does this section apply to the facility?	◉ **Yes** ○ **No**
Questions	
Does the facility's method of biosolids use or disposal match what is allowed in the facility permit (i.e., landfill, land application, distribution and marketing, transfer to another facility, biofuel/bioenergy)?	**Yes**
Does the permittee keep records of biosolids quantities for five years, as applicable (quantities generated, received from source facilities, treated, distributed and marketed, land applied, used as a biofuel or for bioenergy, transferred to another facility, or landfilled?	**Yes**
Are biosolids quantities reported on the facility RMP-Q DMR?	**Yes**
Are the biosolids quantities reported on the RMP - Q DMRs correct and accurate?	**Yes**
The facility's treatment, management, transportation, use, land application, or disposal of biosolids does not result in objectionable odors, i.e., does not result in a violation of the odor prohibition in subsection 62-296.320(2)	**N/A**
If there is an objectionable odor, please describe the odors characteristics, frequency, duration, and migration, etc.	N/A **N/A**
Is the storage of biosolids or other solids at this facility in accordance with the Facility Biosolids Storage Plan?	**N/A**
Does the treatment facility ensure no biosolids are spilled from or tracked off the treatment facility property by the hauling vehicle?	**N/A**
The biosolids for this facility are classified as_____: (AA, A, and/or B)	N/A **N/A**
Does the class of biosolids produced for beneficial use match the authorized class in the facility permit (Class AA, A, or B)?	**N/A**
Does the facility use the biosolids pathogen reduction alternative option identified in the permit?	**N/A**
Are all the operational and process parameters monitored to demonstrate compliance for pathogen reduction?	**N/A**
Do the biosolids meet the treatment requirements for pathogen reduction option used?	**N/A**
Does the facility use the biosolids vector attraction reduction option identified in the permit?	**N/A**

Are all the operational and process parameters monitored to demonstrate compliance for vector attraction reduction?	**N/A**
Do the biosolids satisfactorily meet the treatment requirements for vector attraction reduction?	**N/A**
If the Specific Oxygen Uptake Rate (SOUR) test is used for vector attraction reduction, is it conducted within 15 minutes of sample collection by a certified laboratory or under the direction of an operator certified in accordance with Chapter 62-602, F.A.C?	**N/A**
Does treatment of biosolids or septage for the purpose of meeting pathogen reduction or vector attraction reduction requirements take place at the permitted facility (e.g., not in the tank of a hauling vehicle)?	**N/A**
Are the biosolids monitored at the frequency required by the permit?	**N/A**
Are the biosolids monitoring results reported on the facility DMR (RMP-AA, RMP-A, or RMP-B)?	**N/A**
Are the biosolids monitored for all the required parameters for the class of biosolids?	**N/A**
Do the Class AA, A, or B biosolids comply with the ceiling pollutant limits?	**N/A**
Are the correct analysis methods used for biosolids?	**N/A**
Is a certified laboratory used for the analysis of the biosolids?	**N/A**
Are all biosolids samples representative and taken after final treatment of the biosolids but before land application or distribution and marketing, unless otherwise approved?	**N/A**
Are all biosolids samples taken at the location specified in the facility permit?	**N/A**
Are the correct sample types properly taken for the type of biosolids (POTW Sludge Sampling Manual)?	**N/A**
Are the Class AA biosolids monitored monthly?	**N/A**
Do the Class AA biosolids meet the Class AA parameter limits?	**N/A**
Are Class AA biosolids that are stored for more than 45 days re-sampled for fecal coliform or Salmonella sp. at the frequency specified in the permit, if required?	**N/A**
For distribution and marketing, does the facility have a fertilizer license, sell or given-away to someone with a fertilizer license, or is enrolled in the US Composting Council's Seal to Testing Assurance program (USCC STA program does not apply in the Lake Okeechobee, St. Lucie River, and Caloosahatchee River watersheds)?	**N/A**
If the facility discovered that distributed and marketed biosolids did not meet Class AA standards, did the facility notify, within 24 hours, the Department and all persons to whom they delivered or distributed and marketed the Class AA biosolids?	**N/A**
Does the facility make available to users by product labels or other means the following information - fertilizer label or equivalent information; name and address of the facility; statement that the biosolids meet subsection 62-640.700 (5), F.A.C.; recommend application rates; and recommendations for storage (including the more than one dry ton/seven-day provision)?	**N/A**
Are all the sites where biosolids are land applied listed on the Treatment Facility Biosolids Plan form (DEP Form 62-640.219(2)(a))?	**N/A**
If a permitted site not listed in the Treatment Facility Biosolids Plan was used, did the permittee notify DEP at least 24 hours prior to land application at the site and submit a revised form within 30 days after using the site?	**N/A**
Did the facility only used permitted sites - i.e., no unpermitted sites were used for land application (i.e., the site did not have a valid DEP permit)?	**N/A**
Does the permittee maintain hauling records for shipments to land application sites and do they contain the required information?	**N/A**
Does the permittee provide a copy of the hauling records to the biosolids site manager, were records free of any discrepancies regarding the quantities delivered, and any discrepancies were reported to DEP within 24 hours of discovery?	**N/A**

Did all biosolids sent to sites meet pathogen reduction, vector attraction reduction, and pollutant limits?	**N/A**
If biosolids not meeting standards were sent to a site, did the permittee notify DEP, the site manager, the site permittee within 24 hours of discovery?	**N/A**
Does the permittee maintain copies for each site used of the Biosolids Application Site Annual Summary forms received from the site permittees indefinitely?	**N/A**
Has the permittee submitted Treatment Facility Biosolids Annual Summary reports to DEP by February 19 each year?	**N/A**
Was the information in the Treatment Facility Biosolids Annual Summary accurate?	**N/A**
Is any incineration or use of biosolids as a biofuel or for bioenergy in accordance with DEP's air regulations and RCRA?	**N/A**
Does the permittee keep the required hauling records to track transport of biosolids between facilities?	**Yes**
If the facility receives biosolids from a source facility, did the permittee report any discrepancies in the quantities of biosolids to DEP within 24 hours of discovery?	**N/A**
If the facility is a source facility and sends biosolids to another facility, does the permittee provide a copy of their hauling records for each shipment to the receiving facility?	**N/A**
If the facility receives biosolids from a source facility, does the receiving facility permit allow receipt of biosolids from other facilities?	**N/A**
Does the facility have copies of the required written agreement(s) between the receiving and source facility?	**N/A**
Did the permittee (source or receiving facility) submit all new written agreements to DEP within 30 days before transporting biosolids (unless approval given otherwise)?	**N/A**
Is operator staffing requirements met?	**N/A**
Are the biosolids receiving and handling operations satisfactory?	**N/A**
Are grit and screenings, etc., from the headworks properly disposed of in a landfill?	**N/A**
Is the facility free from any Biosolids violation not listed above that needs to be addressed?	**N/A**

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Observations:

The Facility last hauled 18,000 gallons of biosolids on December 13, 2023, by Karle Environmental, Inc.

Biosolids generated by this facility may be disposed of in a Class I solid waste landfill.

Groundwater

Compliance Rating	Out of Compliance
Does this section apply to the facility?	○ **Yes** ○ **No**
Questions	
DMRs review period	12/01/2022 – 11/30/2023 **Yes**
Are the groundwater monitoring results sent to the Department on Discharge Monitoring Report, Form 62-620.910 (10), F.A.C. and submitted by the DMR due date?	**Yes**
After a review of the Discharge Monitoring Reports, are the compliance well parameters meeting the groundwater standards in the time period reviewed (12 months or greater)?	**No**

A review of the Discharge Monitoring Reports revealed the following effluent exceedance(s).	Please refer to Table F in the Appendix for additional details. **No**
Do the facilities purging logs on DEP Form FD 9000-24 indicate that purging was done properly; including sufficient volume, purge rate, depth to water, and stability criteria (pH, Temperature, Conductivity, Dissolved Oxygen, Turbidity)?	**Yes**
Is the groundwater monitoring report complete and accurate, including analysis method, laboratory method detection limits, static water level, purging logs, sample collection procedures and treatment?	**No**
Do the groundwater monitoring wells meet DEP requirements including tamper-proof locks, unique well label(s), concrete well pad with protective bumpers not containing numerous cracks, and is free of clutter for sampling purposes?	**No**
If or when new well construction was completed did the facility plug and properly abandoned the existing well and submit Monitoring well completion Report, Form 62-520.900 (3) to DEP within 60 days?	**N/A**
If a monitoring well became damaged or inoperable was maintenance conducted and notification sent to DEP within 2 days of discovery?	**N/A**
Is the well(s) that the facility is sampling at part of the approved groundwater monitoring plan?	**Yes**
Are the monitoring wells operable to the extent that sampling is possible?	**Yes**
Are groundwater samples being collected and analyzed as required by the permit or enforcement action; including location, well type, sample type (grab/composite), time, and frequency?	**Yes**
If sampling was observed were the sample collection activities being performed in accordance with DEP SOP FS 2200?	**N/A**
If sampling was observed was equipment in satisfactory condition?	**N/A**
If sampling was not observed is the description of sample collection activities being performed in accordance with DEP SOP FS 2200?	**N/A**
Is the facility free from any Groundwater violation not listed above that needs to be addressed?	**Yes**

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- *Questions with "N/A" responses do not apply to the facility*

Deficiencies & Corrective Actions:

After a review of the Discharge Monitoring Reports, are the compliance well parameters meeting the groundwater standards in the time period reviewed (12 months or greater)? [62-520.420 F.A.C.]	Deficiency: (Narrative) A review of the Discharge Monitoring Reports revealed Groundwater Exceedances. Please refer to Table F in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please indicate to the Department how the Facility will prevent exceedances in the groundwater going forward.
Is the groundwater monitoring report complete and accurate, including analysis method,	Deficiency: (Narrative) October – December 2022 Groundwater DMR stated that the Background monitoring well MWB-21302 was "MNR" – monitoring not required. This well is required to be sampled by the permit.
	Corrective Action(s): (Narrative)

laboratory method detection limits, static water level, purging logs, sample collection procedures and treatment? [62-520.900 (2) F.A.C.]	Please provide documentation to the Department on why "MNR" was used for MWB-21302 well.
Do the groundwater monitoring wells meet DEP requirements including tamper-proof locks, unique well label(s), concrete well pad with protective bumpers not containing numerous cracks, and is free of clutter for sampling purposes? [62-520.600(6)(e) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, it was noted that there were deficiencies at each of the Facility's five Groundwater Monitoring Wells. Please refer to Table G in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please submit documentation to the Department demonstrating that each of the noted Groundwater Monitoring Well deficiencies have been corrected.
Observations:	
No additional observations or deficiencies noted.	

SSO Survey

Compliance Rating	In Compliance				
Does this section apply to the facility?	◉	**Yes**	○	**No**	
Questions					
Does the facility have an Operation and Maintenance Manual for their collection system?	**Yes**				
How often is the Operation and Maintenance Manual updated?	As needed. **Yes**				
Does the O&M manual reflect the current collection system configuration?	**Yes**				
Are procedures available for minimizing spills in either the Operation and Maintenance Manual or in a separate document?	**Yes**				
Does the facility have a Sewer Overflow Response Plan/procedures for minimizing spills?	**Yes**				
Did the facility collect and/or analyze bacteriological samples as outlined in their SORP?	**N/A**				
Does the facility have a map of its collection system?	**Yes**				
Are the SORP and collection system maps immediately available to SSO response staff, including during power failures?	**Yes**				
Did the facility collect and/or analyze bacteriological samples for sewage spills that reached surface waters?	**N/A**				
Does the facility perform routine preventative maintenance to keep the collection/transmission system in good working order?	**Yes**				
Does the facility maintain a ready-to-use supply of equipment, tools and materials for responding to SSOs?	**Yes**				
How many lift stations have permanent emergency back-up power generators?	N/A **N/A**				

In the last 12 months, was the facility free from sewage spills or abnormal event from any part of a collection/transmission system or treatment plant that discharged to the ground or did not make it to surface waters, i.e., stormwater collection system, drainage ditch, stream, pond, or lake?	**N/A**
Does the facility report the spill(s) to the Department within 24 hours of discovery?	**Yes**
Does the facility follow up on spills?	**Yes**
Does the facility keep routine documentation and reporting records of spills, and/or operation and maintenance activities on the collection/transmission system(s)?	**Yes**
In the last 12 months, was the facility free from sewage spills or abnormal events from any components of a collection/transmission system or from a treatment plant that reached surface waters including stormwater conveyance system or drainage ditch?	**Yes**
Is the facility free from any SSO violation not listed above that needs to be addressed?	**Yes**

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- *Questions with "No" responses indicate deficiencies*
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Observations:

The Facility reported one spills within the past 12 months. Please refer to Table H of the appendix for additional details.

The Department has developed new guidance on how Sanitary Sewer Overflows (SSOs) are addressed statewide, which was implemented July 1, 2019. According to the guidance each SSO incident is evaluated and rated, and the appropriate document is filed/issued. Either a Memo-to-File, a Compliance Assistance Offer Letter, or Warning Letter is sent for each incident. A Memo-to-File was sent for the June 2023 SSO: https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1208936.1]&[profile=Discovery_Compliance]

No further action required at this time, but The Department may require formal enforcement on the SSOs, pursuant to your permit conditions, Chapter 62-620, Fla. Admin. Code, and Chapter 403, Fla. Stat.

Other

Compliance Rating	Not Evaluated
Does this section apply to the facility?	(•) **Yes** ( ) **No**
Questions	
*Is the facility free from any violation not listed above, or pattern of noncompliance, resulting in a high potential for water quality or health impacts *(Any violations considered significant by the Secretary, Deputy Secretary, Director of District Management, or the Division Director meet SNC criteria)*	**N/A**
Please describe any potential non-wastewater violations (i.e. Hazardous Waste, Stormwater, SLERP, Air and Storage Tanks) that were referred.	**N/A** **N/A**

- *Significant Non-Compliance Criteria per Program Guidance Memo OWM-00-01 Should be Reviewed when Checklist Items Deficiencies are Noted and Marked by a "*"*
- *Questions with "No" responses indicate deficiencies*
- *Questions with "N/A" responses do not apply to the facility*

Observations:

Not Evaluated.

Deficiencies Summary

Evaluation Area: Sampling	
The facility failed to collect and/or analyze samples as required by permit or enforcement action. [62-600.650 (1) F.A.C., 62-620.610 (18) F.A.C., 62-160.210 (1) F.A.C., 62-600.660 (1) F.A.C., DEP SOP FS 2400, ANCV]	Deficiency: (Narrative) A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. *[62-610.463(4)]* If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020. October – December 2022 Groundwater DMR stated that the Background monitoring well MWB-21302 was "MNR" – monitoring not required. This well is required to be sampled by the permit.
	Corrective Action(s): (Narrative) Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future. Please provide documentation to the Department on why "MNR" was used for MWB-21302 well.
Is composite sampling being conducted appropriately; including purging, sampling velocity at least 2fps, clean tubing, individual sample volume of at least 100 mL, sample storage of =6°C preservation, hold times and representative samples? [62-160.210 (1) F.A.C., 62-160.800 (1)(a) F.A.C., DEP SOP FS 2400, 62-160.300 F.A.C., 40 C.F.R. 136 Table II]	Deficiency: (Narrative) At the time of the inspection, the Facility did not have a NIST thermometer certification for the composite sampler.
	Corrective Action(s): (Narrative) During the inspection, the operator indicated that the composite sampler is not refrigerated. Please explain how samples are stored at <6°C, and how this temperature is verified.

Evaluation Area: Records and Reports	
Are the discharge monitoring reports completed properly? [403.161(1)(b) F.S., 62-600.680 F.A.C.]	Deficiency: (Narrative) A review of the Discharge Monitoring Reports revealed deficiencies. Please refer to Table C in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please correct and resubmit all DMRs with noted calculation and/or transcription errors.
	Deficiency: (Narrative)

Does the facility submit their monitoring results for Giardia and Cryptosporidium in a timely manner? [62-610.463 (4) F.A.C., 62-600.680 F.A.C.]	A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. *[62-610.463(4)]* If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020.
	Corrective Action(s): (Narrative) Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future.
The facility failed to submit any report required by rule, permit, enforcement action or inspection activity except for DMRs. [62-610.870 (3) F.A.C., 62-610.865 (11) F.A.C., 62-600.405 F.A.C., 403.161(1)(b) F.S., FRPT]	Deficiency: (Narrative) A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. *[62-610.463(4)]* If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020.
	Corrective Action(s): (Narrative) Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future.
The permittee failed to submit any DMR required by rule, permit, or enforcement action in a timely manner. [403.161(1)(b) F.S., 62-600.680 F.A.C., 62-620.610 (18)(a) F.A.C., FDMR]	Deficiency: (Narrative) A timeliness review of the DMRs revealed there was one late submission in April 2021. Please refer to Table E in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please ensure all DMRs are submitted timely going forward. No further action required at this time.

Evaluation Area: Facility Site Review	
Are all the blower motors present and operational at the time of the inspection? [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, one of the surge blowers was not operational, and one of the aeration blowers was not operational.
	Corrective Action(s): (Narrative) Please submit documentation to the Department demonstrating that the non-operational blowers have been repaired and are functioning as intended.
Are the digester(s) free from excessive odors and/or foaming? [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, the digesters contained an excessive amount of foaming.
	Corrective Action(s): (Narrative) Please submit photos to the Department demonstrating that the digesters are free from excessive foam.
Are there two functioning pumps in the surge tank(s)? [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, it was noted that one of the transfer pumps from the surge tanks was not operational.
	Corrective Action(s): (Narrative)

	Please submit documentation to the Department demonstrating that the transfer pump has been repaired and is functioning as intended.
Is the exterior of the tanks, wall, and/or pipes of the facility free from leaks? [62-600.410 F.A.C., 62-620.300 (5) F.A.C., 62-620.610 (7) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, there were several cracks noted on the tank walls on the aerator and digester basins. There were also a couple of small leaks noted. Please refer to Photos 16, 17 and 18 in the Photo Log.
	Corrective Action(s): (Narrative) Please repair any areas of the tank walls with cracking, spalling, or leaking. Please submit documentation of these repairs to the Department.
Is the facility free from any Facility Site Review violation not listed above that needs to be addressed? [See Deficiency Narrative for Specific Rule Violated]	Deficiency: (Narrative) At the time of the inspection, the surge tanks contained excessive foam and appeared to be turning septic. It was also noted that one of the blowers for the surge tanks was inoperable, which may have caused these conditions. [Rules 62-600.410 and 62-620.300 (5), F.A.C.]
	Corrective Action(s): (Narrative) Please submit photos to the Department demonstrating that the surge tanks are operating as designed without excessive foaming.

Evaluation Area: Effluent Quality	
A review of the Discharge Monitoring Reports revealed the following effluent exceedance(s).	Deficiency: (Narrative) Please refer to Table F in the Appendix for additional details regarding effluent exceedances.
	Corrective Action(s): (Narrative) Please explain how the Facility plans to address the effluent exceedances and prevent them going forward.
*Are the effluent limits without exceedances four out of six months (chronic criteria)? [40 CFR Part 123.45]	Deficiency: (Narrative) A review of the effluent exceedances revealed chronic exceedances.
	Corrective Action(s): (Narrative) Please explain how the Facility plans to address the effluent exceedances and prevent them going forward.

Evaluation Area: Effluent Disposal	
Is all reclaimed water piping and equipment color-coded Pantone purple (522C)? [62-610.469 (7)(f) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, it was noted that the piping at one of the reuse pumping stations was not Pantone Purple.
	Corrective Action(s): (Narrative) Please submit photos to the Department demonstrating that the reuse piping has been appropriately color-coded Pantone Purple.

Evaluation Area: Groundwater	
After a review of the Discharge Monitoring Reports, are the compliance well parameters meeting the groundwater standards in the time period reviewed (12 months or greater)? [62-520.420 F.A.C.]	Deficiency: (Narrative) A review of the Discharge Monitoring Reports revealed Groundwater Exceedances. Please refer to Table F in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please indicate to the Department how the Facility will prevent exceedances in the groundwater going forward.
	Deficiency: (Narrative)

Is the groundwater monitoring report complete and accurate, including analysis method, laboratory method detection limits, static water level, purging logs, sample collection procedures and treatment? [62-520.900 (2) F.A.C.]	October – December 2022 Groundwater DMR stated that the Background monitoring well MWB-21302 was "MNR" – monitoring not required. This well is required to be sampled by the permit.
	Corrective Action(s): (Narrative) Please provide documentation to the Department on why "MNR" was used for MWB-21302 well.
Do the groundwater monitoring wells meet DEP requirements including tamper-proof locks, unique well label(s), concrete well pad with protective bumpers not containing numerous cracks, and is free of clutter for sampling purposes? [62-520.600 (6)(e) F.A.C.]	Deficiency: (Narrative) At the time of the inspection, it was noted that there were deficiencies at each of the Facility's five Groundwater Monitoring Wells. Please refer to Table G in the Appendix for additional details.
	Corrective Action(s): (Narrative) Please submit documentation to the Department demonstrating that each of the noted Groundwater Monitoring Well deficiencies have been corrected.

Appendix for FLA014478 Inspection Conducted on December 20, 2023

Table A – Buffer, Reagent, and Standard Lot Numbers and Expiration Dates

Standard/Buffer	Lot No.	Expiration Date
pH 4.00 s.u.	H3123B	8/31/2025
pH 7.00 s.u.	L3023A	11/30/2025
pH 10.00 s.u.	K1323D	4/13/2025
Chlorine Standards	A3320	November 2025
Turbidity 0-10 NTU	A2117	* Unreadable and awaiting info

Table B – Operator Names and License Numbers

Operator Name	License Class and Number	Expiration Date
Burke Young	WWC 0014943	04-30-2025
Adrian Charlton	WWA 0014895	04-30-2025

Table C – Discharge Monitoring Report Deficiencies
12/01/2022 – 11/30/2023

Monitoring Period	DMR (R-001) Deficiencies
December 2022 – November 2023	• The Facility is required to report the annual average for Flow from monitoring site FLW-02. Flow from FLW-02 is required to be monitored 5 days/week. There is not, however, a column for this parameter on Part B. Because of this, the annual averages cannot be verified.
November 2023	• A review of the DMR revealed the following calculation errors: o The Percent Capacity was reported as 62.46 %. The calculated value was 61.71%
October 2023	• A review of the DMR revealed the following calculation errors: o The annual average for CBOD (EFA-01) was reported as 2.94 mg/L. The calculated value was 2.69 mg/L. o The monthly average for CBOD (EFA-01) was reported as 7 mg/L. The calculated value was 2.9 mg/L. o The monthly average for Flow (FLW-01) was reported as 0.549 MGD. The Calculated value was 0.531 MGD. o The Percent Capacity was reported as 68.625 %. The calculated value was 59.38%
September 2023	• A review of the DMR revealed the following calculation errors: o The annual average for CBOD (EFA-01) was reported as 2.76 mg/L. The calculated value was 2.70 mg/L. o The monthly average for CBOD (EFA-01) was reported as 7 mg/L. The calculated value was 3.9 mg/L. o The Percent Capacity was reported as 86.11 %. The calculated value was 55%
August 2023	• A review of the DMR revealed the following calculation errors: o The annual average for CBOD (EFA-01) was reported as 2.77 mg/L. The calculated value was 2.87 mg/L. o The Percent Capacity was reported as 94.17 %. The calculated value was 54.46%
July 2023	• A review of the DMR revealed the following transcription errors: o The monthly minimum for Chlorine (EFA-01) was reported as 5.1 mg/L, however, a review of Part B indicates the correct value is 3.8 mg/L. • A review of the DMR revealed the following calculation errors: o The annual average for CBOD (EFA-01) was reported as 2.64 mg/L. The calculated value was 2.86 mg/L. o The monthly average for CBOD (EFA-01) was reported as 7 mg/L. The calculated value was 3.4 mg/L.
June 2023	• A review of the DMR revealed the following calculation errors: o The annual average for CBOD (EFA-01) was reported as 2.52 mg/L. The calculated value was 2.75 mg/L. o The monthly average for CBOD (EFA-01) was reported as 6 mg/L. The calculated value was 3.1 mg/L. o The Fecal Coliform % less than detection (EFA-02) was reported as 100%. The calculated value was 87%.
May 2023	• A review of the DMR revealed the following transcription errors: o The monthly average for CBOD (EFA-01) was reported as 0.476 mg/L, however, Part B indicates that the laboratory MDL is 2 mg/L, so this should be recorded as "<2 mg/L". • A review of the DMR revealed the following calculation errors: • The annual average for CBOD (EFA-01) was reported as 2.39 mg/L. The calculated value was 2.62 mg/L.
April 2023	• A review of the DMR revealed the following calculation errors: • The annual average for CBOD (EFA-01) was reported as 2.47 mg/L. The calculated value was 2.70 mg/L. • The Percent Capacity was reported as 61.75 %. The calculated value was 62.58%
March 2023	• A review of the DMR revealed the following transcription errors:

	○ The annual average for CBOD (EFA-01) was reported as NOD on Part A, however, calculations indicated this was 2.70 mg/L . ○ The annual average for CBOD (EFA-02) was reported as 2.4 mg/L on Part A, however, a review of Part B indicated this was NOD.
February 2023	• A review of the DMR revealed the following transcription errors: ○ The annual average for CBOD (EFA-02) was reported as 2.38 mg/L on Part A, however, a review of Part B indicated this was NOD. ○ The monthly maximum for TSS (EFB-01) was reported as NOD, however, a review of Part B indicates the correct value is <1 mg/L. ○ The monthly minimum for Chlorine (EFA-01) was reported as NOD, however, a review of Part B indicates the correct value is <1 mg/L ○ The Fecal Coliform % less than detection (EFA-02) was reported as 100%, however, a review of Part B indicates that this was NOD. • A review of the DMR revealed the following calculation errors: • The annual average for CBOD (EFA-01) was reported as 2.38 mg/L. The calculated value was 2.70 mg/L.
January 2023	• A review of the DMR revealed the following calculation errors: • The annual average for CBOD (EFA-01) was reported as 2.45 mg/L. The calculated value was 2.75 mg/L. • The Percent Capacity was reported as 57.875 %. The calculated value was 55.7%
December 2022	• A review of the DMR revealed the following transcription errors: ○ The monthly average for CBOD (EFA-01) was reported as 1.75 mg/L, however, Part B indicates that the laboratory MDL is 2 mg/L, so this should be recorded as "<2 mg/L". ○ The monthly maximum for TSS (EFB-01) was reported as 0.548 mg/L, however, a review of Part B indicates the correct value is 1.50 mg/L. ○ The monthly minimum for Chlorine (EFA-01) was reported as 5.0 mg/L, however, a review of Part B indicates the correct value is 3.8 mg/L. • A review of the DMR revealed the following calculation errors: • The annual average for CBOD (EFA-01) was reported as 2.45 mg/L. The calculated value was 2.95 mg/L.

Groundwater Monitoring Report Deficiencies
12/01/2022 – 9/30/2023

Monitoring Period	GW Monitoring Wells Deficiencies
Oct – Dec 2022	• The results for Monitoring Well MWB-21302 are listed as MNR with no explanation provided.

Table E – Late or Missing DMRs
11/1/2020 – 11/30/2023

Monitoring Period	Date Due	Date Received	Days Late
April 2021	5/28/2021	6/4/2021	7

Table F – Effluent Exceedances
11/01/2020 – 11/30/2023

Date	Monitoring Group	Monitoring Location	Parameter	Description	Result	Limit	Units	Statistical Base	Explanation
11/30/2023	R-001	EFA-01	P 51005	Coliform, Fecal, % less than detection	70	75.0	percent	TM - Minimum Total Monthly	None Provided
9/30/2023	R-001	EFA-01	P 74055	Coliform, Fecal	200	25.0	#/100mL	MB - Maximum	None Provided
8/31/2023	R-001	EFA-01	P 74055	Coliform, Fecal	200	25.0	#/100mL	MB - Maximum	
8/31/2023	R-001	EFA-01	P 51005	Coliform, Fecal, % less than detection	70.97	75.0	percent	TM - Minimum Total Monthly	None Provided
7/31/2023	R-001	EFA-01	P 74055	Coliform, Fecal	200	25.0	#/100mL	MB - Maximum	
7/31/2023	R-001	EFA-01	P 51005	Coliform, Fecal, % less than detection	74.19	75.0	percent	TM - Minimum Total Monthly	None Provided
6/30/2023	R-001	EFA-01	P 74055	Coliform, Fecal	200	25.0	#/100mL	MB - Maximum	None Provided

Appendix for FLA014478 Inspection Conducted on December 20, 2023

5/31/2023	R-001	EFA-01	P 74055	Coliform, Fecal	200	25.0	#/100mL	MB - Maximum	May 27th 1530 received a fail fecal coliform; immediately went to reject May 29th 1230 passed fecal set plant back to normal operation Total reject: 0.558mg
5/31/2023	R-001	EFA-01	P 51005	Coliform, Fecal, % less than detection	64.5	75.0	percent	TM - Minimum Total Monthly	
4/30/2023	R-001	EFA-01	P 51005	Coliform, Fecal, % less than detection	60	75.0	percent	TM - Minimum Total Monthly	None Provided
3/31/2022	R-001	EFB-01	P 00530	Solids, Total Suspended	7.4	5.0	mg/L	MB - Maximum	None Provided
2/28/2022	R-001	EFA-02	P 51005	Coliform, Fecal, % less than detection	0	75.0	percent	TM - Minimum Total Monthly	None Provided
2/28/2022	R-001	EFA-02	P 00400	pH	0	6.0	s.u.	ME - Minimum	
2/28/2022	R-001	EFA-02	P 50060	Chlorine, Total Residual	0	1.0	mg/L	ME - Minimum	
10/31/2021	R-001	EFA-01	P 74055		40	25.0	#/100mL	MB - Maximum	None Provided
6/30/2021	R-001	EFA-01	P 74055	Coliform, Fecal	36	25.0	#/100mL	MB - Maximum	Just started operations at this plant. Working to bring plant back into compliance.
5/31/2021	R-001	EFA-01	P 74055	Coliform, Fecal	200	25.0	#/100mL	MB - Maximum	Just started operations at this plant. Working to bring plant back into compliance.

Table G – Groundwater Monitoring Exceedances

Date	<Compliance Well(s)>	<Background Well(s) Limit> MWB-21302	Permit Limit(s)	DMR Comments
Jul – Sept 2023	MWC-21304: Fecal Coliform = 1.0 #/100ml MWC-80020: Fecal Coliform = 2.0 #/100ml	<1 #/100ml	0.0 #/100ml	Resampled 9/20/23 12:45PM Results yield <1 Resampled 9/20/23 11:44 AM Results yield <1
Apr – Jun 2023	MWC-80020: Nitrogen, Nitrate, Total = 17.7 mg/L	0.0 mg/L	10.0 mg/L	None Provided
Jan – Mar 2023	MWC-80019: Fecal Coliform = 1.0 #/100ml	<1 #/100ml	0.0 #/100ml	None Provided
Oct – Dec 2022	MWC-21304: Fecal Coliform = <1.0 #/100ml MWC-80020: Fecal Coliform = <1.0 #/100ml MWC-80019: Fecal Coliform = <1.0 #/100ml	MNR	0.0 #/100ml	None Provided
Jul – Sept 2022	MWC-80020: Fecal Coliform = 5.0 #/100ml	4.0 #/100ml	0.0 #/100ml	Resampled on 9/20/22 and the result was < 1
Apr - Jun 2022	MWC-21304: pH = 6.44 s.u.	6.92 s.u.	6.5 – 8.5 s.u.	None Provided
Apr - Jun 2022	MWC-80020: Nitrogen, Nitrate, Total = 24.5 mg/L	<0.01 mg/L	10.0 mg/L	None Provided
Jan – Mar 2022	MWC-21304: pH = 6.41 s.u.	7.09 s.u.	6.5 – 8.5 s.u.	None Provided
Jan – Mar 2022	MWC-80020: Nitrogen, Nitrate, Total = 18 mg/L	<0.01 mg/L	10.0 mg/L	None Provided
Oct – Dec 2021	MWC-21304: pH = 6.11 s.u. MWC-80020: pH = 6.3 s.u.	6.89 s.u.	6.5 – 8.5 s.u.	None Provided
Oct – Dec 2021	MWC-80020: Nitrogen, Nitrate, Total = 10.8 mg/L	NOD	10.0 mg/L	None Provided
Jul – Sept 2021	MWC-21304: pH = 6.37 s.u.	6.9 s.u.	6.5 – 8.5 s.u.	Heavy rain
Jul – Sept 2021	MWC-80020: Fecal Coliform = 2.0 #/100ml	1.0 #/100ml	0.0 #/100ml	< 2.00 ND= Not detected at the reporting limit
Apr - Jun 2021	MWC-21304: pH = 6.29 s.u.	6.82 s.u.	6.5 – 8.5 s.u.	Just started operations of plant. Working to bring plant back into compliance.
Apr - Jun 2021	MWC-80020: Nitrogen, Nitrate, Total = 15 mg/L	0.01 mg/L	10.0 mg/L	Just started operations of plant. Working to bring plant back into compliance.
Jan – Mar 2021	MWC-21304: Total Dissolved Solids = 1240 mg/L MWC-80019: Total Dissolved Solids = 668 mg/L	388 mg/L	500 mg/L	None Provided

Jan – Mar 2021	MWC-21304: Chloride as (Cl) = 394 mg/L MWC-80020: Chloride as (Cl) = 324 mg/L	15.8 mg/L	250 mg/L	None Provided
Jan – Mar 2021	MWC-21304: pH = 6.44 s.u.	7.15 s.u.	6.5 – 8.5 s.u.	None Provided
Jan – Mar 2021	MWC-80020: Nitrogen, Nitrate, Total = 55.1 mg/L	<0.01 mg/L	10.0 mg/L	None Provided
Oct – Dec 2020	MWC-21304: Chloride as (Cl) = 970 mg/L	220 mg/L	500 mg/L	None Provided
Oct – Dec 2020	MWC-21304: Chloride as (Cl) = 295 mg/L	13.9 mg/L	250 mg/L	None Provided

Table H – Groundwater Monitoring Well Deficiencies

Groundwater Monitoring Well Deficiencies	
Well Description	**Deficiencies**
F1	• The well label does not match the Monitoring Well ID on the Permit. • The well pad is severely cracked.
F2	• The well label does not match the Monitoring Well ID on the Permit. • The well was not locked. • There was water inside the protective casing. • There was no cap on the well inside the protective casing.
F3	• The well label does not match the Monitoring Well ID on the Permit. • The well was not locked. • There was no cap on the well inside the protective casing.
F4	• The well label does not match the Monitoring Well ID on the Permit. • The well pad was overgrown. • There was erosion around the well pad.
F5	• The well label does not match the Monitoring Well ID on the Permit. • The well was not locked. • There was no cap on the well inside the protective casing.

Table I – Sanitary Sewer Overflows

LOCATION	DATE DISCHARGE OCCURRED	DATE DISCHARGE REPORTED	SPILL VOL (GAL)	SPILL VOL RECOVERED (GAL)	SPILL CHARAC-TERISTIC	CAUSE	AREA AFFECTED	CLEAN-UP
7075 Spotted Fawn Ct	6/30/2023 - 8:00 AM	6/30/2023	1,500	1,200	Raw Wastewater	Rags	Ground	Repair, Lime Vac Truck

Forest Utilities WWTP (FLA014478)
Photos by Alex McSurley on 12/20/23

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Alex McSurley



1. Bar Screen



2. Surge Tank



3. Surge Tank



4. Aeration Blowers



5. Aeration Basin



6.Aeration Basin

Forest Utilities WWTP (FLA014478)
Photos by Alex McSurley on 12/20/23

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Alex McSurley



7. Aeration Basin



8. Aeration Basin



9. Clarifier



10. Clarifier



11. Sludge Holding Tank



12. Sludge Holding Tank

Forest Utilities WWTP (FLA014478)
Photos by Alex McSurley on 12/20/23

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Alex McSurley



13. CCC



14. Falling Baffle in CCC



15. Bridge Filter



16. Crack and Spalling on Tank Wall



17. Leak on Aeration/Digester



18. Leak on Tank Wall

Forest Utilities WWTP (FLA014478)
Photos by Alex McSurley on 12/20/23

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Alex McSurley



19. Lift Station Wet Well



20. Lift Station Wet Well



21.Reuse Piping (Not Pantone Purple)



22. Reuse Storage Pond



23. MWB-21302



24. MWI-21303



25. MWC-21304

Forest Utilities WWTP (FLA014478)
Photos by Alex McSurley on 12/20/23

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Alex McSurley



26. MWC-80019



27. MWC-80020

FLORIDA DEPARTMENT OF Environmental Protection

South District
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Fort Myers, FL 33902-2549
SouthDistrict@FloridaDEP.gov

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

Memorandum

TO: File
THROUGH: Landon Reigelman, Environmental Manager
FROM: Alex McSurley, Environmental Specialist II
Deanna Newburg, Environmental Consultant
DATE: April 3, 2024
SUBJECT: Forest Utilities WWTP – FLA014478 WL Meeting Notes

Date of Meeting: March 4, 2024
In Attendance: DEP: Alex McSurley, Landon Reigelman, Deanna Newburg
Forest Utilities: Mitch Gilbert, Elaina Faircloth, Jim Elliot, Matt Gillispie

An enforcement meeting was held on Microsoft Teams with Fort Myers Campground representatives on March 4, 2024, based on the Complaint inspection that found the Facility to be out of compliance. The non-compliance issues documented in the inspection report were addressed during the meeting.

A formal response relative to the meeting will be due Friday May 3, 2024. Corrective Actions taken by the Facility since the December 20, 2023, inspection are listed below and include notes from the meeting and the Department's response.

Evaluation Area: Sampling

Deficiency: A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. [62-610.463(4)] If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020. Additionally, October – December 2022 Groundwater DMR stated that the Background monitoring well MWB-21302 was "MNR" – monitoring not required. This well is required to be sampled by the permit.

> ***Response:*** *The Facility was able to locate the samples and states they were resubmitted through the portal for 2021. They also were able to get the results for MWB-21302 from the lab and the Part D DMR for October – December 2022 has been resubmitted. The department has still not been able to locate the pathogen monitoring form and associated results that would have been due during the permit renewal process in 2020; please send the required form to sd-wwinspect@floridadep.gov.*

Deficiency: At the time of the inspection, the Facility did not have a NIST thermometer certification for the composite sampler.

Response: *The Facility reported that composite samples have been collected by taking an hourly grab sample and manually compositing the samples in their refrigerator. Since the inspection, a NIST certified thermometer has been provided for the refrigerator. Additionally, the Facility has purchased two refrigerated composite samplers to be kept onsite. DEP requested the Facility submit documentation demonstrating that the composite samplers will be set up to allow flow-proportional sampling. The Facility will provide a copy of the NIST certification for the refrigerator thermometer, as well as an update on the status of the new composite samplers in the Formal Response.*

Evaluation Area: Records and Reports

Deficiency: A review of the Discharge Monitoring Reports revealed deficiencies. Please refer to Table C in the Appendix for additional details.

Response: *The Facility has resubmitted the DMRs with noted calculation and transcription errors. No further action is needed at this time.*

Deficiency: A timeliness review of the DMRs revealed there was one late submission in April 2021. Please refer to Table E in the Appendix for additional details.

Response: *The Facility will ensure all DMRs are submitted timely going forward. No further action is needed at this time.*

Evaluation Area: Facility Site Review

Deficiency: At the time of the inspection, one of the surge blowers was not operational, and one of the aeration blowers was not operational.

Response: *The blowers have been removed and sent for repairs. The Facility believes that, once repaired, the blowers will help with the excessive foam in the surge tank and digester. This is projected to be done in 30 days. The Facility will provide an update in the Formal Response.*

Deficiency: At the time of the inspection, the digesters contained an excessive amount of foaming.

Response: *The foaming was caused by a process error that has been corrected. A photo demonstrating the Digester is free from excessive foam will be submitted with the Formal Response.*

Deficiency: At the time of the inspection, it was noted that one of the transfer pumps from the surge tanks was not operational.

Response: *The transfer pump has been repaired and is back online. The Facility has also added telemetry and SCADA to this system to help quickly identify issues in the future. Documentation of these repairs will be submitted in the Formal Response.*

Deficiency: At the time of the inspection, there were several cracks noted on the tank walls on the aerator and digester basins. There were also a couple of small leaks noted.

Response: *The Facility reported that the seeping cracks will be repaired in 90 -120 days. It may be possible to complete repairs in 60 days, but the Facility feels that 90 – 120 days is more realistic. At this time, the Facility is under contract to be sold. The new owners will make more permanent repairs to the tanks once the sale is complete.*

Deficiency: At the time of the inspection, the surge tanks contained excessive foam and appeared to be turning septic. It was also noted that one of the blowers for the surge tanks was inoperable, which may have caused these conditions.

Response: *The surge blower has been removed and sent for repairs. The Facility believes that, once repaired, the blower will help with the excessive foam in the surge tank. This is projected to be done in 30 days. The Facility will provide an update in the Formal Response.*

Evaluation Area: Effluent Quality

Deficiency: The Facility has had chronic effluent exceedances.

Response: *The Facility has replaced the chlorination system and added analyzers tied to the SCADA system. This will allow the Facility to be notified if chlorine is running low. This has helped reduce effluent exceedances since it was incorporated.*

Evaluation Area: Effluent Disposal

Deficiency: At the time of the inspection, it was noted that the piping at one of the reuse pumping stations was not colored with Pantone Purple.

Response: *This is anticipated to be completed within 30 – 60 days. The Facility will submit an update in the Formal Response.*

Evaluation Area: Groundwater

Deficiency: A review of the Discharge Monitoring Reports revealed Groundwater Exceedances.

Response: *The Facility is currently evaluating the cause of the nitrogen exceedances in the monitoring wells. An update will be provided in the Formal Response.*

Deficiency: At the time of the inspection, it was noted that there were deficiencies at each of the Facility's five Groundwater Monitoring Wells.

Response: *The Facility has replaced the broken caps and locks on the groundwater monitoring wells. The cracked well pad at the F1 well, and the well labels are still to be corrected. An update will be provided in the formal response.*

The facility will submit their formal response by Friday, May 3, 2024.

Florida Utility Solutions

15275 Collier Blvd., Suite 201-268

Naples, FL 34119

May 3, 2024

Re: Warning Letter
Forest Utilities WWTP
Facility ID No. FLA014478
Lee County - DW

Dear Ms. Sweigert,

Forest Utilities WWTP is working in conjunction with Florida Utility Solutions to resolve the described issues. Please see below answers for the items listed in the warning letter.

1. Sampling –
   - Giardia and Cryptosporidium sampling was performed on 4/1/2021. I have attached sample results.
   - We have an NIST Thermometer on site. Please see attached photo.

2. Records and Reports –
   - DMR deficiencies have been corrected and resubmitted.
   - Giardia and Cryptosporidium sampling was performed on 4/1/2021. I have attached sample results.
   - Giardia and Cryptosporidium sampling was performed on 4/1/2021. I have attached sample results.
   - All future DMR's will be submitted in a timely manner.

3. Facility Site Review –
   - The surge tank blower has been repaired. Please see attached photo of new motor and rebuilt blower.
   - The aeration basin blower has been repaired. Please see attached photo of new motor on blower.
   - No foam in digester. Please see attached photo.

- Surge tank transfer pump has been repaired and installed. Please see attached photo.
- Crack in digester basin as been quoted by a qualified contractor for repair. The tank has been drained and put out of use until the repair has been made to prevent any further leaking. Repair is scheduled to start 5/15/2024.
- We adjusted the blowers to prevent excessive foaming in the aeration basins. Please see attached photo.

4. Effluent Quality –
   - Some of the effluent exceedances were data entry error and have been corrected on the DMR's and resubmitted, such as a pH of "0".
   - We have installed a new chlorine system. We have not had any fecal exceedances since. These two corrections should prevent any future effluent exceedances.

5. Effluent Disposal –
   - The irrigation pump station does not belong to Forest Utilities, it belongs to the Forest Country Club and Golf Course. We have notified them that the piping should be painted purple.

6. Groundwater –
   - We are working with the engineering firm and a geological firm to address the exceedances and determine the cause and ways to prevent future exceedances. Currently we believe the wells may have ground water intrusion and may need remediated. We also believe the golf course maintenance practices may be a contributing factor.
   - Well Deficiencies – All wells have had new pads installed and had erosion issues repaired. New locks and latches have been placed on all wells. Overgrowth has been cut back to an acceptable distance. The wells have been relabed. Please see attached photos.

We appreciate your patience as we work through these items. Please let us know if there is anything further, we need to do at this time.

Sincerely,

Mitch Gilbert

Florida Utility Solutions
Office 239.513.0445



Surge tank blower.



Surge Tank Blower.



No foam in digester. Has been drained.



Surge tank transfer pumps working.

Surge Tank



Aeration Basin



Monitoring wells with locks, new pads, erosion control and vegetation removal.











NIST Thermometer and Certificate.





From:	James Elliott
To:	McSurley, Alexandria
Cc:	Matt Gillispie; Mitch Gilbert; Doris Swor; Sonne DeVries; forestu@aol.com
Subject:	FW: Forest Utilities WWTP Pictures Dated: May 31, 2024 - Digester Tank Wall Concrete Wall Repair Documentation Facility ID No. FLA014478 SI Proj. # 170-02-21
Date:	Thursday, July 11, 2024 2:52:02 PM
Attachments:	Photos 1 & 2.pdf Photos 3 & 4.pdf Photos 5 & 6.pdf

EXTERNAL MESSAGE
This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Alex, the attached photographs document the Forest Utilities WWTP digester tanks reinforced concrete walls repair. The digester interior walls wee sandblasted and coated as shown. An exterior vertical crack at a joint between the digesters was cleaned and sealed with epoxy as shown. This documentation is intended as a follow-up to Florida Utility Solutions May 3, 2024 Warning Letter response item 3. Relative to cracks in the digester basins. Should you have any questions, do not hesitate to call. Jim

---

From: Joe Nuccio <JNuccio@source-inc.com>
Sent: Thursday, July 11, 2024 2:33 PM
To: James Elliott <jpelliott@source-inc.com>
Subject: Forest Utilities WWTP Pictures Dated: May 31, 2024 - Project #170-02-21

Jim, see attached

Joe Nuccio
Cad Coordinator
Source, Inc
1334 Lafayette Street
Cape Coral, Florida 33904
Phone: (239) 549 2345
Fax: (239) 549-6779
jnuccio@source-inc.com

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PHOTO 1
EXTERIOR
WALL
REPAIR



PHOTO 2
EXTERIOR
WALL
REPAIR



PHOTO 3
EAST DIGESTER
CONCRETE
WALL
REPAIR



PHOTO 4
EAST DIGESTER
CONCRETE
WALL
REPAIR



PHOTO 5
WEST DGESTER
CONCRETE
WALL
REPAIRS



PHOTO 6
WEST DIGESTER
CONCRETE
WALL
REPAIR

WWTP MALFUNCTION / ABNORMAL EVENT REPORT

Please note for accordance with the Florida Administrative Code (F.A.C.) Rules. This form is provided for your convenience only. You may complete this form and FAX it to the Wastewater Section at (850)412-0590 or email to SD-AbnormalEvents@dep.state.fl.us. If spill is greater than 1000 gallons you MUST call State Watch Point at 1-800-320-0519. All items with an asterisk (*) are requirements by rule that must be completed.

*Facility Name:	Forest Utilities	*County:	Lee County
*Permit Number:	FLA014478	*Reporter Phone:	239-825-7818
*Reporter Name:	Mitch Gilbert	Method Of Contact:	phone
*Reporter Address:	15275 Collier Blvd. Suite 201-268 Naples, FL 34119	*Responsible Party Phone:	239-825-7818
*Responsible Party:	Mitch Gilbert	*Responsible Party Address:	15275 Collier Blvd. Suite 201-268 Naples, FL 34119

*DEP:	☒	*Date: 8/30/24	*Time: 3:00pm	*Person Contacted: Email
*State Warning Point:	☐	*Date:	*Time:	Person Contacted:
*Other:	☐	*Date:	*Time:	Person Contacted:

Spill Information

*Spill Characteristic	*Source		*Area Affected
☒ Raw Wastewater	X Lift Station # 13	☐ Surge Tank	☐ Storm Water
☐ Effluent	☐ Line Break	☐ Aeration Tank	☐ Surface Water/ _____
☐ Mixed Liquor	☐ Filter	☐ Clarifier	☐ Ground
☐ Sludge	☐ Disposal System	☐ Digester	☐ Containment Area
☐ Other _____	Other -Plugged line	☐ Other	☒ Other/ AROUND AREA

*Date / Time Discharge Occurred: 8/30/24 12:00PM

*Amount of Discharge (1) 300 total gallons OR (2) _____ gallons per hour for _____ hours.

*Amount Recovered - 300 gallons

*Ongoing: ☐ * Ceased: ☒

*Physical location/ address/ other reference: 6308 Sugar Bush Ln, Fort Myers, FL 33908

* Malfunction/Cause

☒ Power Outage	☐ RAS Line	Weather
☐ Pump Failure	☐ Leak	☐ Lightning
☐ Disinfection System Failure	☐ Switch/Timer Failure	☐ Heavy Rainfall
☐ Clarifier Failure	☐ Filtration System Problem	☐ High Winds
☐ Filter Bypass	☐ Clog or Blockage	☐ Tropical Storm: _____
☐ Blower Failure	☐ Line Break	☐ Hurricane:
☐ Other _____	☐ Other	☒ Other: clear

* Explain: Power Failure From FPL.

* Effluent Limit Violations

☐ Cl_2 _____ mg/L	☐ Turbidity _____ NTU	☐ pH _____ SU
☐ TSS _____ mg/L	☐ NO_3 _____ mg/L	☐ $CBOD_5$ _____ mg/L
☐ Other _____	☐ Fecal Coliforms _____ CFU/100ml	☐ Abnormal Flow _____ MGD

* Corrective / Remedial Action Being Taken

☒ Auxiliary Power System On-Line	☐ Back-Up On-Line	☐ Notified Local Authorities
☒ Disinfect with LIME	☐ Samples Taken	☐ Notified State Warning Point
☐ Bypass	☐ Restore Power	☒ Notified DEP
☐ Contained On-site	☐ Replace Equipment/Supplies	☐ Line Repaired
☐ Other	☐ VAC Truck/Destination: _____	☐ Signs Posted Near Affected Waters

* Remedial Action Being Taken / Estimated Time for Completion of Repairs: Complete - Installed portable generator for power until FPL power can be restored. Will monitor daily. Recovered all raw sewage with vactor truck. Disinfected with lime.

WWTP MALFUNCTION / ABNORMAL EVENT REPORT

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*Facility Name:	Jamaica Bay	*County:	Lee County
*Permit Number:		*Reporter Phone:	239-825-7818
*Reporter Name:	Mitch Gilbert	Method Of Contact:	phone
*Reporter Address:	15275 Collier Blvd. Suite 201-268 Naples, FL 34119	*Responsible Party Phone:	239-825-7818
*Responsible Party:	Mitch Gilbert	*Responsible Party Address:	15275 Collier Blvd. Suite 201-268 Naples, FL 34119

*DEP: ☒	*Date: 10/14/2024	*Time:	*Person Contacted: Email
*State Warning Point: ☐	*Date:	*Time:	Person Contacted:
*Other: ☐	*Date:	*Time:	Person Contacted:

Spill Information

*Spill Characteristic	*Source		*Area Affected
☒ Raw Wastewater	Lift Station	☐ Surge Tank	☐ Storm Water
☐ Effluent	☐ Line Break	☐ Aeration Tank	☐ Surface Water/ _____
☐ Mixed Liquor	☐ Filter	☐ Clarifier	X Ground
☐ Sludge	☐ Disposal System	☐ Digester	☐ Containment Area
☐ Other _____	☒ Other -MANHOLE	☐ Other	Other

*Date / Time Discharge Occurred: 10/13/24 3:00 PM

*Amount of Discharge (1) 200 total gallons OR (2) _____ gallons per hour for _____ hours.

*Amount recovered 200 gallons

*Ongoing: ☐ * Ceased: ☒

*Physical location/ address/ other reference: 15235S.TamiamiTrail, Fort Myers, FL 33908

* Malfunction/Cause

☐ Power Outage	☐ RAS Line	Weather
☐ Pump Failure	☐ Leak	☐ Lightning
☐ Disinfection System Failure	☐ Switch/Timer Failure	☐ Heavy Rainfall
☐ Clarifier Failure	☐ Filtration System Problem	☐ High Winds
☐ Filter Bypass	Clog or blockage	☐ Tropical Storm: _____
☐ Blower Failure	☐ Line Break	X Hurricane: Milton
☐ Other	☐ Other	Other: clear

* Explain: Hurricane Milton caused a power outage and the manhole was backing up onto the street

* Effluent Limit Violations

☐ Cl_2 _____ mg/L	☐ Turbidity _____ NTU	☐ pH _____ SU
☐ TSS _____ mg/L	☐ NO_3 _____ mg/L	☐ $CBOD_5$ _____ mg/L
☐ Other _____	☐ fecal coliforms _____ CFU/100ml	☐ Abnormal Flow _____ MGD

* Corrective / Remedial Action Being Taken

☐ Auxiliary Power System On-Line	Back-Up On-Line	☐ Notified Local Authorities
☐ Disinfect with LIME	☐ Samples Taken	☐ Notified State Warning Point
☐ Bypass	☐ Restore Power	☒ Notified DEP
☒ Contained On-site	☐ Replace Equipment/Supplies	☐ Line Repaired
☐ Other	VAC Truck/Destination: _____	☐ Signs Posted Near Affected Waters

* Remedial Action Being Taken / Estimated Time for Completion of Repairs: Complete - limestone was spread over the entire area

WWTP MALFUNCTION / ABNORMAL EVENT REPORT

Please note for accordance with the Florida Administrative Code (F.A.C.) Rules. This form is provided for your convenience only. You may complete this form and FAX it to the Wastewater Section at (850)412-0590 or email to SD-AbnormalEvents@dep.state.fl.us. If spill is greater than 1000 gallons you MUST call State Watch Point at 1-800-320-0519. All items with an asterisk (*) are requirements by rule that must be completed.

*Facility Name:	Forest Utilities	*County:	Lee County
*Permit Number:	FLA014478	*Reporter Phone:	239-825-7818
*Reporter Name:	Mitch Gilbert	Method Of Contact:	phone
*Reporter Address:	15275 Collier Blvd. Suite 201-268 Naples, FL 34119	*Responsible Party Phone:	239-825-7818
*Responsible Party:	Mitch Gilbert	*Responsible Party Address:	15275 Collier Blvd. Suite 201-268 Naples, FL 34119

*DEP: ☒	*Date: 11/21/24	*Time: 11:10 AM	*Person Contacted: Email
*State Warning Point: ☐	*Date:	*Time:	Person Contacted:
*Other: ☐	*Date:	*Time:	Person Contacted:

Spill Information

*Spill Characteristic	*Source		*Area Affected
☒ Raw Wastewater	Lift Station	☐ Surge Tank	☐ Storm Water
☐ Effluent	☐ Line Break	☐ Aeration Tank	☐ Surface Water/ _____
☐ Mixed Liquor	☐ Filter	☐ Clarifier	☐ Ground
☐ Sludge	☐ Disposal System	☐ Digester	☐ Containment Area
☐ Other _____	X Other -MANHOLE	☐ Other	☒ Other/ AROUND AREA

*Date / Time Discharge Occurred: 11/21/24 9:15 AM

*Amount of Discharge (1) 200 total gallons OR (2) _____ gallons per hour for _____ hours.

*Amount recovered 200 gallons

*Ongoing: ☐ * Ceased: ☒

*Physical location/ address/ other reference: 16556 Bear Cub Court Ft Myers, FL 33908

* Malfunction/Cause

☐ Power Outage	☐ RAS Line	Weather
X Pump Failure	☐ Leak	☐ Lightning
☐ Disinfection System Failure	☐ Switch/Timer Failure	☐ Heavy Rainfall
☐ Clarifier Failure	☐ Filtration System Problem	☐ High Winds
☐ Filter Bypass	☐ Clog or blockage	☐ Tropical Storm: _____
☐ Blower Failure	☐ Line Break	☐ Hurricane:
☐ Other	☒ Other	☒ Other: clear

* Explain: Floats in the lift station went bad

* Effluent Limit Violations

☐ Cl_2 _____ mg/L	☐ Turbidity _____ NTU	☐ pH _____ SU
☐ TSS _____ mg/L	☐ NO_3 _____ mg/L	☐ $CBOD_5$ _____ mg/L
☐ Other _____	☐ Fecal Coliforms _____ CFU/100ml	☐ Abnormal Flow _____ MGD

* Corrective / Remedial Action Being Taken

☐ Auxiliary Power System On-Line	Back-Up On-Line	☐ Notified Local Authorities
☒ Disinfect with LIME	☐ Samples Taken	☐ Notified State Warning Point
☐ Bypass	☐ Restore Power	☒ Notified DEP
Contained On-site	X Replace Equipment/Supplies	☐ Line Repaired
☐ Other	VAC Truck/Destination: _____	☐ Signs Posted Near Affected Waters

* Remedial Action Being Taken / Estimated Time for Completion of Repairs: Complete - Cleaned up the area with LIME

Florida Department of Environmental Protection

Annual Reuse Report

Part I – Instructions

1. This form is to be submitted on or before January 1 following the completion of each fiscal year (October 1 through September 30). Submittal is required by Rule 62-610.870, F.A.C. This report will be used to develop and maintain a reuse inventory. It will not be used for determination of compliance with permit limitations, other than requirements to submit this report. If flow monitoring information is not available for individual reuse types or types of users, please provide your best estimates of flows allocated to individual reuse types or types of users.

2. Submit the report (including all attachments):

   a. Electronically using the DEP Online Business Portal (https://www.fldepportal.com/DepPortal/go/home).

   b. To the appropriate water management district.

3. When submitting the form electronically through the DEP online business portal, you do not need to submit a hard copy of the form as well to the Department. Once the form is submitted and accept through the DEP online business portal, a copy of the report will be generated and available through the DEP online document warehouse. That copy of the report can be submitted to the appropriate water management district to fulfill reporting requirements.

4. Completion of this report is required for all domestic wastewater facilities having permitted capacities of 0.1 mgd or larger which contribute reclaimed water to one or more reuse systems permitted under Chapter 62-610, F.A.C. This form is to be completed annually for each separate reuse system. For purposes of this form, "reuse system" means a network of pipes, pumping facilities, storage facilities, and appurtenances designed to convey and distribute reclaimed water from one or more domestic wastewater treatment facilities to one or more users of reclaimed water.

5. Use the units specified in the form. For flows, show annual average flows (in mgd). This can be obtained by averaging daily flows over a 365-day period, dividing the total annual volume by 365, or by averaging the 12 monthly average flow values.

6. Be sure to submit the required attachments (see Part X on pages 8 and 9 of this form).

7. The cover sheet of your permit will identify portions of your project classified as "reuse" and portions classified as "effluent disposal." Rule 62-610.810, F.A.C., lists the criteria for classifying projects (or portions of projects) as "reuse" or "effluent disposal."

Part II - General Information

1. Reporting Period: October 1, 2023 through September 30, 2024
2. Date Submitted: _____
3. Person Completing This Form

   Name: Matt Gillispie

   Title: Operations Manager

   Organization: Florida Utility Solutions

   Mailing Address: 15275 Collier Blvd Suite 201-268

   City/State/Zip Code: Naples, FL 34119

   Telephone: (239) 513-0445

   E-mail: matt@floridautilitysolutions.com
4. Reuse System Name: Forest Utilities WWTP
5. Domestic Wastewater Treatment Facilities Providing Reclaimed Water to This Reuse System

   a. Location of Facilities

   City: Fort Myers County: Lee

DEP District (check one):

- ☐ Northwest (Pensacola)
- ☐ Northeast (Jacksonville)
- ☐ Southwest (Tampa)
- ☐ Central (Orlando)
- ☐ Southeast (West Palm Beach)
- ☑ South (Ft. Myers)

Water Management District (check one):

- ☐ Northwest Florida (Havana)
- ☐ Suwannee River (Live Oak)
- ☐ Southwest Florida (Brooksville)
- ☐ St. Johns River (Palatka)
- ☑ South Florida (West Palm Beach)

b. Domestic Wastewater Treatment Facility Information

Enter the name of the facility, the DEP identification number, disinfection level,[a] permitted capacity, and annual average flow for each treatment facility providing reclaimed water to this reuse system.

Table I. Facility Information

Facility Name	DEP Identification Number	Disinfection Level [a]	Permitted Capacity (mgd)	Average Flow (mgd)
Please see the attached sheet.	Please see the attached sheet.	Please see the attached sheet.	Please see the attached sheet.	Please see the attached sheet.
Total Treated Wastewater				0.488

[a] Enter one of the following codes for disinfection level for each treatment facility:
HI = High-level disinfection, as described in Rule 62-600.440(6), F.A.C.
IM = Intermediate disinfection, as described in Rule 62-600.440(7), F.A.C.
BA = Basic disinfection, as described in Rule 62-600.440(5), F.A.C.
LL = Low-level disinfection, as described in Rule 62-600.440(8), F.A.C.
HB = High-level disinfection & basic disinfection for portions of the treated flow.
FT = Full treatment disinfection, as described in Rule 62-610.563(3)(b), F.A.C.

Part III - Reclaimed Water and/or Effluent Available for Reuse or Disposal

Table II. Available Reclaimed Water and/or Effluent

Source of Water	Average Flow (mgd)
Treated Wastewater [Enter the Total Average Flow from Table I]	0.488
Supplemental Water Supplies added by the utility - Surface Water	0
Supplemental Water Supplies added by the utility - Stormwater	0
Supplemental Water Supplies added by the utility - Ground Water	0
Supplemental Water Supplies added by the utility - Drinking Water	0
Demineralization Concentrate (Blended with final reclaimed water only)	0
Water Recovered from ASR [b]	0
Total Water Available for Reuse or Disposal [Should be equal to the Total Reuse Flow in Table III below]	0.4880

[b] Aquifer Storage and Recovery (ASR) - This activity is described in Rule 62-610.466, F.A.C. If you have an ASR system included in your permit for the reuse system, please make separate entries in

both Part III (for the total average flow withdrawn from the ASR well) and in Part VI (for the total average flow injected into the ASR well).

Part IV - Reuse

For each reuse activity, enter the permitted capacity, average flows, and acreage. Do not duplicate any of these entries in Part V of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the reuse types listed in this part. Make discrete entries (do not show ranges). Show totals at the bottom of the table.

Table III. Reuse Activities

Reuse Type	Reuse Sub-Type	Part	Capacity (mgd)	Flow (mgd)	Area (acres)
Public Access Areas & Landscape Irrigation	Golf Course Irrigation	III	2.0	0.488	280
	Residential Irrigation	III			
	Other Public Access Areas	III			
Agricultural Irrigation & Sprayfields	Edible Crops (Be sure to attach the inventory of edible crop irrigation. See Part X of this form.)	III			
	Grass, Pasture, Other Crops	II			
Ground Water Recharge & Indirect Potable Reuse	Rapid Infiltration Basins (Including Some Perc Ponds) [c]	IV			
	Absorption Fields [c]	IV			
	Surface Water Augmentation (Discharge to Class I Waters)	V			
	Injection to Potable Aquifers	V			
Industrial	At Treatment Plant	VII			
	At Other Facilities	VII			
Toilet Flushing		III			
Fire Protection		III			

Wetlands				
Other (Specify)				
Total Reuse **[Enter total flow on Line 1 in Part VI of this form.]**		2.0	0.488	280.0

° To be considered "reuse," either of the following conditions must exist:

* There are multiple basins or absorption fields that are routinely wetted, dried, and maintained in accord with Part IV of Chapter 62-610, F.A.C., or
* Continuously-loaded ponds must meet the higher treatment/disinfection requirements in Rule 62-610.525, F.A.C.

If neither condition is met, the perc pond or absorption field is "effluent disposal" and should be recorded in Part V in this form (under "Other").

Part V - Effluent Disposal

For each effluent disposal activity, enter the permitted capacity and average flow. Do not duplicate any of these entries in Part IV of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the effluent disposal types listed in this part. Make discrete entries (do not show ranges) for capacity and flow. Show totals at the bottom of the table.

Table IV. Disposal Activities

Disposal Type	Disposal Sub-Type	Permitted Capacity (mgd)	Average Flow (mgd)
Surface Water Discharges	Ocean Outfall	0	0
	To Coastal or Estuarine Waters	0	0
	To Wetlands	N/A	N/A
	To Other Surface Waters	0	0
Deep Well Disposal		0	0
Other (specify)			
Total Flow Disposed **[Enter total flow on Line 2 in Part VI of this form.]**		0.0	0.0

Part VI - Summary of Reuse and Disposal

Table V. Reuse and Disposal Summary

Reuse or Disposal Activity	Average Flow (mgd)
1. **Reuse** (From Total Flow of Table III)	0.488
2. **Effluent Disposal** (From Total Flow of Table IV)	0.0
3. **Flow Stored in ASR** (See note [b] on ASR in Part III.)	0
Total (Should equal Total Flow of Table II) [d]	0.488

[d] The totals in Tables II and V will not be equal if one of the following conditions exists (check as appropriate):

☐ The reuse system includes an ASR system and the amounts injected and withdrawn during the year differ.

☐ The reuse system includes one or more reuse activities in which reclaimed water is returned to the treatment facility after its use, where it is then available for reuse or disposal.

Part VII – Reuse Activities, Numbers of Customers, and Backup Discharges

1. How many single-family residences have reclaimed water service?
   0

2. How many golf courses are irrigated using reclaimed water?
   2

3. How many parks or playgrounds are irrigated using reclaimed water?
   0

4. How many schools are irrigated using reclaimed water?
   0

5. Is reclaimed water used to flush toilets? ☐ Yes ☑ No If yes, list locations where reclaimed water is used for toilet flushing: _____

6. Is reclaimed water used for fire protection? ☑ No ☐ Yes, in sprinkler systems

   ☐ Yes, in fire hydrants ☐ Yes, other (please describe): _____

7. How many cooling towers use reclaimed water from this reuse system? 0

8. List or describe any unique or unusual uses of reclaimed water. N/A

9. Is there a surface water discharge that serves as a backup discharge for the reuse system?

☑ No ☐ Yes, a Limited Wet Weather Discharge permitted under Rule 62-610.860, F.A.C.

☐ Yes, permitted under the APRICOT Act [Section 403.086(7), F.S.]

☐ Yes, permitted under other rules governing surface water discharges

10. Do you require construction of reclaimed water piping in new residential or other developments?

☐ Yes ☑ No

11. Do you require connection to the reclaimed water system when reclaimed water service becomes available?

☐ Yes ☑ No

Part VIII – Cross-Connection Control Activities

Rule 62-610.469, F.A.C., imposes cross-connection control requirements on reuse systems permitted under Part III of Chapter 62-610, F.A.C. This includes requirements for the implementation of cross-connection control programs by all public water supply systems serving areas that are within the general reclaimed water service area. Color-coding, labeling, and separation distance requirements are included. In addition, inspections within the reclaimed water service area are required. For purposes of this form, "cross-connection" means a pipe-to-pipe connection between drinking water pipes and reclaimed water pipes.

1. Are all public water supply systems serving areas that are within the general reuse service area actively implementing and enforcing their cross-connection control programs?
   ☑ Yes ☐ No

   a. Have all of these cross-connection control programs been accepted by the DEP or the approved county health department? ☑ Yes ☐ No

2. How many illegal cross-connections have been identified during the reporting period? 0

   a. How many of these cross-connections have been eliminated? 0

   b. Please, attach a description of identified cross-connections and efforts taken to eliminate them.

3. How many new connections were made to the reclaimed water system during the reporting period? 0

   a. How many of the new reclaimed water connections were inspected at the time of initial connection? 0

4. How often are the reclaimed water connections of existing residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)?
   Not Inspected

   a. How often are the reclaimed water connections of existing non-residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)? Not Inspected

5. In addition to the number of new connections inspected in Item 3 above, how many existing connections were inspected during the reporting period?
   0

Part IX - Rates Charged for the Use of Reclaimed Water

Please, list the fees charged for the use of reclaimed water. Please do not enter wastewater or sewer charges. If reclaimed water is provided at no cost, enter zeroes in both blanks. If the fee structure includes both flat rate and gallonage charge components, make a positive entry in both spaces. Make all entries in the units shown.

1. How much do you charge a single-family residential customer (assume a 0.2-acre lot) for the use of reclaimed water?

Flat rate ($/month/connection) _____

Gallonage charge (cents/1000 gal.) _____

2. How much do you charge non-residential customers, such as golf courses, (assume 0.1 mgd on a 50-acre site) for the use of reclaimed water?

Flat rate ($/month/connection) 0

Gallonage charge (cents/1000 gal.) 0.15

Part X - Required Attachments

Check, as appropriate, and attach the required documentation.

☐ **Inventory of Edible Crop Irrigation** - If reclaimed water is used to irrigate edible crops at commercial agricultural sites, attach a copy of the current edible crop irrigation inventory as required by Rules 62-610.475 and 62-610.870, F.A.C. The inventory shall include the following information:

   a. Name of the agricultural operation.
   b. Name and telephone number of the owner or operator of the agricultural operation.
   c. Address of the agricultural operation.
   d. Edible crops irrigated using reclaimed water.
   e. Type of application (irrigation) method used.
   f. Approximate area (acres) under irrigation using reclaimed water on which edible crops are grown.

☑ **Inventory of Storage Facilities** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a copy of the current inventory of storage facilities, as required by Rules 62-610.464, 62-610.830, and 62-610.870, F.A.C. The inventory shall include the following information:

a. Name or identifier for the storage system.

b. Location.

c. Function of the storage system (system storage or reject storage).

d. Type of facility (covered tank, uncovered tank, lined pond, unlined pond).

e. Indication of whether or not the storage facility is a water of the state or discharges to a water of the state.

f. Distance to the nearest public water supply well.

g. Distance to the nearest potable water supply well, which is not a public water supply well.

h. Volume of each storage tank/pond and the total storage volume of all storage tanks and ponds (in units of million gallons).

☑ **Summary of Public Notification Program** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a summary of the public notification program activities during the reporting period, as required by Rule 62-610.468(6), F.A.C. The summary shall include the following:

a. Details of written public notification activities (include copies of written notices).

b. Summary of activities involving the news media.

c. Use of advisory signs.

d. Other public notification activities.

☑ **Summary of Metering and Rate Structure** – As noted in 403.064(16), Florida Statutes, utilities implementing reuse projects are encouraged to meter use of reclaimed water by all end users and to charge for the use of reclaimed water based on the actual volume used when such metering and charges can be shown to encourage water conservation. Metering and the use of volume-based rates are effective water management tools for the following reuse activities: residential irrigation, agricultural irrigation, industrial uses, landscape irrigation, irrigation of other public access areas, commercial and institutional uses such as toilet flushing, and transfers to other reclaimed water utilities. As required by 403.064(16), F.S., if this reuse system provides reclaimed water for any of the uses listed above, attach a summary of the utility's metering activities and the rate structure that the utility currently employs or plans to employ. The summary shall include the following:

a. Number of meters employed to monitor volume of reclaimed water used by customers.

b. If information is available, please provide per capita reclaimed water use for areas that meter and for unmetered areas. If available, please provide historical per capita usage data for before and after the utility began metering reclaimed water.

c. Provide information on the type of rate structure (i.e., inclining or declining block rates) for reclaimed water employed by the utility.

d. Provide a description of the utility's use of master meters (i.e., for a subdivision) or the use of individual meters (i.e., for single-family residential customers).

e. Provide a summary of the utility's plans for metering reclaimed water customers.

☐ **None of these items are required for this reuse system.**

Part XI - Permittee's Certification

I certify that the statements made in this report of reclaimed water utilization are true, correct, and complete to the best of my knowledge and belief.

Date: 12/20/24 — Signature

Phone: (239) 513-0445 — Ivory M. Gilbert — Name and Title (please print/type)

Company Name: Florida Utility Solutions

Address: 15275 Collier Blvd Suite 201-268

City/State/Zip Code: Naples, FL 34119

E-Mail: matt@floridautilitysolutions.com

FLORIDA DEPARTMENT OF
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Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

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Jeanette Nuñez
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DW Treatment Facilities

Facility Name	DEP Identification Number	Disinfection Level	Permitted Capacity (mgd)	Average Flow (mgd)
Forest Utilities WWTP	FLA014478	HI	.8	0.488



Florida Utility Solutions

15275 Collier Blvd., Suite 201-268

Naples, FL 34119

(239) 513-0445

Meter Rate and Structure Street

1” - $39.96

1.5” – 79.82

2” – 127.85

10” Turbine - $2,314.95

Reclaimed – Golf course only - .15/1,000 gallons



Florida Utility Solutions

15275 Collier Blvd., Suite 201-268

Naples, FL 34119

(239) 513-0445

Attachments for Part X of Annual Reuse Report for Forest Utilities WWTP

Inventory of Storage Facilities

There are no storage facilities at this WWTP. Effluent is discharged into a mixed lake.

Summary of Public Notification Program

Public advisory signs, consisting of required documentation, are posted in public access areas where reuse is used around the community.

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Secretary

Annual Reuse Report Electronic Submission

Report Accepted

01/02/2025

Dear Ivory Gilbert,

Reuse System Name:	Forest Utilities WWTP
WAFR ID:	FLA014478
Permittee:	Ivory Mitchell Gilbert
Address:	6341 Deer Run Road SW Fort Myers FL 33908
DEP District:	SOUTH DISTRICT
Water Management District:	South Florida Water Management District

The *Annual Reuse Report* for the Reuse System indicated above has been accepted by the Department.

Enclosures:
All supporting documentation can be found here:
https://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?facility.id=FLA014478
Please allow up to three (3) business days for the above documents to appear.

If you have any questions during this process, please contact please contact SOUTH DISTRICT via e-mail at SD_newapps@dep.state.fl.us for further information.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

E-mail Recipients:
mitchgilbert@floridautilitysolutions.com
SD_newapps@dep.state.fl.us
Arlene.Taylor@FloridaDEP.gov
mitchgilbert@floridautilitysolutions.com
matt@floridautilitysolutions.com

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Annual Reuse Report Electronic Submission

DEP Review Initiated

01/02/2025

Dear Ivory Gilbert,

Reuse System Name:	Forest Utilities WWTP
WAFR ID:	FLA014478
Permittee:	Ivory Mitchell Gilbert
Address:	6341 Deer Run Road SW Fort Myers FL 33908
DEP District:	SOUTH DISTRICT
Water Management District:	South Florida Water Management District

The *Annual Reuse Report* for the Reuse System indicated above has been submitted for DEP Review. Attached is a summary of the information you have submitted. DEP is in the process of reviewing the data sent. Additional information may be requested. **Once the DEP Review process is complete, you will receive confirmation of report acceptance in a seperate e-mail.**

If you have any questions during this process, please contact SOUTH DISTRICT via e-mail at SD_newapps@dep.state.fl.us for further information.

E-mail Recipients:
mitchgilbert@floridautilitysolutions.com
SD_newapps@dep.state.fl.us
aws-reusecoordinator@sfwmd.gov
mitchgilbert@floridautilitysolutions.com
matt@floridautilitysolutions.com

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Receipt for Submission

Sanitary Sewer Overflow Reporting

Thank you for submitting a Report of a Sanitary Sewer Spill or Overflow Incident in accordance with 62-620.610 and/or 62-604.550, F.A.C. You have indicated that the incident is on-going or that this is not the final closeout report for this incident, please ensure that you return to the system in the future to close out this incident.

Your DEP Incident ID is **29594**. Please use this ID during any future correspondence with the Department concerning this incident.

Type of Notice: Initial Report
Date of Notice: 05/16/2025

Incident Information
Name of Incident: Forest Utilties
State Watch Office Report Number:
PNP Incident Number:
Start of Incident: 05/16/2025 13:58
End of Incident: 05/16/2025 14:04
Incident Description: The lift station lost power due to an outage. The spilled occurred at the manhole site. A pump truck has been sent to the site to clean up the spill. Lime has been applied to the affected area to remediate and dry up the spill.
Wastewater Type: Treated
Cause: Power
Spill Volume: 700
Volume Recovered: 600
Waterbodies Impacted: NA
Clean-up Status: In-progress
Clean-up Actions: Vacuumed/pump truck, Applied lime
Agencies Notified:

Incident Location
Address Line 1: 15989 Old US Highway 41
Address Line 2:
Directions:
City: Fort Myers

State: FL
Zip Code: 33912
County: Lee
Coordinates (in decimal degrees):
Lat: 26.510129690582303 Long: -81.85997623578933
Other Impacted Counties: Lee

Facility Information
Facility ID: FLA014478
Facility/Installation Name: Forest Utilities WWTP
Operating Entity Name: NA
Address Line 1: 6341 Deer Run
Address Line 2:
Facility/System Type: DOMESTIC WASTEWATER
City: Fort Myers
State: FL
Zip Code: 33908

Incident Reported By
Name: Mitch Gilbert
Affiliation: Director
Phone: (239) 513-0445
Email Address: mitchgilbert@floridautilitysolutions.com
Relationship: Operator of the Facility/Installation

On-Site Contact
Name: Mitch Gilbert
Phone: (239) 513-0445
Email Address: mitchgilbert@floridautilitysolutions.com

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Your DEP Incident ID is **29855**. Please use this ID during any future correspondence with the Department concerning this incident.

Type of Notice: Initial Report
Date of Notice: 06/13/2025

Incident Information
Name of Incident: Forest manhole overflow
State Watch Office Report Number:
PNP Incident Number:
Start of Incident: 06/13/2025 03:00
End of Incident: 06/13/2025 03:30
Incident Description: clogged pump caused manhole to overflow
Wastewater Type: Untreated
Cause: Blockage
Spill Volume: 600
Volume Recovered: 500
Waterbodies Impacted: NA
Clean-up Status: Complete
Clean-up Actions: Vacuumed/pump truck, Applied lime
Agencies Notified:

Incident Location
Address Line 1: 16992 and 16994 Timberlakes Drive
Address Line 2:
Directions:
City: Fort Myers
State: FL
Zip Code: 33908

County: Lee
Coordinates (in decimal degrees):
Lat: 26.49779559955251 Long: -81.86690034110313
Other Impacted Counties: Lee

Facility Information
Facility ID: FLA014478
Facility/Installation Name: Forest Utilities WWTP
Operating Entity Name: NA
Address Line 1: 6341 Deer Run
Address Line 2:
Facility/System Type: DOMESTIC WASTEWATER
City: Fort Myers
State: FL
Zip Code: 33908

Incident Reported By
Name: Mitch Gilbert
Affiliation: President
Phone: (239) 513-0445
Email Address: mitchgilbert@floridautilitysolutions.com
Relationship: Operator of the Facility/Installation

On-Site Contact
Name: Matt Gillispie
Phone: (239) 218-0933
Email Address: matt@floridautilitysolutions.com

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Your DEP Incident ID is **29965**. Please use this ID during any future correspondence with the Department concerning this incident.

Type of Notice: Initial Report
Date of Notice: 06/25/2025

Incident Information
Name of Incident: overflow
State Watch Office Report Number:
PNP Incident Number:
Start of Incident: 06/25/2025 09:30
End of Incident: 06/25/2025 10:00
Incident Description: leak from manhole cover
Wastewater Type: Untreated
Cause: Blockage
Spill Volume: 200
Volume Recovered: 200
Waterbodies Impacted: NA
Clean-up Status: Complete
Clean-up Actions: Vacuumed/pump truck, Applied lime
Agencies Notified:

Incident Location
Address Line 1: 16712 Bobcat Dr
Address Line 2:
Directions:
City: Fort Myers
State: FL
Zip Code: 33908

County: Lee
Coordinates (in decimal degrees):
Lat: 26.49848970623098 Long: -81.85988286829814
Other Impacted Counties: Lee

Facility Information
Facility ID: FLA014478
Facility/Installation Name: Forest Utilities WWTP
Operating Entity Name: NA
Address Line 1: 6341 Deer Run
Address Line 2:
Facility/System Type: DOMESTIC WASTEWATER
City: Fort Myers
State: FL
Zip Code: 33908

Incident Reported By
Name: Matt Gullispie
Affiliation: Utility Manager
Phone: (239) 513-0445
Email Address: matt@floridautilitysolutions.com
Relationship: Operator of the Facility/Installation

On-Site Contact
Name: matt gullispie
Phone: (239) 513-0445
Email Address: matt@floridautilitysolutions.com

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Your DEP Incident ID is **30130**. Please use this ID during any future correspondence with the Department concerning this incident.

Type of Notice: Initial Report
Date of Notice: 07/09/2025

Incident Information
Name of Incident: 34 Umber Ct
State Watch Office Report Number:
PNP Incident Number:
Start of Incident: 07/09/2025 01:39
End of Incident: 07/09/2025 02:00
Incident Description: lift station backup
Wastewater Type: Untreated
Cause: Blockage
Spill Volume: 300
Volume Recovered: 300
Waterbodies Impacted: NA
Clean-up Status: Complete
Clean-up Actions: Vacuumed/pump truck, Applied lime
Agencies Notified:

Incident Location
Address Line 1: 34 Umber Ct
Address Line 2:
Directions:
City: Fort Myers
State: FL
Zip Code: 33908

County: Lee
Coordinates (in decimal degrees):
Lat: 26.520041603770423 Long: -81.8569320674875
Other Impacted Counties: Lee

Facility Information
Facility ID: FLA014478
Facility/Installation Name: Forest Utilities WWTP
Operating Entity Name: NA
Address Line 1: 6341 Deer Run
Address Line 2:
Facility/System Type: DOMESTIC WASTEWATER
City: Fort Myers
State: FL
Zip Code: 33908

Incident Reported By
Name: Matt Gillispie
Affiliation: Utility Manager
Phone: (239) 513-0445
Email Address: matt@floridautilitysolutions.com
Relationship: Operator of the Facility/Installation

On-Site Contact
Name: Matt Gillispie
Phone: (239) 218-0933
Email Address: matt@floridautilitysolutions.com

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Sanitary Sewer Overflow Reporting

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Your DEP Incident ID is **30406**. Please use this ID during any future correspondence with the Department concerning this incident.

Type of Notice: Initial Report
Date of Notice: 07/29/2025

Incident Information
Name of Incident: leaking manhole
State Watch Office Report Number:
PNP Incident Number:
Start of Incident: 07/29/2025 11:00
End of Incident: 07/29/2025 01:15
Incident Description: Leaking manhole due to pump malfunction
Wastewater Type: Untreated
Cause: Equipment
Spill Volume: 600
Volume Recovered: 600
Waterbodies Impacted: NA
Clean-up Status: Complete
Clean-up Actions: Vacuumed/pump truck, Applied lime
Agencies Notified:

Incident Location
Address Line 1: 67 Umber Ct
Address Line 2:
Directions:
City: Fort Myers
State: FL
Zip Code: 33908

County: Lee
Coordinates (in decimal degrees):
Lat: 26.51952709620093 Long: -81.85727960879949
Other Impacted Counties: Lee

Facility Information
Facility ID: FLA014478
Facility/Installation Name: Forest Utilities WWTP
Operating Entity Name: NA
Address Line 1: 6341 Deer Run
Address Line 2:
Facility/System Type: DOMESTIC WASTEWATER
City: Fort Myers
State: FL
Zip Code: 33908

Incident Reported By
Name: Mitch Gilbert
Affiliation: Director
Phone: (239) 513-0445
Email Address: mitchgilbert@floridautilitysolutions.com
Relationship: Director

On-Site Contact
Name: Mitch Gilbert
Phone: (239) 513-0445
Email Address: mitchgilbert@floridautilitysolutions.com

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Receipt for Submission

Sanitary Sewer Overflow Reporting

Thank you for submitting a Report of a Sanitary Sewer Spill or Overflow Incident in accordance with 62-620.610 and/or 62-604.550, F.A.C. You have indicated that the incident is on-going or that this is not the final closeout report for this incident, please ensure that you return to the system in the future to close out this incident.

Your DEP Incident ID is **30860**. Please use this ID during any future correspondence with the Department concerning this incident.

Type of Notice: Updated Report
Date of Notice: 09/11/2025

Incident Information
Name of Incident: leaking manhole
State Watch Office Report Number:
PNP Incident Number:
Start of Incident: 09/10/2025 07:30
End of Incident: 09/10/2025 08:00
Incident Description: Homeowner reported leaking manhole to DEP. Forest Utilities and Flordia Utility Solutions were notifed the following morning, but no active leaks were found. All lift sations and manholes were pumped down.
Wastewater Type: Untreated
Cause: Overflow
Spill Volume: Unknown
Volume Recovered: 0
Waterbodies Impacted: NA
Clean-up Status: Complete
Clean-up Actions: Applied lime
Agencies Notified:

Incident Location
Address Line 1: 16682 Bobcat Drive
Address Line 2:
Directions:
City: Fort Myers

State: FL
Zip Code: 33908
County: Lee
Coordinates (in decimal degrees):
Lat: 26.501811 Long: -81.860112
Other Impacted Counties: Lee

Facility Information
Facility ID: FLA014478
Facility/Installation Name: Forest Utilities WWTP
Operating Entity Name: NA
Address Line 1: 6341 Deer Run
Address Line 2:
Facility/System Type: DOMESTIC WASTEWATER
City: Fort Myers
State: FL
Zip Code: 33908

Incident Reported By
Name: Mitch Gilbert
Affiliation: President
Phone: (239) 513-0445
Email Address: mitchgilbert@floridautilitysolutions.com
Relationship: Operator of the Facility/Installation

On-Site Contact
Name: Matt Gillisspie
Phone: (239) 218-0933
Email Address: matt@floridautilitysolutions.com

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Receipt for Submission

Sanitary Sewer Overflow Reporting

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Your DEP Incident ID is **30860**. Please use this ID during any future correspondence with the Department concerning this incident.

Type of Notice: Initial Report
Date of Notice: 09/11/2025

Incident Information
Name of Incident: leaking manhole
State Watch Office Report Number:
PNP Incident Number:
Start of Incident: 09/10/2025 07:30
End of Incident: 09/10/2025 08:00
Incident Description: Homeowner reported leaking manhole to DEP. Forest Utilities and Flordia Utility Solutions were notifed the following morning, but no active leaks were found. All lift sations and manholes were pumped down.
Wastewater Type: Untreated
Cause: Overflow
Spill Volume: Unknown
Volume Recovered: 250
Waterbodies Impacted: NA
Clean-up Status: Complete
Clean-up Actions: Applied lime
Agencies Notified:

Incident Location
Address Line 1: 16682 Bobcat Drive
Address Line 2:
Directions:
City: Fort Myers

State: FL
Zip Code: 33908
County: Lee
Coordinates (in decimal degrees):
Lat: 26.501810797095665 Long: -81.86011227116256
Other Impacted Counties: Lee

Facility Information
Facility ID: FLA014478
Facility/Installation Name: Forest Utilities WWTP
Operating Entity Name: NA
Address Line 1: 6341 Deer Run
Address Line 2:
Facility/System Type: DOMESTIC WASTEWATER
City: Fort Myers
State: FL
Zip Code: 33908

Incident Reported By
Name: Mitch Gilbert
Affiliation: President
Phone: (239) 513-0445
Email Address: mitchgilbert@floridautilitysolutions.com
Relationship: Operator of the Facility/Installation

On-Site Contact
Name: Matt Gillisspie
Phone: (239) 218-0933
Email Address: matt@floridautilitysolutions.com

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Receipt for Submission

Sanitary Sewer Overflow Reporting

Thank you for submitting a Report of a Sanitary Sewer Spill or Overflow Incident in accordance with 62-620.610 and/or 62-604.550, F.A.C. You have indicated that the incident is on-going or that this is not the final closeout report for this incident, please ensure that you return to the system in the future to close out this incident.

Your DEP Incident ID is **31121**. Please use this ID during any future correspondence with the Department concerning this incident.

Type of Notice: Initial Report
Date of Notice: 10/03/2025

Incident Information
Name of Incident: Station overflowed due to glogged pump
State Watch Office Report Number:
PNP Incident Number:
Start of Incident: 10/03/2025 03:30
End of Incident: 10/03/2025 04:00
Incident Description: Station overflowed due clogged pump
Wastewater Type: Untreated
Cause: Overflow
Spill Volume: 500
Volume Recovered: 500
Waterbodies Impacted: NA
Clean-up Status: Complete
Clean-up Actions: Vacuumed/pump truck, Applied lime
Agencies Notified:

Incident Location
Address Line 1: 16992 Timberlake Dr
Address Line 2:
Directions:
City: Fort Myers
State: FL
Zip Code: 33908

County: Lee
Coordinates (in decimal degrees):
Lat: 26.497548353239775 Long: -81.86706703860281
Other Impacted Counties: Lee

Facility Information
Facility ID: FLA014478
Facility/Installation Name: Forest Utilities WWTP
Operating Entity Name: NA
Address Line 1: 6341 Deer Run
Address Line 2:
Facility/System Type: DOMESTIC WASTEWATER
City: Fort Myers
State: FL
Zip Code: 33908

Incident Reported By
Name: MItch Gilbert
Affiliation: President
Phone: (239) 513-0445
Email Address: mitchgilbert@floridautilitysolutions.com
Relationship: Operator of the Facility/Installation

On-Site Contact
Name: Matt Gillisspie
Phone: (239) 218-0933
Email Address: matt@floridautilitysolutions.com

Florida Department of Environmental Protection

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jay Collins
Lt. Governor

Alexis A. Lambert
Secretary

Receipt for Submission

Sanitary Sewer Overflow Reporting

Thank you for submitting a Report of a Sanitary Sewer Spill or Overflow Incident in accordance with 62-620.610 and/or 62-604.550, F.A.C. You have indicated that the incident is on-going or that this is not the final closeout report for this incident, please ensure that you return to the system in the future to close out this incident.

Your DEP Incident ID is **31130**. Please use this ID during any future correspondence with the Department concerning this incident.

Type of Notice: Initial Report
Date of Notice: 10/06/2025

Incident Information
Name of Incident: Clogged force main
State Watch Office Report Number: 2025-8586
PNP Incident Number:
Start of Incident: 10/04/2025 09:30
End of Incident: 10/04/2025 06:00
Incident Description: manhole overflowed
Wastewater Type: Untreated
Cause: Blockage
Spill Volume: 1500
Volume Recovered: 1500
Waterbodies Impacted: NA
Clean-up Status: Complete
Clean-up Actions: Vacuumed/pump truck, Applied lime
Agencies Notified:

Incident Location
Address Line 1: 16992 Timberlakes Drive
Address Line 2:
Directions:
City: Fort Myers
State: FL
Zip Code: 33908

County: Lee
Coordinates (in decimal degrees):
Lat: 26.497812402680694 Long: -81.86689363558057
Other Impacted Counties: Lee

Facility Information
Facility ID: FLA014478
Facility/Installation Name: Forest Utilities WWTP
Operating Entity Name: NA
Address Line 1: 6341 Deer Run
Address Line 2:
Facility/System Type: DOMESTIC WASTEWATER
City: Fort Myers
State: FL
Zip Code: 33908

Incident Reported By
Name: Mitch Gilbert
Affiliation: President
Phone: (239) 513-0445
Email Address: mitchgilbert@floridautilitysolutions.com
Relationship: Operator of the Facility/Installation

On-Site Contact
Name: Matt Gillisspie
Phone: (239) 218-0933
Email Address: matt@floridautilitysolutions.com

Florida Department of Environmental Protection

WASTEWATER
SIGNIFICANT NONCOMPLIANCE (SNC) DOCUMENTATION

Facility:	Forest Utilities WWTP			**Inspection Date:**	October 9, 2025
Inspector:	K. Turke	**Permit No:**	FLA014478	**Permitted Capacity:**	0.800 MGD

1. Permit

☐ Operating without a valid wastewater permit
☐ Unpermitted discharge with a high potential for water quality of health impacts
☐ Unauthorized bypass with a high potential for water quality or health impacts
☐ Unpermitted collection system with a high potential for water quality of health impacts
☐ Unauthorized substantial plant modification placed into service
☐ Unauthorized residuals or sludge disposal with a high potential for water quality of health impacts

2. Compliance Schedule

☐ Start Construction milestone exceeded by 90 days or more
☐ End construction milestone exceeded by 90 days or more
☐ Attainment of final compliance milestone exceeded by 90 days or more
☐ Failure to meet any other enforcement order or compliance schedule milestones by 90 days or more

3. Records and Reports

☐ Surface Water Discharge Monitoring Report (DMR) late by 30 or more days
☐ Land-Application Effluent Discharge Monitoring Reports – 2 or more non-submittals in 6 mo. window
☐ Falsification of any record or report
☐ Compliance schedule report or final compliance report late by 30 or more days
☐ Pretreatment reports late by 30 or more days

4. Operation and Maintenance

☐ Improper operation resulting in a high potential for water quality or health impacts
☐ Failure to perform maintenance resulting in a high potential for water quality or health impacts
☐ Missing equipment resulting in a high potential for water quality or health impacts
☐ Failure to replace malfunctioning equipment resulting in a high potential for water quality or health impacts

5. Effluent

☐ Limit exceeded by TRC 2 out of 6 months (TRC Violation)
☐ Limit exceeded 4 out of 6 months (chronic effluent violation)
☐ Total Residual Chlorine for Disinfection below minimum 10% or more of the time in a rolling 6 month period
☐ Persistent acute toxicity through follow up tests
☐ Persistent chronic toxicity through follow up tests
☐ Pollutant passthrough with a high potential for water quality or health impacts (pretreatment)
☐ Any other violation with a high potential for water quality or health impacts

6. Effluent Disposal Method

☐ Operation of unauthorized disposal system
☐ Disposal system failure with a high potential for water quality or health impacts
☐ Failure to operate disposal system as designed with a high potential for water quality or health impacts
☐ Unauthorized modification of disposal system placed into service

7. Other Violations

☒ Any violation not listed above, or pattern of noncompliance, resulting in a high potential for water quality or health impacts – (Comments or Details supporting SNC finding must be provided.)

Comments/Details:

Failure to submit Pathogen Monitoring Report timely, which was noted on the previous Warning Letter from January 18, 2024. Also, SSO spills met the requirement of either >2 at the same locations or > six/per 100 miles of collection system piping in a 12-month period.

☐ Failure to implement pretreatment program or enforce indirect users where industrial contributions cause effluent limit or disposal violations
☐ Any violation considered Significant by Secretary, Deputy Secretary, Director of District Management, or the Division Director

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jay Collins
Lt. Governor

Alexis A. Lambert
Secretary

Receipt for Submission

Sanitary Sewer Overflow Reporting

Thank you for submitting a Report of a Sanitary Sewer Spill or Overflow Incident in accordance with 62-620.610 and/or 62-604.550, F.A.C. You have indicated that the incident is on-going or that this is not the final closeout report for this incident, please ensure that you return to the system in the future to close out this incident.

Your DEP Incident ID is **31238**. Please use this ID during any future correspondence with the Department concerning this incident.

Type of Notice: Initial Report
Date of Notice: 10/13/2025

Incident Information
Name of Incident: leaking manhole
State Watch Office Report Number:
PNP Incident Number:
Start of Incident: 10/12/2025 04:00
End of Incident: 10/12/2025 06:00
Incident Description: Manhole over flowing due to clogged pump.
Wastewater Type: Untreated
Cause: Blockage
Spill Volume: 50
Volume Recovered: 0
Waterbodies Impacted: NA
Clean-up Status: Complete
Clean-up Actions: Applied lime
Agencies Notified:

Incident Location
Address Line 1: 16992 Timberlakes Drive
Address Line 2:
Directions:
City: Fort Myers
State: FL
Zip Code: 33908

County: Lee
Coordinates (in decimal degrees):
Lat: 26.497822004467107 Long: -81.86693655092483
Other Impacted Counties: Lee

Facility Information
Facility ID: FLA014478
Facility/Installation Name: Forest Utilities WWTP
Operating Entity Name: NA
Address Line 1: 6341 Deer Run
Address Line 2:
Facility/System Type: DOMESTIC WASTEWATER
City: Fort Myers
State: FL
Zip Code: 33908

Incident Reported By
Name: Mitch Gilbert
Affiliation: President
Phone: (239) 513-0445
Email Address: mitchgilbert@floridautilitysolutions.com
Relationship: Operator of the Facility/Installation

On-Site Contact
Name: Matt Gillisspie
Phone: (239) 218-0933
Email Address: matt@floridautilitysolutions.com

Florida Department of Environmental Protection

October 14, 2025

Project Manager
Sanders Laboratories Inc.
10090 Bavaria Road
Ft. Myers FL 33913
239-590-0337
Tami@sanderslabs.net; jeff@sanderslabs.net; katie@sanderslabs.net
Client ID: Final Effluent 2510328-002A

BCS ID: 2510080

Dear Project Manager,

We have completed the analysis of the submitted samples as outlined below.

Project Name: Forest Utilities WWTP

Analysis	Method
Cryptosporidium spp. Enumeration	EPA 1623.1; BCS SOP P-2 (ISO17025 and TNI Accredited)
Giardia spp. Enumeration	EPA 1623.1; BCS SOP P-2 (ISO17025 and TNI Accredited)

Following, you will find our report on the results of the analysis conducted on the referenced samples. Should you have any questions, please do not hesitate to contact me.

Sincerely,

Bonnie Mull

Bonnie Mull, MPH
Laboratory Operations Manager

BCS Laboratories, Inc. – Gainesville
4609 NW 6th Street, Ste. A, Gainesville, Florida 32609
Tel. (352) 377-9272, Fax. (352) 377-5630
www.microbioservices.com
FL DOH E82924, ISO17025:2017 L2422 (ANAB), PA DEP 68-03950, AZ DHS AZ0820, EPA FL01147
This report shall not be reproduced, except in full, without the written consent of BCS Laboratories

Client: Sanders Laboratories Inc.
Analysis: *Cryptosporidium spp. Enumeration*

Project Name: Forest Utilities WWTP
Client Sample ID: Final Effluent 2510328-002A BCS Sample ID: 2510080

Amount Submitted: 100 L Sample Description: Envirochek HV Filter

Sampling Date: October 08, 2025 11:49 Percent Solids: N/A

Date Received: October 09, 2025 10:18 Receipt Temperature: 0.7 deg C Preserved: Yes

Amount Analyzed 100 L Analyst: Bonnie Mull, M.P.H.

Analysis Start: October 10, 2025 9:52 Analysis Stop Date: October 13, 2025 14:00

Primary Value: ≤1.0 Cryptosporidium Oocysts/100 liters

Secondary Value: ≤1.0 Potentially Viable Oocysts/100 liters*

Qualifier: U

Analysis Notes: Undetected: Analyte was not detected in the sample analyzed; Value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units

Client: Sanders Laboratories Inc.
Analysis: *Giardia spp. Enumeration*

Project Name: Forest Utilities WWTP
Client Sample ID: Final Effluent 2510328-002A BCS Sample ID: 2510080

Amount Submitted: 100 L Sample Description: Envirochek HV Filter

Sampling Date: October 08, 2025 11:49 Percent Solids: N/A

Date Received: October 09, 2025 10:18 Receipt Temperature: 0.7 deg C Preserved: Yes

Amount Analyzed 100 L Analyst: Bonnie Mull, M.P.H.

Analysis Start: October 10, 2025 9:52 Analysis Stop Date: October 13, 2025 14:00

Primary Value: ≤1.0 Giardia Cysts/100 liters

Secondary Value: ≤1.0 Potentially Viable Cysts/100 liters*

Qualifier: U

Analysis Notes: Undetected: Analyte was not detected in the sample analyzed; Value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units

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Client: Sanders Laboratories Inc.

Project: Forest Utilities WWTP

Method Detection Limit: 1 microorganism/ unit weight or volume analyzed

Practical Quantitation Limit: 1 microorganism/ unit weight or volume analyzed

Report Notes: Custody Seal Condition: Not Present

Sample(s) were received well preserved and in excellent condition. Sample(s) were analyzed following receipt as per the described analytical methodology. End of report notes.

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*Potential Viability (PV) may be provided to satisfy FL DEP's reporting requirement for pathogens in reclaimed wastewater. PV is assessed by the presence of intense blue fluorescence and distinct nucleic acid staining of the (Oo)cysts by DAPI dye during EPA1623.1 analysis. PV is the result of the analyst's interpretation of microscopically observed (Oo)cysts and is strictly the professional opinion of BCS based on available methodology and observed data. The EPA 1623.1 method does not recognize nucleic acid staining or any other procedures in the method as an indicator of PV.

I certify that I have examined and I am familiar with the information submitted herein. The results pertain only to sample(s) analyzed and condition at receipt. Based on my inquiry of the individuals responsible for the analysis, I believe the data to be true, accurate, and complete. Field data obtained from submitted documents. The analysis authorized/commissioned by the client. The resulting data are representative of the analysis conducted on the material/samples/articles provided by the client (or client's representative) and it's/their condition at the time of analysis. The sample(s) were analyzed in accordance with the appropriate method , however due to the inherent limitations of methods, microorganisms may avoid detection. BCS Laboratories offers no express or implied warranties concerning the quality, safety, and/or purity of any sample, batch, source, or the process they are derived from. Quality assurance controls were performed as outlined in the method and as per Good Laboratory Practices. The analysis and results presented in this report meet the requirements of the standards of The NELAC Institute (TNI), ISO 17025, and the FL DOH Environmental Laboratory Certification Program, as applicable unless otherwise noted.

Signature of Laboratory Director/Authorized Rep. Bonnie Mull Date: October 14, 2025

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DATA QUALIFIER CODES	
SYMBOL	MEANING
B	Results based on counts outside the acceptable range.
X	Sample received without prior notification or delayed delivery. Analysis performed outside of associated method required QC data set (1 QC data set per 20 samples per 168 hours).
I	Value is between the laboratory method detection limit & laboratory practical quantitation limit.
J1	The sample matrix interfered with the ability to make any accurate determination.
J2	No Quality Control criteria exist for the component.
J3	The data are questionable because of improper laboratory or field protocols.
L	Off scale high. Actual value is known to be greater than value given.
N	Presumptive evidence for the presence of material. There is an indication that the analyte is present, but the confirmation requirement was not met.
O	Sampled, but analysis not performed.
Q	Sample held beyond the accepted holding time.
U	Indicates that the compound was analyzed for but not detected. The specified component was not detected. The reported value is the method detection limit.
V	Analyte was detected in both sample and associated method blank. Data may not be accurate.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies present (TNTC); the numeric value given represents the upper end of the value that can be determined based on the volume.
?	Data are rejected and should not be used. QC data for analyte did not meet acceptance criteria. Presence or absence of analyte could not be confirmed.
**	Not reported due to interference.
^	BCS is not currently accredited for this analyte.
#	BCS Lab specific qualifier. See laboratory analysis notes.

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Sanders Laboratories
Environmental Testing Services

CHAIN OF CUSTODY RECORD

Omega COCID 26980	PAGE: 1	OF: 1

ADDRESS
Ft. Myers Lab02
10090 Bavaria Rd.
Fort Myers, FL 33913
TEL: (239) 590-0337
FAX: (239) 590-0536
Website: www.sanderslabs.net

SUB CONTRATOR: **BCS** COMPANY:

ADDRESS: **4609 NW 6th Street, Ste A**

CITY, STATE, ZIP: **Gainesville, FL 32609**

PHONE: **(352) 377-9272** FAX: **(352) 377-5630** EMAIL:

ACCOUNT #:

SPECIAL INSTRUCTIONS / COMMENTS:

Please analyze these samples per our contract regulations. After analysis, the samples do not need to be returned and can be disposed per your standard laboratory practices.

The information contained in this email is privileged and confidential info

ITEM #	SAMPLE ID	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	COMMENTS: Methanol Preserved Weights HOT Sample Notation, Additional Sample Description.
1	2510328-002A See Attached	Final Effluent (For		Waste Water	10/8/2025 11:49:00 AM	1	WW - Crypto & Giardia

Sanders Laboratories Inc.
Final Effluent 2510328-002A
2510080
10/09/2025 10:18

wrong number 10/09/25 08:00

IR-7T77 SN 863887

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
TVH	10/8/25	16:00	CB		
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
			CB	10/09/25	10:18
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: Standard ☐ **RUSH** Next BD ☐ 2nd BD ☐ 3rd BD ☐

Note: RUSH requests will incur surcharges!

REPORT TRANSMITTAL DESIRED:

☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples 0.4+0.3 °C (0.7°C) Attempt to Cool ? YES

Comments:

Sanders Laboratories Inc.
Final Effluent 2510328-002A
2510080
10/09/2025 10:18

Cryptosporidium and Giardia
Sampling Form

Client Name: Forest Utilities	Date: 10/8/25
Project Name: Every 2 Year Crypto	Sampled by: CB
Project Location: Forest Utilities WWTP	Pall Envirochek HV Filter: 12099
Sample Description: Final Eff	Serial Number on Filter: 863881
Sample Matrix: WW	Lot Number on Filter: FN0318

TSS Collection Time (wasterwater only) 1055

Readings before filtration has begun:
Conductivity EPA 120.1 (um 1216
pH EPA 150.1 (std units): 9.21
Turbidity EPA 180.1(NTU): 0.02
Water Temp EPA 170.1 (°C): 32.0

Flushing Readings:	
Start Flush of Apparatus Time: 1015	Flush Flow Rate (L/min): 1.98
Stop Flush of Apparatus Time: 1055	Total Volume Flushed (L): 80

Filtration Readings:	
Start Filtration Time: 1058	Filtration Flow Rate (L/min): 1.96
Chlorine EPA 330.5	Start Meter Reading (L):
TCL2: 3.08 TURB: 0.02	Stop Meter Reading (L):
Stop Filtration Time: 1149	
TCL2: 2.98 TURB: 0.02	Total Volume Filtered (L): 100

Equipment Used: (circle) DR1900		211410001004
Dip stick	1	
Multi	13E10301	24C105044
Turb	20012585	18051731
Depth	6602	
Peri Pump	5105	
Sub Pump	OO2917	

Date Revised: 7/10/2020 For ID: FF- 06 Approved by:KS

Operable Lift Station Visual Alarm & New Pump Connection
(October 14th, 2025)



Operable Lift Station Visual Alarm & New Pump Connection
(October 14th, 2025)



Groundwater Well Updated Locks & Clear Effluent in CCC
(October 17th, 2025)



Groundwater Well Updated Locks & Clear Effluent in CCC
(October 17th, 2025)



Groundwater Well Updated Locks & Clear Effluent in CCC
(October 17th, 2025)



Groundwater Well Updated Locks & Clear Effluent in CCC
(October 17th, 2025)



Groundwater Well Updated Locks & Clear Effluent in CCC
(October 17th, 2025)



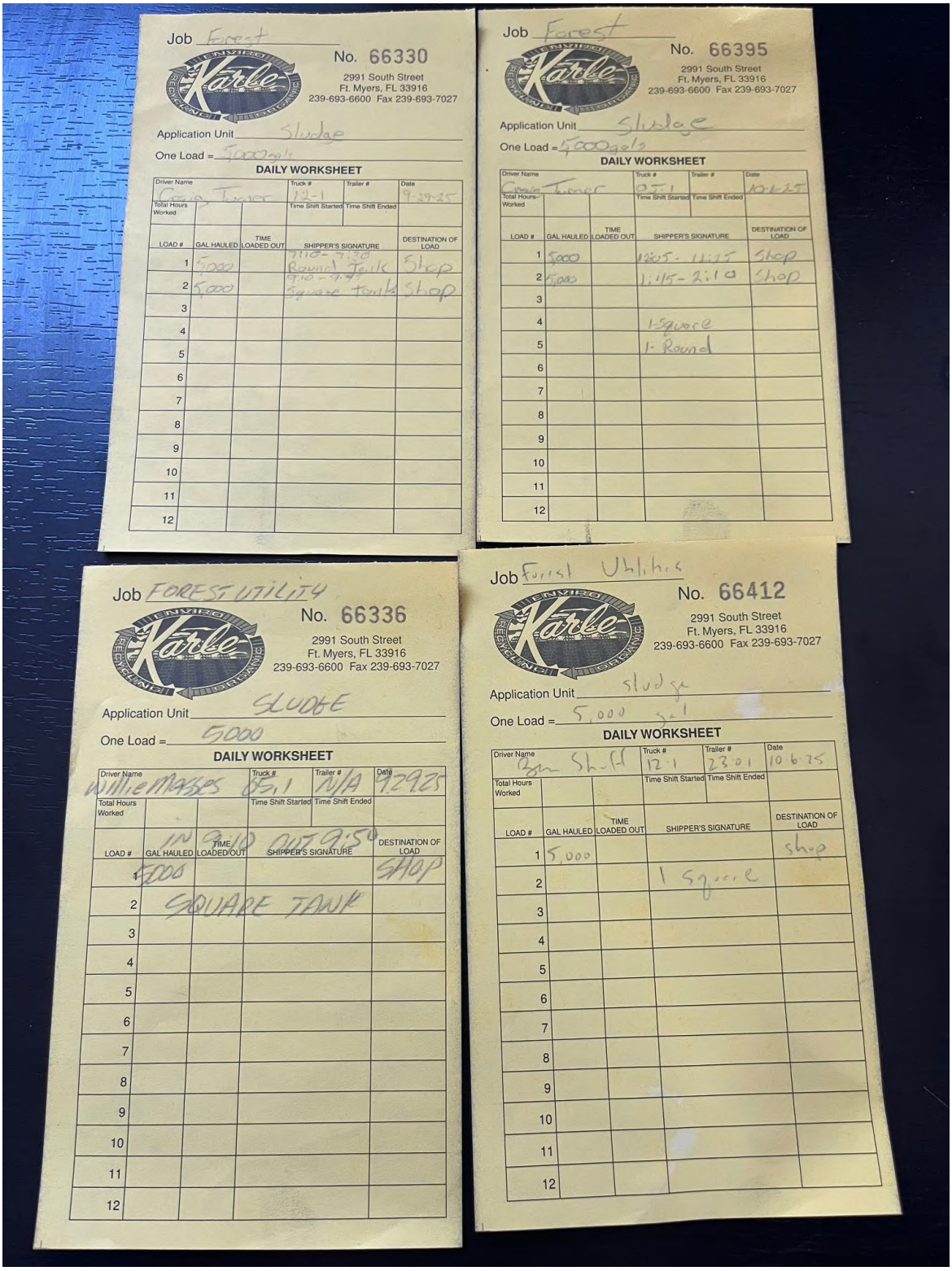
Groundwater Well Updated Locks & Clear Effluent in CCC
(October 17th, 2025)



Groundwater Well Updated Locks & Clear Effluent in CCC
(October 17th, 2025)



Groundwater Well Updated Locks & Clear Effluent in CCC (October 17th, 2025)



Job Forest

Karle — Environmental Engineering & Contracting

No. 66330

2991 South Street
Ft. Myers, FL 33916
239-693-6600 Fax 239-693-7027

Application Unit Sludge

One Load = 5000 gals

DAILY WORKSHEET

Driver Name	Truck #	Trailer #	Date
Craig Turner	12-1		9-29-25

Total Hours Worked		Time Shift Started	Time Shift Ended

LOAD #	GAL HAULED	TIME LOADED OUT	SHIPPER'S SIGNATURE	DESTINATION OF LOAD
1	5000		7:10 - 9:50 Round Tank	Shop
2	5,000		9:40 - 2:40 Square tank	Shop
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Job Forest

Karle — Environmental Engineering & Contracting

No. 66395

2991 South Street
Ft. Myers, FL 33916
239-693-6600 Fax 239-693-7027

Application Unit Sludge

One Load = 5000 gals

DAILY WORKSHEET

Driver Name	Truck #	Trailer #	Date
Craig Turner	12-1		10-6-25

Total Hours Worked		Time Shift Started	Time Shift Ended

LOAD #	GAL HAULED	TIME LOADED OUT	SHIPPER'S SIGNATURE	DESTINATION OF LOAD
1	5000		1205 - 1:45	Shop
2	5000		1:45 - 2:10	Shop
3				
4			1- Square	
5			1- Round	
6				
7				
8				
9				
10				
11				
12				

Job FOREST UTILITY

Karle — Environmental Engineering & Contracting

No. 66336

2991 South Street
Ft. Myers, FL 33916
239-693-6600 Fax 239-693-7027

Application Unit SLUDGE

One Load = 5000

DAILY WORKSHEET

Driver Name	Truck #	Trailer #	Date
Willie Masses	65.1	N/A	92925

Total Hours Worked		Time Shift Started	Time Shift Ended

LOAD #	GAL HAULED	TIME LOADED OUT	SHIPPER'S SIGNATURE	DESTINATION OF LOAD
1	IN 9:10 5000		OUT 9:50	SHOP
2	SQUARE TANK			
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Job Forest Utilities

Karle — Environmental Engineering & Contracting

No. 66412

2991 South Street
Ft. Myers, FL 33916
239-693-6600 Fax 239-693-7027

Application Unit sludge

One Load = 5,000 gal

DAILY WORKSHEET

Driver Name	Truck #	Trailer #	Date
Shiloh	12.1	23.01	10.6.25

Total Hours Worked		Time Shift Started	Time Shift Ended

LOAD #	GAL HAULED	TIME LOADED OUT	SHIPPER'S SIGNATURE	DESTINATION OF LOAD
1	5,000			shop
2			1 Square	
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jay Collins
Lt. Governor

Alexis A. Lambert
Secretary

Receipt for Submission

Sanitary Sewer Overflow Reporting

Thank you for submitting a Report of a Sanitary Sewer Spill or Overflow Incident in accordance with 62-620.610 and/or 62-604.550, F.A.C. You have indicated that the incident is on-going or that this is not the final closeout report for this incident, please ensure that you return to the system in the future to close out this incident.

Your DEP Incident ID is **31300**. Please use this ID during any future correspondence with the Department concerning this incident.

Type of Notice: Initial Report
Date of Notice: 10/17/2025

Incident Information
Name of Incident: leaking manhole
State Watch Office Report Number:
PNP Incident Number:
Start of Incident: 10/17/2025 01:30
End of Incident: 10/17/2025 02:30
Incident Description: leaking manhole due to clogged pump
Wastewater Type: Untreated
Cause: Blockage
Spill Volume: 100
Volume Recovered: 50
Waterbodies Impacted: NA
Clean-up Status: Complete
Clean-up Actions: Vacuumed/pump truck, Applied lime
Agencies Notified:

Incident Location
Address Line 1: 16971 Timberlakes Drive
Address Line 2:
Directions:
City: Fort Myers
State: FL
Zip Code: 33908

County: Lee
Coordinates (in decimal degrees):
Lat: 26.49872060599267 Long: -81.86746090674423
Other Impacted Counties: Lee

Facility Information
Facility ID: FLA014478
Facility/Installation Name: Forest Utilities WWTP
Operating Entity Name: NA
Address Line 1: 6341 Deer Run
Address Line 2:
Facility/System Type: DOMESTIC WASTEWATER
City: Fort Myers
State: FL
Zip Code: 33908

Incident Reported By
Name: Mitch Gilbert
Affiliation: President
Phone: (239) 513-0445
Email Address: mitchgilbert@floridautilitysolutions.com
Relationship: Operator of the Facility/Installation

On-Site Contact
Name: Matt Gillisspie
Phone: (239) 218-0933
Email Address: matt@floridautilitysolutions.com

Florida Department of Environmental Protection

From: Mitch Gilbert FUS
To: Turke, Kaylee; Matt Gillispie
Cc: Forest WWTP; Alana - Florida Utility Solutions
Subject: Re: Forest Utilities WWTP (FLA014478) FDEP Preliminary Deficiency List
Date: Wednesday, October 22, 2025 1:15:53 PM

EXTERNAL MESSAGE
This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Hello Kayle,

Thank you for reaching out. Please see the answers below.

- The clarifier had excessive scum/floc floating at the surface. THE CLARIFIER HAS BEEN CLEANED.
- It was stated that the skimmer arm needed to be adjusted to provide better operation. WE ADJUSTED THE ARM BUT WERE UNSUCCESSFUL AND HAVE ORDERED REPLACEMENT PARTS.
- There were holes in the airlines and excessive corrosion on the airlines and handrails. WE HAVE NOT ADDRESSED THIS. THIS WILL NEED APPROVAL SO PLEASE ADD TO THE REPORT.
- One of the blowers was being replaced, so there was only one operable blower. THIS HAS BEEN COMPLETED. PLEASE SEE ATTACHED PHOTO.
- The first lift station only had one operable pump. A SECOND PUMP HAD BEEN INSTALLED.
- The digester seeps through the wall if the water rises halfway above capacity. THIS TANK IS ACTUALLY THE SUB-STANDARD/REJECT TANK. IT WILL NEED APPROVAL SO PLEASE PUT ON REPORT.
- Reuse advisory signage was not posted at holes 1 and 10 on the golf course or on the scorecards. THIS IS BEING DONE AS PART OF THE GOLF COURSE REHABILITATION PROJECT. WE WILL SUPPLY PICTURES WHEN COMPLETE. PLEASE ADD TO THE REPORT.

THANK YOU!
Mitch

Get Outlook for iOS

From: Turke, Kaylee <Kaylee.Turke@FloridaDEP.gov>
Sent: Friday, October 17, 2025 4:12:48 PM
To: Matt Gillispie <matt@floridautilitysolutions.com>
Cc: Forest WWTP <forest@floridautilitysolutions.com>; Mitch Gilbert FUS

Secondary Blower Installation 10/22/2025



<mitchgilbert@floridautilitysolutions.com>; Alana - Florida Utility Solutions <alana@floridautilitysolutions.com>
Subject: Forest Utilities WWTP (FLA014478) FDEP Preliminary Deficiency List

Good afternoon,

I hope this email finds you well. I appreciate your updates regarding the Forest Utilities WWTP following our inspection on October 9th. I wanted to provide you with a preliminary deficiency list prior to sending out the report, just in case items have been completed since our visit (I know some items listed will take time to complete – but I wanted to add them anyways).

Preliminary List

- The clarifier had excessive scum/floc floating at the surface.
- It was stated that the skimmer arm needed to be adjusted to provide better operation.
- There were holes in the airlines and excessive corrosion on the airlines and handrails.
- One of the blowers was being replaced, so there was only one operable blower.
- The first lift station only had one operable pump.
- The digester seeps through the wall if the water rises halfway above capacity.
- Reuse advisory signage was not posted at holes 1 and 10 on the golf course or on the scorecards.

For the last item, I have attached a copy of 62-610.468 F.A.C. to this email, which outlines the need for advisory signage, as well as what needs to be included on the signage/scorecards.

Let me know if you have any questions!

Have a great weekend!

Best,

Kaylee Turke
Florida Department of Environmental Protection
South District Office – Wastewater Compliance
Environmental Specialist
Kaylee.Turke@FloridaDEP.gov
Office: 239-344-5710

From: Matt Gillispie
To: Turke, Kaylee
Cc: McSurley, Alexandria; Mitch Gilbert FUS
Subject: Re: Golf course scorecard reuse verbiage
Date: Monday, October 27, 2025 2:07:43 PM

EXTERNAL MESSAGE
This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Good afternoon Kaylee,

Attached are the pictures for the two reuse ponds with signage. We are working on the scorecards, but wasn't sure how long that will take so we went ahead and put up the signs in the meantime. Please let me know if you need anything else.

Cheers,

Matt Gillispie

Plant Manager – Florida Utility Solutions Inc.
O: 239-513-0445
C: 239-218-0933
matt@floridautilitysolutions.com

> On Oct 24, 2025, at 12:47 PM, Turke, Kaylee <Kaylee.Turke@floridadep.gov> wrote:
>
> Perfect, thank you! Whenever you get the chance, could you send me a photo of the sign at the ponds and the score cards once they're printed with the added verbiage?
>
> <image001.jpg>
>
> **Kaylee Turke**
> Florida Department of Environmental Protection
> South District Office – Wastewater Compliance
> Environmental Specialist
> Kaylee.Turke@FloridaDEP.gov
> Office: 239-344-5710
>
> ---
>
> **From:** Matt Gillispie <matt@floridautilitysolutions.com>
> **Sent:** Friday, October 24, 2025 12:41 PM
> **To:** Turke, Kaylee <Kaylee.Turke@FloridaDEP.gov>

Reuse Pond Signage 10/27/2025



Reuse Pond Signage 10/27/2025



Cc: McSurley, Alexandria <Alexandria.McSurley@FloridaDEP.gov>; Mitch Gilbert FUS <mitchgilbert@floridautilitysolutions.com>
Subject: Re: Golf course scorecard reuse verbiage

EXTERNAL MESSAGE
This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Ok, thank you! We have sent this to the golf course to be added to the score cards. We have also re-installed the signs at the ponds. Please let me know if you need anything else!

Cheers,

Matt Gillispie

Utility Manager – Florida Utility Solutions Inc.

<image002.png>

O: 239-513-0445

C: 239-218-0933

matt@floridautilitysolutions.com

From: Turke, Kaylee <Kaylee.Turke@FloridaDEP.gov>
Sent: Friday, October 24, 2025 10:17 AM
To: Matt Gillispie <matt@floridautilitysolutions.com>
Cc: McSurley, Alexandria <Alexandria.McSurley@FloridaDEP.gov>
Subject: RE: Golf course scorecard reuse verbiage

Yes, the verbiage you have on the current signs should work as long as you also include the international “do not drink” symbol (along with the English and Spanish phrases). It’s up to you if you would like to include the verbiage at holes #1 and #10 on the golf course and at the reuse ponds, **or** on the scorecards. Whichever works best for the facility.

Thank you!

Kaylee Turke



Florida Department of Environmental Protection
South District Office – Wastewater Compliance
Environmental Specialist
Kaylee.Turke@FloridaDEP.gov
Office: 239-344-5710

From: Matt Gillispie <matt@floridautilitysolutions.com>
Sent: Friday, October 24, 2025 11:55 AM
To: Turke, Kaylee <Kaylee.Turke@FloridaDEP.gov>
Cc: McSurley, Alexandria <Alexandria.McSurley@FloridaDEP.gov>
Subject: Re: Golf course scorecard reuse verbiage

EXTERNAL MESSAGE

This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Hi Kaylee,

So the verbiage we have on the signs around the pond should work then? It's in Spanish and English, stating the pond contains reuse and says "do not drink."

Let me know, thanks!

Cheers,

Matt Gillispie

Utility Manager – Florida Utility Solutions Inc.

O: 239-513-0445
C: 239-218-0933
matt@floridautilitysolutions.com

From: Turke, Kaylee <Kaylee.Turke@FloridaDEP.gov>
Sent: Friday, October 24, 2025 7:54 AM
To: Matt Gillispie <matt@floridautilitysolutions.com>
Cc: McSurley, Alexandria <Alexandria.McSurley@FloridaDEP.gov>
Subject: RE: Golf course scorecard reuse verbiage

Good morning, Matt,

While there isn't exact verbiage indicated in the rule, it does say that the golf course scorecards need to "designate the nature of the reuse project area where reuse is practiced" and include the text "Do not drink" in English and Spanish

together with the equivalent standard international symbol.

I am trying to see if I can find an example for you, but we may not have any on hand. In the meantime, I have attached a copy of the rule that outlines the requirements for the advisory signage/notification.

If you have any further questions, please let me know.

Respectfully,

<image001.jpg>

Kaylee Turke
Florida Department of Environmental Protection
South District Office – Wastewater Compliance
Environmental Specialist
Kaylee.Turke@FloridaDEP.gov
Office: 239-344-5710

From: Matt Gillispie <matt@floridautilitysolutions.com>
Sent: Thursday, October 23, 2025 4:08 PM
To: Turke, Kaylee <Kaylee.Turke@FloridaDEP.gov>
Subject: Golf course scorecard reuse verbiage

EXTERNAL MESSAGE
This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Good afternoon, Kaylee,

Can you please send me the verbiage that would be required for the golf course scorecard regarding the reuse ponds? Thank you!

Cheers,

Matt Gillispie

Plant Manager – Florida Utility Solutions Inc.
O: 239-513-0445
C: 239-218-0933
matt@floridautilitysolutions.com



Permit Renewal Application and Supporting Documentation

for

Forest Utilities Inc.

Wastewater Treatment Facility

The Forest
The Country Club Community
Fort Myers, Florida

County of Lee

Facility ID: FLA014478

November 2025

Source, Inc. Project Number 170-01-25

SOURCE, INC.
ENGINEERS - PLANNERS

1334 LAFAYETTE STREET * CAPE CORAL, FL 33904
TELEPHONE (239)549-2345 FAX (239)549-6779

James P. Elliott, P.E.
Florida License No.: 21022

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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Section	Title
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3	Form 2A
4	Maps and Drawings
5	Capacity Analysis Report
6	Reuse Feasibility Study
7	Binding Agreements
8	Operation and Maintenance Performance Report
9	Reclaimed Water or Effluent Analysis Report
10	Collection/Transmission System Action Plan
11	Collection System Power Outage Contingency Plan
12	Engineering Plans – Static Fine Screen and Effluent Filter Replacement
13	Additional Documents: a. Operational Protocol b. Effluent Monitoring Plan c. Wastewater Collection System Operation and Maintenance Manual d. Lift Station Operation and Maintenance Manual

SECTION 1

Cover

SOURCE, INC.
Engineers - Planners
FL Eng. Business #2627

James P. Elliott, P.E., President
Timothy E. Pugh, P.E., Vice President

1334 Lafayette Street
Cape Coral, FL 33904-9770
(239) 549-2345
Fax (239) 549-6779
E-mail address: Mail@source-inc.com

November 4, 2025

Delivered Electronically

Ms. Elizabeth Sweigert, South District Director
Florida Department of Environmental Protection
South District
2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33902-2549
<Elizabeth.Sweigert@FloridaDEP.gov>

RE: Permit Renewal Application
Forest Utilities, Inc. WWTP
Permit No. FLA014478
Source, Inc. Project Number 170-01-25

Dear Ms. Sweigert:
We respectfully request the Department's review and approval of the Forest Utilities' wastewater treatment facility operation permit renewal application. Enclosed are the following documents included in the application:

1. DEP Form 62-620.910(1) WASTEWATER FACILITY OR ACTIVITY PERMIT APPLICATION FORM 1 GENERAL INFORMATION.
2. DEP Form 62-620.910(2) WASTEWATER APPLICATION FORM 2A FOR A DOMESTIC WASTEWATER FACILTY PERMIT.
3. DEP Form 62-620.910(2), SECTION 8, 1. General Application Requirements.
    a. Process Flow Diagram.
    b. Site Plan.
    c. Location Map.
    e. Capacity Analysis Report.
    g. Reuse Feasibility Study.
4. DEP Form 62-620.910(2), SECTION 8, 3. Additional Application Requirements for Permit Renewals.
    a. Operation and Maintenance Performance Report.
    b. Reclaimed Water or Effluent Analysis Report.
5. In accordance with Rule 62-600.705 Collection/Transmission Systems the following additional documentation is provided:
    a. Collection System Action Plan.
    b. Power Outage Contingency Plan.
6. Engineering Plans – Static Fine Screen and Effluent Filter Replacement
7. Additional Documentation:
    a. Operational Protocol.
    b. Effluent Monitoring Plan.

c. Wastewater Collection System Operation and Maintenance Manual.
d. Lift Station Operation and Maintenance Manual

We trust the application forms and documentation provided are sufficient to complete your review. If you have any questions or if we can be of further assistance, feel free to contact us.

Very Truly Yours,
Source, Inc.

James P. Elliott, P.E.
FL. License No.: 21022

cc: Ronald Leavitt <rcleavit@source-inc.com>
Tim Pugh <tepugh@source-inc.com>
Douglas, Jessica <jessica.douglas@floridadep.gov>
Doris Swor <dorrees6@gmail.com>
Mitch Gilbert <mitchgilbert@floridautilitysolutions.com>

SECTION 2

DEP Form 62-620.910(1)

• WASTEWATER FACILITY OR ACTIVITY PERMIT, APPLICATION FORM 1, GENERAL INFORMATION

WASTEWATER FACILITY OR ACTIVITY PERMIT APPLICATION FORM 1 GENERAL INFORMATION

I IDENTIFICATION NUMBER:

Facility ID FLA014478

II CHARACTERISTICS:

INSTRUCTIONS: Complete the questions below to determine whether you need to submit any permit application forms to the Department of Environmental Protection. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the blank in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements. See Section B of the instructions. See also, Section C of the instructions for definitions of the terms used here.

SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED
A. Is this facility a domestic wastewater facility which results in a discharge to surface or ground waters?	X		X
B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters?		X	
C. Does or will this facility (other than those describe in A. or B.) discharge process wastewater, or non-process wastewater regulated by effluent guidelines or new source performance standards, to surface waters?		X	
D. Does or will this facility (other than those described in A. or B.) discharge process wastewater to ground waters?		X	
E. Does or will this facility discharge non-process wastewater, not regulated by effluent guidelines or new source performance standards, to surface waters?		X	
F. Does or will this facility discharge non-process wastewater to ground waters?		X	
G. Does or will this facility discharge stormwater associated with industrial activity to surface waters?		X	
H. Is this facility a non-discharging/closed loop recycle system?		X	
I. Is this facility a public water system whose primary purpose is the production of potable water for public consumption and which discharges demineralization concentrate to surface water or groundwater?		X	

DEP Form 62-620.910(1)
(Effective July 7, 2006 Revised July 30, 2010)

III NAME OF FACILITY: (40 characters and spaces)

Forest Utilities WWTP

Facility ID FLA014478

IV FACILITY CONTACT: (A. 30 characters and spaces)

A. Name and Title (Last, first, & title)	B. Phone (area code & no.)
Swor, Doris, President	(239) 481-5333

V FACILITY MAILING ADDRESS: (A. 30 characters and spaces; B. 25 characters and spaces)

A. Street or P.O. Box: 6341 Deer Run Road, SW		
B. City or Town: Fort Myers	State: FL	Zip Code: 33908

VI FACILITY LOCATION: (A. 30 characters and spaces; B. 24 characters and spaces; C. 3 spaces (if known); D. 25 characters and spaces; E. 2 spaces; F. 9 spaces)

A. Street, Route or Other Specific Identifier: Deer Run, Forest Country Club		
B. County Name: Lee County	C. County Code (if known): 36	
D. City or Town: Fort Myers	E. State: FL	F. Zip Code: 33908

VII SIC CODES: (4-digit, in order of priority)

1. Code #: 4952	(Specify) Sewage System	2. Code #: 2873	(Specify) Fertilizer
3. Code #: 4971	(Specify) Irrigation System	4. Code #: 0711	(Specify) Ag. Soil Prep.

VIII OPERATOR INFORMATION: (A. 40 characters and spaces; B. 1 character; C. 1 character (if other, specify); D. 12 characters; E. 30 characters and spaces; F. 25 characters and spaces; G. 2 characters; H. 9 characters)

A. Name: Florida Utility Solutions - Ivory Mitch Gilbert		B. Is the name in VIII A. the owner? ☐Yes ☒No	
C. Status of Operator: F = Federal; S = State; P = Private; O = Other; M = Public (other than F or S)	(code) P	(specify) Provate	D. Phone No.: (239) 481-5333
E. Street or P. O. Box: 6341 Deer Run Road, SW			
F. City or Town: Fort Myers		G. State: FL	H. Zip Code: 33908

IX INDIAN LAND: Is the facility located on Indian lands? ☐ Yes ☒ No

Facility ID FLA014478

X EXISTING ENVIRONMENTAL PERMITS:

A. NPDES Permit No.	B. UIC Permit No.	C. Other (specify)	D. Other (specify)

XI MAP: Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII NATURE OF BUSINESS (provide a brief description)

Provides treatment for domestic wastewater collection from residential subdivisions and commercial properties. Treated effluent is discharged to adjacent golf courses and used to supplement irrigation water for golf course irrigation. Stabilized sludge is dried and hauled to landfill.

XIII CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Doris Swor	Doris Swor
A. Name (type or print)	B. Signature
President	10/30/25
Official Title (type or print)	C. Date Signed

SECTION 3

DEP Form 62-620.910(2)

• WASTEWATER APPLICATION FORM 2A FOR A DOMESTIC WASTEWATER FACILITY PERMIT

WASTEWATER APPLICATION FORM 2A FOR A DOMESTIC WASTEWATER FACILITY PERMIT

Instructions for selected items are included in the "INSTRUCTIONS FOR FORM 2A". Refer to these instructions before filling out each item.

SECTION 1. APPLICANT AND FACILITY DESCRIPTION

1. Application Type

- ☐ New
- ☐ Substantial Modification
- ☒ Permit Renewal

2. Facility Type

- ☒ Wastewater Treatment
- ☒ Reuse or Disposal
- ☐ Limited Wet Weather Discharge
- ☐ Residuals/Septage Management

3. Treatment Facility Information

a. Name: Forest Utilities WWTP

b. Facility Identification Number: FLA014478

c. Location

Number and Street: 6341 Deer Run Road, SW

City/State/Zip Code: Fort Myers, Florida 33908

Telephone: (239) 481-5333

Latitude	26	°	29	'	13	"N
Longitude	81	°	52	'	12	"W

Dates Coordinates Determined: 8/11/20

Method Used to Obtain Coordinates: Previous permit which stated "Scaled from USGS Quad Map"

d. Ownership Type

- ☐ Municipal
- ☐ County
- ☐ State
- ☒ Private

e. Contact

Name	Mitch Gilbert
Title	Contract Operator
Telephone	(239) 825-7818

f. Facility Mailing Address

Number and Street	6341 Deer Run Road, SW
City/State/Zip Code	Fort Myers, Florida 33908

g. Year Facility Began Operation 1979-1980

4. Applicant or Authorized Representative

Legal Name	Forest Utilities, Inc.
Number and Street	6000 Forest Boulevard
City/State/Zip Code	Fort Myers, Florida 33908
Telephone	(239) 481-1300
Contact Person	Doris Swor
Title	President
Telephone Number	(239) 481-5333

Is the applicant the owner or operator (or both) of the facility? ☒ Owner ☐ Operator

Indicate whether correspondence regarding this facility should be directed to the facility or the applicant.
☒ Facility ☐ Applicant

5. Project Name and Description

Forest Utilities Wastewater Treatment Facility. Existing 0.800 MGD capacity wastewater treatment facility providing treatment and disposal service to an existing Florida PSC sewer franchise service area.

6. Municipalities or Areas Served

Name of Municipality or Area	Ownership	Population Served
Forest Utilities, Inc. PSC Franchise Area	Provate	6500 +/-
	Total Population Served	6500+/-

7. Reclaimed Water Reuse and Effluent Disposal

Method of Reuse or Disposal	Number of Reuse or Disposal Points	Total Design Capacity (mgd)	Basis of Design Flow
Surface Waters - Excluding Ocean Outfalls and Wetlands (Rule 62-600.510, F.A.C.)			
Ocean Outfalls (Rule 62-600.520, F.A.C.)			
Wetlands (Rule 62-600.620, F.A.C.)			
Reuse of Reclaimed Water and Land Application (Rule 62-600.530, F.A.C.)	1	0.800	100% of treated effluent
Ground Water Disposal by Underground Injection (Rule 62-600.540, F.A.C.)			
Other (Describe)			
Total	1	0.800	100%

8. Flows to Another Wastewater Facility

a. Does the facility discharge or transport treated or untreated wastewater to another treatment facility?
☐ Yes ☒ No

b. If yes, describe the mean(s) by which the wastewater from the treatment facility is discharged or transported to the other treatment facility (e.g., collection/transmission system, reclaimed water distribution system)?
N/A

If transport is by a party other than the applicant, provide the following:
Transporter name: N/A
Mailing Address:
Contact person:
Title:
Telephone number:

c. For each treatment facility that receives this discharge, provide the following:
Name: N/A
Mailing Address:
Contact person:
Title:
Telephone number:

d. Facility Identification Number of Facility Which Receives the Flow: N/A

e. Average Daily Flow Rate to the Receiving Facility: N/A mgd

9. Residuals Use or Disposal

a. Amount of Residuals Generated by the Facility: 19.6 (Estimated, from previous applicaiton) dry tons/year

b. Does this facility receive residuals from another facility for further treatment and disposal? ☐ Yes ☒ No

c. Method of Residuals Use or Disposal

Method	Number of Sites or Number of Receiving Facilities	Dry Tons Used or Disposed per Year
Land Application (Chapter 62-640, F.A.C.)		
Distribution and Marketing (Chapter 62-640, F.A.C.)		
Landfill Disposal (Chapter 62-701, F.A.C.)	1	9.8 (estimated)
Incineration (Chapter 62-200 Series, F.A.C.)		
Transport to Another Treatment Facility		
Other (Describe)	1-compost facility	9.8 (estimated)
	Total	19.6 (estimated)

d. If residuals are transported to another facility for landfill disposal, incineration, or treatment, provide the facility name, Facility identification number and address.

Name	Karle Enviro Organic Recycling, Inc.
Facility Identification Number	N/A
Number and Street	2991 South Street
City/State/Zip Code	Fort Myers, Florida 33916
County	Lee
Telephone	(239) 693-7027
Treatment Processes Used by Receiving Facility	Dewatering/Thickening

10. Permits and Applications

a. Expiration Date of Current NPDES Permit _____

b. Expiration Date of Current DEP Permit May 4, 2026

c. Permit Number of Any Existing Environmental Permits

NPDES		PSD	
UIC		Other	
RCRA		Other	

d. Orders and Notices

Type or Order or Notice	Issuing Agency	Date of Order or Notice
Notice or Violation		
Consent Order		
Administrative Order		
Other (Describe.)		

SECTION 2. TREATMENT FACILITY DESCRIPTION

1. Flow

a. Design Capacity

Current Design Capacity	0.800	mgd
Proposed Incremental Design Capacity	+ 0.000	mgd
Proposed Total Design Capacity	= 0.800	mgd

b. Basis of Design Flow

- ☒ Annual Average Daily Flow
- ☐ Maximum Monthly Average Daily Flow
- ☐ Three-Month Average Daily Flow
- ☐ Other. If other, specify.

	Two Years Ago	Last Year	This Year	
c. Annual Average Daily Flow Rate	0.479	0.478	0.453	mgd
d. Maximum Daily Flow Rate	0.567	0.553	0.532	mgd

2. Design Treatment Levels

Parameter	Effluent Concentration	Units	Basis	Percent Removal
pH	6.0 - 8.5	Standard Units		
$CBOD_5$	Mean 20, Max 30	mg/L	Grab (7 days/week)	95
TSS	5.0	mg/L	Grab (7 days/week)	95
Chlorine Residual	Min. 1.0	mg/L	Continuous	-
Fecal Colifirm	25 max (75% BDL)	Colonies/100 mL	Grab (7 days/week)	-
Trubidity	Max. 3.0	NTU	Continuous	-

3. Disinfection Level Provided

- ☐ Low-level
- ☐ Basic
- ☐ Intermediate
- ☒ High-level
- ☐ High-level Alternative

If the facility disinfects by chlorination and the discharge is to surface waters, is dechlorination provided? ☐ Yes ☐ No

N/A

4. Residuals Treatment

a. Class of Residuals

- ☐ Class AA (Rule 62-640.850, F.A.C.)
- ☐ Class A (Rule 62-640.600, F.A.C.)
- ☒ Class B (Rule 62-640.600, F.A.C.)
- ☐ Other

If other, describe

N/A

b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge:

N/A - Sludge is hauled and processed off-site

c. Which vector attraction reduction option is met for the sewage sludge at your facility? N/A

- ☐ Option 1 (Minimum 38 percent reduction in volatile solids)
- ☐ Option 2 (Anaerobic process, with bench-scale demonstration)
- ☐ Option 3 (Aerobic process, with bench-scale demonstration)
- ☐ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
- ☐ Option 5 (Aerobic processes plus raised temperature)
- ☐ Option 6 (Raise pH to 12 and retain at 11.5)
- ☐ Option 7 (75 percent solids with no unstabilized solids)
- ☐ Option 8 (90 percent solids with unstabilized solids)
- ☐ Option 9 (Injection below land surface)
- ☐ Option 10 (Incorporation into soil within 6 hours)
- ☐ Option 11 (Covering active sewage sludge unit daily)
- ☐ None or unknown

d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge:

N/A - Sludge residuals are hauled off-site for processing and disposal.

e. Parameter Concentrations

POLLUTANT	CONC.	UNITS
Total Nitrogen		% dry weight
Total Phosphorus		% dry weight
Total Potassium		% dry weight
Arsenic		mg/kg dry weight
Cadmium		mg/kg dry weight
Chromium		mg/kg dry weight
Copper		mg/kg dry weight
Lead		mg/kg dry weight
Mercury		mg/kg dry weight
Molybdenum		mg/kg dry weight
Nickel		mg/kg dry weight
Selenium		mg/kg dry weight
Zinc		mg/kg dry weight
pH		standard units
Total Solids		%
Other Parameters		

Date of Sample TBD

5. Reliability Class

- ☒ Class I
- ☐ Class II
- ☐ Class III
- ☐ Other Equivalent Reliability

SECTION 3. A. DISCHARGES TO SURFACE WATERS (including wetlands)

N/A

1. Discharge Serial Number and Name

Discharge Serial Number _____

2. Discharge Location

County _____
Street or Description _____
City or Town (if applicable) _____
Zip Code _____
Latitude ° ' "N
Longitude ° ' "W
Dates Coordinates Determined _____
Method Used to Obtain Coordinates _____

3. Design Capacity of the Outfall

Current Design Capacity _____ mgd
Proposed Incremental Design Capacity + _____ mgd
Proposed Total Design Capacity = _____ mgd

4. Basis of Design Flow

- ☐ Annual Average Daily Flow
- ☐ Maximum Monthly Average Daily Flow
- ☐ Three-Month Average Daily Flow
- ☐ Other

If other, specify _____

5. Basis for Effluent Limitations

- ☐ TBEL
- ☐ Level I WQBEL
- ☐ Level II WQBEL
- ☐ Other

If other, specify _____

Date Effluent Limitations Established _____

6. Description of Receiving Waters

a. Name of Receiving Water _____

b. Type of Receiving Waterbody

- ☐ Fresh
- ☐ Brackish or Marine

c. Classification of Receiving Waterbody

- ☐ Class I
- ☐ Class II
- ☐ Class III
- ☐ Class IV
- ☐ Class V

Is the receiving waterbody contiguous to, or identified as, an Outstanding Florida Water (OFW) or an Outstanding National Resource Water? ☐ Yes ☐ No

If yes, name and locate on a USGS map. _____

Does this facility discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flow through) Indian Country? ☐ Yes ☐ No

d. Name of Watershed (if known) _____

United States Soil Conservation Service 14-digit Watershed Code (if known) _____

e. Name of State Management/River Basin (if known) _____

United States Geological Survey 8-digit Hydrologic Cataloging Unit Code (if known) _____

f. Critical low flow of receiving stream (if applicable)

acute _____ cfs chronic _____ cfs

g. Total hardness of receiving stream at critical low flow (if applicable) _____ mg/l of $CaCO_3$

7. Outfall Information

Description of Outfall and Diffuser

Construction Materials _____
Length From Shore _____ feet
Diameter _____ inches
Discharge Depth Below Water Surface _____ feet
Receiving Water Bottom Depth Below Water Surface _____ feet
Is the outfall equipped with a diffuser? ☐ Yes ☐ No

8. Surface Water Improvement and Management (SWIM)

a. Will the discharge affect any SWIM plan waterbodies? ☐ Yes ☐ No

b. If yes, name the waterbody _____

c. Has the SWIM plan been approved by a water management district and the Department? ☐ Yes ☐ No

d. If yes, attach documentation that the proposed discharge is consistent with the SWIM plan.

9. Additional Information Required for Intermittent or Periodic Discharges

Frequency	_____	Times Per Year
Duration	_____	Days
Volume	_____	Thousand Gallons Per Incident
Occurrence		

	Jan		May		Sep
	Feb		Jun		Oct
	Mar		Jul		Nov
	Apr		Aug		Dec

10. Additional Information Required for Limited Wet Weather Discharges Permitted in Accordance with Rule 62-610.860, F.A.C.

a. Downstream Waterbody

Name of nearest downstream lake, estuary, reservoir, OFW, or Class I water. Show location on a USGS map. _____

Classification of Downstream Waterbody

- ☐ Class I
- ☐ Class II
- ☐ Class III
- ☐ Class IV
- ☐ Class V

Distance Downstream _____ miles

Average Flow Velocity During Anticipated Periods of Discharge _____ feet per second

Travel Time During Anticipated Periods of Discharge _____ hours

b. Rainfall Information

Rainfall Gauging Station Location _____

Period of Record Analyzed:
Beginning Year _____
Ending Year _____
Number of Years _____
Average Annual Rainfall _____ inches per year

c. Simulation of Operation of the Reuse, Storage, and Limited Wet Weather Discharge for an Average Rainfall Year

Year Simulated _____

Annual Rainfall During Average Year _____ inches

Number of Days Limited Wet Weather Discharge is Used During Average Rainfall Year (N) _____ days

Percent of the Days of the Year that the Limited Wet Weather Discharge will Occur During Average Rainfall Year (P) _____ %

Note:
P = [(N) / (365)] x 100%.
P cannot exceed 25% or be less than 1%.

d. Reclaimed Water Quality (maximum monthly average)

$CBOD_5$ _____ mg/L
TKN (as Nitrogen) _____ mg/L

e. Minimum Acceptable Stream Dilution Factor (SDF) _____

Note:
$SDF = P(0.085 \times CBOD_5 + 0.272 \times TKN - 0.484)$
The values for $CBOD_5$ and TKN should be in terms of maximum monthly average limitations as provided in 14.d. above. The value of P should be as calculated in 14.c. above.

f. Adjusted Stream Dilution Factor _____

Note:
If the travel time shown in 14.a., above, is less than 24 hours, provide the adjusted minimum acceptable stream dilution factor.
Adjusted SDF = SDF x (24 hours)/(travel time in hours)

11. Additional Information Required for Wetland Discharges

a. Is the wetland a jurisdictional wetland (i.e. within the landward extent of waters as defined in Rule 62-301.400. F.A.C., or isolated and not owned entirely by one person, or owned entirely by the State)? ☐ Yes ☐ No

b. Will the wetland be used as a treatment wetland or receiving wetland?

If the wetland is to be used as a treatment wetland, attach documentation showing ownership or the applicant's legal interest in the treatment wetland.

☐ Treatment
☐ Receiving

c. If the wetland is to be used for treatment, identify the type.

☐ Man-made
☐ Hydrologically Altered
☐ Unaltered

d. Is the wetland herbaceous or woody?

☐ Herbaceous
☐ Woody

e. Identify the classification of surface waters within the wetland.

☐ Class I
☐ Class II
☐ Class III
☐ Class IV
☐ Class V

f. Are the waters within the wetland part of an OFW?

☐ Yes ☐ No

12. Effluent Testing Information.

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)		s.u.	-	-	-
pH (Maximum)		s.u.	-	-	-
Flow Rate					
Temperature (Winter)					
Temperature (Summer)					
* For pH, please report a minimum and maximum daily value.					

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	MDL/ PQL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
CARBONACEOUS BIOCHEMICAL OXYGEN DEMAND (CBOD)							
TOTAL SUSPENDED SOLDS (TSS)							
FECAL COLIFORM							

13. Additional Application Information for Applicants with a Design Flow Greater Than or Equal to 0.1 mgd

a. Effluent Testing Data

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	MDL/ PQL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)							
CHLORINE (TOTAL RESIDUAL, TRC)							
DISSOLVED OXYGEN							
TOTAL KJELDAHL NITROGEN (TKN)							
NITRATE PLUS NITRITE							
NITROGEN							
OIL and GREASE							
PHOSPHORUS (Total)							
TOTAL DISSOLVED SOLIDS (TDS)							
OTHER PARAMETERS							

b. Inflow and Infiltration

Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration _____ gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

c. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ☐ Yes ☐ No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: _____

Mailing Address: _____

_____

Telephone Number: _____

Responsibilities of Contrator: _____

14. Expanded Effluent Testing Data: 1.0 mgd and Pretreatment Treatment Works.

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.											
ANTIMONY											
ARSENIC											
BERYLLIUM											
CADMIUM											
CHROMIUM											
COPPER											
LEAD											
MERCURY											
NICKEL											
SELENIUM											
SILVER											
THALLIUM											
ZINC											
CYANIDE											
TOTAL PHENOLIC COMPOUNDS											
HARDNESS (AS CaCO 3)											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.											
VOLATILE ORGANIC COMPOUNDS.											
ACROLEIN											
ACRYLONITRILE											
BENZENE											
BROMOFORM											
CARBON TETRACHLORIDE											
CLOROBENZENE											
CHLORODIBROMO-METHANE											
CHLOROETHANE											
2-CHLORO-ETHYLVINYL ETHER											
CHLOROFORM											
DICHLOROBROMO-METHANE											
1,1-DICHLOROETHANE											
1,2-DICHLOROETHANE											
TRANS-1,2-DICHLORO-ETHYLENE											
1,1-DICHLORO-ETHYLENE											
1,2-DICHLOROPROPANE											
1,3-DICHLORO-PROPYLENE											
ETHYLBENZENE											
METHYL BROMIDE											
METHYL CHLORIDE											
METHYLENE CHLORIDE											

1,1,2,2-TETRACHLORO-ETHANE											
TETRACHLORO-ETHYLENE											
TOLUENE											
1,1,1-TRICHLOROETHANE											
1,1,2-TRICHLOROETHANE											
TRICHLOR-ETHYLENE											
VINYL CHLORIDE											
Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.											
ACID-EXTRACTABLE COMPOUNDS											
P-CHLORO-M-CRESOL											
2-CHLOROPHENOL											
2,4-DICHLOROPHENOL											
2,4-DIMETHYLPHENOL											
4,6-DINITRO-O-CRESOL											
2,4-DINITROPHENOL											
2-NITROPHENOL											
4-NITROPHENOL											
PENTACHLORO-PHENOL											
PHENOL											
2,4,6-TRICHLOROPHENOL											
Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.											
BASE-NEUTRAL COMPOUNDS.											
ACENAPHTHENE											
ACENAPHTHYLENE											
ANTHRACENE											
BENZIDINE											
BENZO(A)-ANTHRACENE											
BENZO(A)PYRENE											
3,4 BENZO-FLUORANTHENE											
BENZO(GHI)-PERYLENE											
BENZO(K)-FLUORANTHENE											
BIS (2-CHLOROETHOXY) METHANE											
BIS (2-CHLOROETHYL)-ETHER											
BIS (2-CHLOROISO-PROPYL) ETHER											
BIS (2-ETHYLHEXYL) PHTHALATE											
4-BROMOPHENYL PHENYL ETHER											
BUTYL BENZYL PHTHALATE											
2-CHLORO-NAPHTHALENE											
4-CHLORPHENYL PHENYL ETHER											
CHRYSENE											
DI-N-BUTYL PHTHALATE											

DI-N-OCTYL PHTHALATE											
DIBENZO(A,H) ANTHRACENE											
1,2-DICHLOROBENZENE											
1,3-DICHLOROBENZENE											
1,4-DICHLOROBENZENE											
3,3-DICHLOROBENZIDINE											
DIETHYL PHTHALATE											
DIMETHYL PHTHALATE											
2,4-DINITROTOLUENE											
2,6-DINITROTOLUENE											
1,2-DIPHENYL-HYDRAZINE											
FLUORANTHENE											
FLUORENE											
HEXACHLORO-BENZENE											
HEXACHLORO-BUTADIENE											
HEXACHLORO-CYCLO-PENTADIENE											
HEXACHLORO-ETHANE											
INDENO(1,2,3-CD)PYRENE											
ISOPHORONE											
NAPHTHALENE											
NITROBENZENE											
N-NITROSODI-N-PROPYLAMINE											
N-NITROSODI-METHYLAMINE											
N-NITROSODI-PHENYLAMINE											
PHENANTHRENE											
PYRENE											
1,2,4-TRICHLORO-BENZENE											
Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.											
Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.											

SECTION 3. B. REUSE AND LAND APPLICATION SYSTEMS

1. Reuse or Land Application System Serial Number and Name

Reuse or Land Application System Serial Number	R-001
	The Forest Country Club Golf Courses
	(The Bear and The Bobcat)

2. Reuse or Land Application System Location

County	Lee
City or Town (if applicable)	Fort Myers
Street or Description	Adjacent to the WWTF within the Forest Subdivision
Latitude	26 ° 29 ' 13 "N
Longitude	81 ° 52 ' 12 "W
Dates Coordinates Determined	8/11/20, from previous permit applicaiton
Method Used to Obtain Coordinates	Previous permit application (Scaled from USGS Quac

3. Design Capacity of the Reuse or Land Application System

Current Design Capacity	0.800	mgd
Proposed Incremental Design Capacity	+ 0.00	mgd
Proposed Total Design Capacity	= 0.800	mgd

4. Basis of Design Flow

- ☒ Annual Average Daily Flow
- ☐ Maximum Monthly Average Daily Flow
- ☐ Three-Month Average Daily Flow
- ☐ Other

If other, specify

5. Is land application continuous or intermittent? ☐ Continuous ☒ Intermittent

6. Underdrains and Perimeter Ditches

a. Is the reuse or land application system underdrained? ☐ Yes ☒ No

b. Are perimeter ditches used? ☐ Yes ☒ No

If yes, will they be excavated to a depth which will intersect the seasonal high ground water table or the ground water mound during any portion of the year? ☐ Yes ☒ No

7. Type of Reuse or Land Application System

- ☐ Slow-rate land application system/restricted public access (Chapter 62-610, F.A.C., Part II)
- ☒ Slow-rate land application system/public access areas, residential irrigation, and edible crop irrigation (Chapter 62-610, F.A.C., Part III)
- ☐ Rapid-rate land application system (Chapter 62-610, F.A.C., Part IV)
- ☐ Absorption field system (Chapter 62-610, F.A.C., Part V)
- ☐ Overland flow system (Chapter 62-610, F.A.C., Part VI)
- ☐ Other land application system with additional levels of preapplication treatment (Rule 62-610.660, F.A.C.)
- ☐ Other land application system with lower levels of preapplication treatment (Rule 62-610.670, F.A.C.)

8. Application Areas and Rates

Site/Use Type/Major User	Area (acres)	Rate (inches/week)	Capacity (mgd)
The Forest Counrty Club Golf Courses	160	1.29	0.800
Total	160	1.29	0.800

9. Additional Information Required for Reuse Systems Permitted Under Part III of Chapter 62-610, F.A.C.

a. Areas Irrigated

- ☐ Residential lawns
- ☒ Golf courses
- ☐ Cemeteries
- ☐ Parks, playgrounds
- ☐ Landscape areas
- ☐ Highway medians, rights-of-way
- ☐ Edible crops
- ☐ Others

If other, specify _____

b. Other Uses of Reclaimed Water

- ☐ Toilet flushing
- ☐ Fire protection
- ☐ Construction dust control
- ☐ Aesthetic purposes (decorative ponds, fountains, etc.)
- ☐ Others

If other, specify. _____

c. How many hours per day, seven days per week, is or will an operator be on-site at the wastewater treatment facility?

6 hours per day

If the treatment facility is or will be staffed by an operator less than 24 hrs/day, describe the additional levels of reliability included within the treatment or reuse systems (See Rule 62-610.462, F.A.C.)

Continous monitorng of total chlorine residula and turbidity with automatic operating valves upon default. Effluent is diverted to substandard storage for recycling to the treatement process, if necessary.

d. For permit renewals, list the dates on which the operating protocols (as described in Rule 62-610.463, F.A.C.) were submitted to the Department and the date of the Department's approvals during the last five years.

Date Submitted	Date Approved
10/22/2020	-

e. For each site where edible crops are or will be irrigated with reclaimed water, describe the crops grown; the type of application system used; provisions for crop washing and for processing, if any; and provisions for control of public access, if any. (See Rule 62-610.475, F.A.C.)

N/A

SECTION 3. C. GROUND WATER DISPOSAL BY UNDERGROUND INJECTION

N/A

1. Underground Injection Well Facility Serial Number and Name

Underground Injection Well Facility Serial Number _____

2. Underground Injection Well Facility Location

County _____
City or Town (if applicable) _____
Street or Description _____

Latitude ° ' "N
Longitude ° ' "W
Dates Coordinates Determined _____
Method Used to Obtain Coordinates _____

3. Underground Injection Well Facility DEP Identification Number or Permit Application Number _____

4. Design Capacity of the Underground Injection Well Facility

Current Design Capacity _____ mgd
Proposed Incremental Design Capacity + _____ mgd
Proposed Total Design Capacity = _____ mgd

5. Basis of Design Flow

☐ Annual Average Daily Flow
☐ Maximum Monthly Average Daily Flow
☐ Three-Month Average Daily Flow
☐ Other

If other, specify.

6. Is injection continuous or intermittent? ☐ Continuous ☐ Intermittent

SECTION 4. SCHEDULED IMPROVEMENTS AND SCHEDULES OF IMPLEMENTATION

N/A

1. Improvements Required

a. Discharge Serial Numbers, Reclaimed Water Reuse or Land Application System Serial Numbers, and Underground Injection Well Facility Serial Numbers Affected _____

b. Authority Imposing Requirement

- ☐ Local
- ☐ State
- ☐ Federal
- ☐ Developed by Applicant
- ☐ Other

If other, specify. _____

2. Implementation Schedule and Actual Completion Dates

Implementation Steps	Schedule	Actual Completion
a. Preliminary Plans Complete		
b. Final Plans and Specifications Complete		
c. Financing Complete		
d. Site Acquired		
e. Begin Construction		
f. End Construction		
g. Begin Reuse or Disposal		
h. Operational Level Attained		

3. Have appropriate permits/clearances concerning other Federal/State requirements been obtained?

☐ Yes ☐ No

If so, describe briefly:

SECTION 5. INDUSTRIAL WASTEWATER CONTRIBUTIONS N/A

1. Does the treatment works have, or is it subject to, an approved pretreatment program? ☐ Yes ☐ No

2. Provide the number of each of the following types of industrial users that discharge to the treatment works.

a. Number of non-categorical SIUs. _____
b. Number of CIUs. _____

3. Significant Industrial User Information

Name _____
Number and Street _____
City/State/Zip Code _____
County _____

4. Industrial processes Affecting or Contributing to the SIU's Discharge

5. Principal Product(s) and Raw Material(s)

Principal product(s): _____
Raw material(s): _____

6. Flow Rate

a. Process wastewater flow rate.

_____ gpd ☐ Intermittent ☐ Continuous

b. Non-process wastewater flow rate.

_____ gpd ☐ Intermittent ☐ Continuous

7. Pretreatment Standards. Indicate whether the SIU is subject to the following:

a. Local limits ☐ Yes ☐ No

b. Categorical pretreatment standards ☐ Yes ☐ No

If subject to categorical pretreatment standards, which category and subcategory?

_____

8. Problems at the Treatment Works Attributed to Waste Discharged by the SIU. Has the SIU caused or contributed to any problems (e.g. upsets, interference) at the treatment works in the past three years?

☐ Yes ☐ No

If yes, describe each episode.

9. RCRA Waste. Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe?

☐ Yes ☐ No If no, go to question 12.

10. Waste Transport. Method by which RCRA waste is received (check all that apply):

☐ Truck ☐ Rail ☐ Dedicated Pipe

11. Waste Description. Give EPA hazardous waste number and amount (volume or mass, specify units).

EPA Hazardous Waste Number	Amount	Units

12. Remediation Waste. Does the treatment works currently (or has it been modified that it will) receive waste from remedial activities?

☐ Yes (complete 13. through 15.) ☐ No

Provide a list of sites and the requested information (13. – 15.) for each current and future site.

13. Waste Origin. Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

14. Pollutants. List the hazardous constituents that are received (or are expected to be received). Include data on volume and concentration, if known. (Attach additional sheets if necessary).

15. Treatment.

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

☐ Yes ☐ No

If yes, describe the treatment (provide information about the removal efficiency):

b. Is the discharge (or will the discharge be) continuous or intermittent?

☐ Continuous ☐ Intermittent

If intermittent, describe discharge schedule.

SECTION 6. ADDITIONAL INFORMATION REQUIRED FOR PERMIT RENEWALS

1. Have there been any modifications to the treatment facilities or reuse or disposal system, since the issuance of the current permit? If yes, describe on a separate sheet and attach. ☐ Yes ☒ No

2. For limited wet weather discharges, have any modifications been made to the operation, frequency of discharge, or stream hydrology since the original limited wet weather discharge permit or the most recent permit. If yes, describe on a separate sheet and attach. ☐ Yes ☐ No ☒ NA

3. Have there been any violations during the last six months? If yes, describe on a separate sheet and attach. ☐ Yes ☒ No

4. Have there been any treatment facility interferences due to the discharge of industrial wastewater to the treatment facility during the last six months? If yes, describe on a separate sheet and attach. ☐ Yes ☒ No

5. Is there any enforcement action pending against these treatment, reuse, or disposal facilities? If yes, describe on a separate sheet and attach. ☐ Yes ☒ No

6. Have all previous permit conditions, including pretreatment requirements, monitoring requirements, and operator attendance been complied with? If no, describe on a separate sheet and attach. ☒ Yes ☐ No

7. For permit renewals involving a limited wet weather discharge permitted under Rule 62-610.860, F.A.C., list the number of days during each of the last five years that the limited wet weather discharge was used. Also, list the total annual rainfall for each year.

Year	Number of Days Used	P (%)	Annual Rainfall (inches)
1.			
2.			
3.			
4.			
5.			
Total/Average			

8. For permit renewals involving a limited wet weather discharge permitted under Rule 62-610.860, F.A.C., provide the number of days during each of the last five years that the actual dilution ratio, as defined in Rule 62-610.860, F.A.C., was less than the minimum SDF and the number of months in which the monthly average $CBOD_5$ or TKN in the limited wet weather discharge exceeded the permit limitations.

Year	Number of Days the Dilution Ratio Was Less Than SDF	Number of Months the Limits Were Exceeded	
		$CBOD_5$	TKN
1.			
2.			
3.			
4.			
5.			

N/A

SECTION 7. ADDITIONAL INFORMATION REQUIRED FOR RESIDUALS/SEPTAGE MANAGEMENT FACILITIES

1. Location of Residuals Treatment Processes _____

(Describe in relation to the wastewater treatment processes.)

2. Type and Amount of Waste Treated at this Facility

Type	Amount (dry tons/day)	Amount (gallons/day)
Residuals	or	
Septage		
Food Establishment Sludge		
Portable Toilet Waste		
Holding Tank Waste		
Boat or Marina Waste		
Other (Describe.)	or	
Total	or	

Is the total amount estimated or actual? ☐ Estimated ☐ Actual

3. Information on Treatment Facilities Transporting Residuals

a. DEP Permit Number _____

b. Facility Name _____
Number and Street _____
City/State/Zip Code _____
County _____
Telephone _____

c. Facility Type ☐ Type I ☐ Type II ☐ Type III

d. Amount of Residuals Received From This Facility _____ dry tons/day or _____ gpd

Is this amount estimate or actual? ☐ Estimated ☐ Actual

e. Describe the treatment provided by this facility before transport

f. Parameter Concentrations

POLLUTANT	CONC.	UNITS
Total Nitrogen		% dry weight
Total Phosphorus		% dry weight
Total Potassium		% dry weight
Arsenic		mg/kg dry weight
Cadmium		mg/kg dry weight
Chromium		mg/kg dry weight
Copper		mg/kg dry weight
Lead		mg/kg dry weight
Mercury		mg/kg dry weight
Molybdenum		mg/kg dry weight
Nickel		mg/kg dry weight
Selenium		mg/kg dry weight
Zinc		mg/kg dry weight
pH		standard units
Total Solids		%
Other Parameters		

Date of Sample _____

4. Describe the manifest system used for tracking residuals during transport from the facilities.

SECTION 8. DOCUMENTATION SUBMITTED

1. General Application Requirements	Attached Yes	Attached No
a. Process Flow Diagram	X	
b. Site Plan	X	
c. Location Map	X	
d. Agricultural Use Plan or Dedicated Site Plan		X
e. Capacity Analysis Report	X	
f. Results of Whole Effluent Biological Toxicity Testing		X
g. Reuse Feasibility Study	X	
h. Binding Agreements and Documentation of Controls on Individual Users of Reclaimed Water	X	

2. Additional Application Requirements for New Facilities and Modifications to Existing Facilities	Yes	No
a. Preliminary Design Report		X
b. Documentation of Compliance with Antidegradation Requirements		X
c. Public Service Commission Certification Number and Copy of Certificate or Order Number and Copy of Order		X
d. Letter from the Management and Storage of Surface Waters Permitting Agency		X
e. Request for Approval of Monitoring Plans for Discharge of Domestic Wastewater to Wetlands		X
f. Concurrent Application for Ground Water Disposal by Underground Injection		X
g. Application for Monitoring Plan Approval		X

3. Additional Application Requirements for Permit Renewals	Yes	No
a. Operation and Maintenance Performance Report	X	
b. Reclaimed Water or Effluent Analysis Report	X	
c. Technical Evaluation of Need to Revise Local Pretreatment Limits		X
d. Results of Mechanical Integrity Testing		X

Other Documentation Submitted:

- Collection/Transmission System Action Plan
- Collection/Transmission System Power Outage Contingency Plan

SECTION 9. CERTIFICATIONS

1. Certifications for Construction of New Facilities or Modifications to Existing Facilities

a. Applicant or Authorized Representative

I certify that the statements made in this application for a permit and all attachments are true, correct, and complete to the best of my knowledge and belief. I agree to retain the design engineer, or another professional engineer registered in Florida, to conduct on-site observation of construction, to prepare a notification of completion of construction, and to review record drawings for adequacy as referenced in Rule 62-620.630, F.A.C. Further, I agree to provide an appropriate operation and maintenance manual for the facilities pursuant to Rule 62-620.630, F.A.C., and to retain a professional engineer registered in Florida to examine (or to prepare or revise, if necessary) the manual. For projects regulated by Chapter 62-610, F.A.C., I agree to provide the additional operation requirements of that Chapter.

(Signature of Applicant or Authorized Representative[1])	Date
Name (please type):	Company Name:
Florida Registration Number:	Company Street Address or P O Box
Telephone No. (including area code)	City/State/Zip Code:
_ _____ Email (optional)	

b. Professional Engineer Registered in Florida

I certify that the engineering features of this domestic wastewater project have been (designed) (examined) by me and found to conform to engineering principles applicable to such projects. In my professional judgment, this facility, when properly constructed, operated, and maintained, will comply with all applicable statutes of the State of Florida and rules of the Department.

Name (please type):	Company Name:
Florida Registration Number:	Company Street Address or P O Box
Telephone No. (including area code)	City/State/Zip Code:
_ _____ Email (optional)	
	(Seal, Signature, Date, Registration No.)

[1] If signed by the authorized representative, attach a letter of authorization.

c. Professional Engineer Registered in Florida

I certify that this firm or individual has been retained by the applicant to prepare a notification of completion of construction, to prepare operation and maintenance manuals, and to review record drawings for adequacy as referenced in Rules 62-620.630, 62-600.717, and 62-600.720, F.A.C.

Name (please type):	Company Name:
Florida Registration Number:	Company Street Address or P O Box
Telephone No. (including area code)	City/State/Zip Code:
Email (optional)	
	(Seal, Signature, Date, Registration No.)

2. Certifications for Permit Renewals

a. Applicant or Authorized Representative

I certify that the statements made in this application for a permit and all attachments are true, correct and complete to the best of my knowledge and belief. I agree to operate and maintain these wastewater facilities in such a manner as to comply with the provisions of Chapter 403, F.S., Chapter 62-600, F.A.C., and all other applicable rules of the Department. Further, an appropriate operation and maintenance manual which has been examined by a professional engineer as certified below is available and located at 6341 Deer Run, SW, Fort Myers, Florida 33908 and can be submitted upon request as part of the permit procedure. A copy of the record drawings or other plans (as applicable) showing modifications to existing acilities, as referenced in Rule 62-600.717, F.A.C., is available at the same location. I also understand that a permit if granted by the Department, is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C., and I will notify the Department in accordance with this rule upon sale or legal transfer of the permitted facilities. In the event of abandonment or inactivation of the facilities, I will notify the Department and ensure that public health and safety are protected as required by Rule 62-620.610, F.A.C.

(Signature of Applicant or Authorized Representative[2])	10/30/25 Date
Doris Swor Name (please type)	Forest Utilities, Inc. Company Name
President Title	6000 Forest Boulevard Company Street Address or P O Box
(239) 481-5333 Telephone No. (including area code)	Fort Myers, Florida 33908 City, State, Zip Code
Email (optional)	

[2] If signed by the authorized representative, attach a letter of authorization.

b. Professional Engineer

I certify that the engineering features of these domestic wastewater facilities have been examined by me and found to conform to engineering principles applicable to such projects. I certify that the operation and maintenance manual for these wastewater facilities has been prepared or examined by me or by individual(s) under my direct supervision and that there is reasonable assurance, in my professional judgement, that the facilities, when properly operated and maintained in accordance with this manual, will comply with all applicable statutes of the State of Florida and rules of the Department.

James P. Elliott	Source, Inc.
Name (please type):	Company Name:
21022	1334 Lafayette Street
Florida Registration Number:	Company Street Address or P O Box
(239) 549-2345	Cape Coral, Florida 33904
Telephone No. (including area code)	City/State/Zip Code:
_	
Email Address (optional)	
November 04, 2025	(Seal, Signature, Date, Registration No.)

JAMES P. ELLIOTT LICENSE No. 21022 STATE OF FLORIDA PROFESSIONAL ENGINEER

FLORIDA DEPARTMENT OF Environmental Protection

South District
2295 Victoria Avenue Suite 364
Fort Myers FL 33902-2549
SouthDistrict@FloridaDEP.gov

Ron DeSantis
Governor

Jay Collins
Lt. Governor

Alexis A. Lambert
Secretary

November 6, 2025

Wade E. Moser
6000 Forest Blvd
Fort Myers, Florida 33908- 4318
Email: wmoser23@aol.com

Re: Warning Letter
Forest Utilities WWTP
FLA014478
Lee County – DW

Dear Mr. Moser:

A Compliance Evaluation Inspection and Sanitary Sewer Overflow Preventive Inspection were conducted for your facility on **October 9, 2025,** under the authority of Section 403.061, Florida Statutes (F.S.). During these inspections, possible violations of Chapters 62-160, 62-520, 62-600, 62-610, and 62-620 of the Florida Administrative Code (F.A.C.), were observed.

During these inspections, Department personnel noted the following:

- Transcription and calculation errors were present on the Discharge Monitoring Reports (DMRs) during the review period.
- A records review revealed the facility did not submit monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal.
- The clarifier had excessive scum and floc floating at the surface of the basin.
- The rubber on the skimmer arm required adjustment to properly collect scum in the basin.
- Excessive corrosion was observed on the airlines to the aeration basins, resulting in holes that were leaking air.
- The reject tank allowed water to seep through the wall when the water level rose above half the tank's capacity.
- One of the two sand filters was inoperable.
- The handrails and platforms around the facility had excessive corrosion and rotting.
- The facility failed to submit a new written agreement to the Department at least 30 days prior to transporting biosolids.
- Groundwater exceedances were documented during the review period.
- The facility reported 13 Sanitary Sewer Overflows (SSOs) that reached the ground between August 1, 2024, and October 17, 2025.

Violations of Florida Statutes or administrative rules may result in liability for damages and restoration, and the judicial imposition of civil penalties, pursuant to Sections 403.121, Florida Statutes.

Please contact **Kaylee Turke** at **239-344-5710** or via email at: **Kaylee.Turke@FloridaDEP.gov** within **15 days** of receipt of this Warning Letter to arrange a meeting to discuss this matter. The Department is interested in receiving any facts you may have that will assist in determining whether any violations have occurred. Any document submittals can be made to our email mailbox at SD-WWinspect@FloridaDEP.gov or may be mailed to the above address. You may bring anyone with you to the meeting that you feel could help resolve this matter.

Please be advised that this Warning Letter is part of an agency investigation, preliminary to agency action in accordance with Section 120.57(5), Florida Statutes. We look forward to your cooperation in completing the investigation and resolving this matter.

Sincerely,

Elizabeth Sweigert
Director of District Management

Enclosure: Inspection Report

ec: Mitch Gilbert, FGUA (via e-mail: mitchgilbert@floridautilitysolutions.com)
Matt Gillispie, FGUA (via e-mail: matt@floridautilitysolutions.com)
Allen Slater, FRWA (via e-mail: Allen.Slater@frwa.net)

Facility Details

Facility Name	Forest Utilities WWTP			**WAFR ID**	FLA014478		
Physical Address	6341 Deer Run Road SW			**City, State, Zip**	Fort Myers, FL 33908-4318		
County	Lee			**Facility Phone #**	(239) 848-5174		
Permit Issued	12/18/2020			**Permit Expiration**	5/4/2026		
Facility Type	Domestic Wastewater			**Is the Facility NPDES (Y/N)**	No		
Latitude	**Degrees**	26	**Minutes**	29	**Seconds**	49.7586	
Longitude	**Degrees**	81	**Minutes**	52	**Seconds**	11.9426	

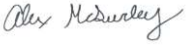
Inspection Details

Inspection Type		**Entry Date**		**Exit Date**	
CEI		10/9/2025		10/9/2025	
SSOP		**Entry Time (HH:MM AM/PM)**		**Exit Time (HH:MM AM/PM)**	
		9:10 AM		10:55 AM	
Samples Taken (Y/N)	No	**RQ#**	N/A	**QA Conducted (Y/N)**	No

Name(s) and Title of Field Representative(s)	**Operator Certification**	**Email**	**Phone Number**
Mitch Gilbert	C - 0015245	mitchgilbert@floridautilitysolutions.com	N/A
Matt Gillispie	N/A	matt@floridautilitysolutions.com	(239) 218-0933

Name(s) and address of Permittee / Designated Representative(s)	**Title**	**Email**	**Phone Number**
Wade E. Moser 6000 Forest Blvd Fort Myers, Florida 33908- 4318	Responsible Official	wmoser23@aol.com	(239) 848-5174

Inspector Information

Name(s) and Signature(s) of Inspector(s)		**District Office**	**Phone Number**	**Date**
Kaylee Turke		SD	(239) 344-5710	10/20/2025
Name and Signature of Reviewer		**District Office**	**Phone Number**	**Date**
Alexandria McSurley		SD	(239) 344-5679	11/4/2025

Facility Compliance Eval Areas

IC = In Compliance; **MC** = Minor Out of Compliance; **NC** = Out of Compliance; **SC** = Significant Out of Compliance;
NA = Not Applicable; **NE** = Not Evaluated
Significant Non-Compliance Criteria Should be Reviewed when Out of Compliance Ratings Are Given in Areas Marked by a "*"

Overall Compliance Determination	Significant Out of Compliance
*Permit	IC
*Compliance Schedules	IC
Laboratory	IC
Sampling	SC
*Records and Reports	SC
Facility Site Review	NC
Flow Measurement	IC
*Operation and Maintenance	NC
*Effluent Quality	NC
*Effluent Disposal	NC
Biosolids	NC
*Groundwater	NC
*SSO Survey	SC
Other	NE

Single Event Violations ("*" SNC SEVs)

Check For Yes	Evaluation Area	Description	Finding Description	Finding ID
☐	Permit	Effluent Violations - Unapproved Bypass	Wastewater was diverted from a portion of the treatment process without department approval.	UNBY
☐	*Permit	Permit Violations - Discharge Without a Valid Permit	The facility was operating without a permit or with an expired permit.	UPHI
☐	Permit	Permit Violations - Failure to Submit Timely Permit Renewal Application	The permittee failed to submit an application to renew the existing permit at least 180 days prior to expiration.	PFSA
☐	Laboratory	Management Practice Violations - Laboratory Not Certified	The laboratory was not certified by the National Environmental Laboratory Accreditation Conference (NELAC).	LNCE
☑	Sampling	Monitoring Violations - Analysis not Conducted	The facility failed to collect and/or analyze samples as required by permit or enforcement action.	ANCV
☐	Sampling	Monitoring Violations - Failure to Monitor for Toxicity Requirements	The facility failed to collect and/or analyze routine or follow-up toxicity samples.	FTOX
☐	Records and Reports	Management Practice Violations - Failure to Develop Adequate SPCC Plan	The facility failed to develop or maintain their Spill Prevention Control and Countermeasures (SPCC) plan.	FSPC
☐	Records and Reports	Management Practice Violations - Failure to Maintain Records	The facility failed to maintain records for the required retention period.	FMRR
☐	Records and Reports	Reporting Violations - Failure to Notify	The permittee failed to notify the department of any event or activity that requires notification as required by permit or rule.	RSWP
☐	Records and Reports	Reporting Violations - Failure to Submit DMRs	The permittee failed to submit any DMR required by rule, permit, or enforcement action in a timely manner.	FDMR
☑	Records and Reports	Reporting Violations - Failure to submit required report (non-DMR, non-pretreatment)	The facility failed to submit any report required by rule, permit, enforcement action or inspection activity except for DMRs.	FRPT
☐	Facility Site Review	Management Practice Violations - Improper Land Application (non-503, non-CAFO)	The land application system was not being maintained.	LASN
☐	Flow Measurement	Monitoring Violations - No Flow Measurement Device	The facility failed to install a flow measurement device, an approved flow measurement device, or a working flow measurement device.	NOFL
☐	Operation and Maintenance	Management Practice Violations - Improper Operation and Maintenance	The facility failed to follow their operation and maintenance plan/manual.	IONM
☐	Operation and Maintenance	Management Practice Violations - Inflow/Infiltration (I/I)	The facility had an inflow and infiltration problem causing collection system issues and/or operational issues.	ININ
☐	Operation and Maintenance	Management Practice Violations - No Licensed/Certified Operator	The facility was being operated without a certified operator or by an operator that is not licensed for the size of plant.	ONCO
☐	*Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent acute toxicity has been documented through follow-up tests.	EATX
☐	*Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent chronic toxicity has been documented through follow-up tests.	ECTX
☐	*Effluent Quality	Effluent Violations - Failed Toxicity Test	Persistent acute or chronic toxicity has been documented in the effluent through the use of routine and follow-up tests.	ETOX
☐	Effluent Quality	Effluent Violations - Narrative Effluent Violation	The facility violated a permit or enforcement narrative effluent limit.	XNEV
☐	Effluent Quality	Effluent Violations - Reported Fish Kill	The facility had a discharge of wastewater that resulted in a fish kill.	XFSH
☐	Sanitary Sewer Overflow Survey	WW SSO - Discharge to Waters	A sewage spill from any components of a collection/transmission system or from a treatment plant reached surface waters including stormwater conveyance system or drainage ditch.	SSO1
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to Maintain Records or Meet Record Keeping Requirements	The facility failed to keep routine documentation and reporting records of spills, and/or operation and maintenance activities on the collection/transmission system.	SSO2
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to monitor	The facility failed to collect and/or analyze bacteriological samples for sewage spills that reached surface waters.	SSO3
☐	Sanitary Sewer Overflow Survey	WW SSO - Failure to report violation that may endanger public health 122.41(l)(7)	The facility failed to report a sewage spill within 24 hours of discovery.	SSO4
☐	Sanitary Sewer Overflow Survey	WW SSO - Improper Operation and Maintenance	The facility failed to perform routine preventative maintenance to keep the collection/transmission system in good working order.	SSO5
☑	Sanitary Sewer Overflow Survey	WW SSO - Overflow to Dry Land	A sewage spill from any part of a collection/transmission system or treatment plant that did not make it to surface waters, i.e., stormwater collection system, drainage ditch, stream, pond, or lake.	SSO6

1. Permit

Compliance Rating	In Compliance
Does this section apply to the facility?	Yes
Questions	
*Is the facility operating with a valid permit?	Yes
Current Permit available on-site?	Yes
Date Permit Issued	18-Dec-20
Date Permit Expires	4-May-26
Permit Renewal Application Due By:	5-Nov-25
Has the facility submitted the permit renewal application at least 180 days prior to the permit expiration date?	Not Applicable
If wastewater is diverted from a portion of the treatment process, was appropriate Department approval obtained?	Not Applicable
Administrative or Judicial Orders?	N/A

	Deficiencies and Corrective Actions
1.1.1	The facility did not have any deficiencies relating to the Permit.
	Observations
1.2.1	Department records indicate that the current operating permit will expire on **May 4, 2026**. F.A.C. Rule 62-620.335(1) states that a Permittee shall submit an application to renew the existing permit at least 180 days before the expiration date of the existing permit. Timely and sufficient submittal of the renewal application and permit processing fee is important (and in your best interest) as it automatically extends the expiration date on the existing permit until the Department takes final action on the renewal application. A tardy application could result in non-compliance. Your renewal application and permit processing fee must be submitted no later than **November 5, 2025**.
1.2.2	This facility operates a domestic wastewater treatment plant that uses the extended aeration process. The permitted capacity for the annual average daily flow (AADF) is 0.800 MGD. The facility has four surge tanks and one effluent reject tank. Biological treatment occurs in seven aeration tanks and three clarifiers. The high-level disinfection system consists of two traveling bridge sand filters, and two chlorine contact basins. Biosolids are treated and stored in three anaerobic holding tanks, three aerated holding tanks, three sludge drying beds and one dried-sludge holding bin. REUSE OR DISPOSAL: Land Application R-001: An existing 0.800 MGD, AADF permitted capacity slow-rate public access system which irrigates the Forrest Country Club Golf Courses. Reclaimed water is stored in two isolated golf course ponds that do not discharge. A Permit Revision was issued on August 4, 2021 for the following: Forest Utilities, Inc. is authorized to convert the disinfection system of the wastewater treatment facility from a chlorine gas system to a bulk sodium hypochlorite disinfection system.
1.2.3	A copy of the permit is available onsite. [62-620.350(5) F.A.C.]
1.2.4	The facility is operated in accordance with the permit. [62-620.300(5) F.A.C.]
1.2.5	The facility was free from unpermitted discharge, bypass, collection system, or residuals with a high potential for water quality or health impacts. [403.161(1)(b) F.S., 62-620.300 F.A.C., 62-604.130 F.A.C., 62-640.400 F.A.C.]

2. Compliance Schedule

Compliance Rating	In Compliance
Does this section apply to the facility?	Yes
Questions	
Compliance Schedule in Permit met?	Yes
Compliance Schedules in Order are being met?	Yes

	Deficiencies and Corrective Actions
2.1.1	The facility did not have any deficiencies relating to a Compliance Schedule.
	Observations
2.2.1	The facility has completed construction and submitted a Notification of Completion of Construction for Wastewater Facilities or Activities (Form 62-620.910(12)), if required. [403.161(1)(b) F.S., 62-620.630(2) F.A.C.]
2.2.2	The Notification of Availability of Record Drawings and Final Operation and Maintenance Manuals (Form 62-620.910(13)) has been submitted as required. [403.161(1)(b) F.S., 62-620.630(2)(b) F.A.C., 62-620.630(2)(b) F.A.C.]
2.2.3	Please ensure that the Notification of Completion of Construction for Wastewater Facilities or Activities (Form 62-620.910(12)) and the Notification of Availability of Record Drawings and Final Operation and Maintenance Manuals (Form 62-620.910(13)) are available onsite during future inspections for review.

3. Laboratory

Compliance Rating	In Compliance
Does this section apply to the facility?	Yes
Questions	
Does the laboratory hold certification from the Florida Department of Health Environmental Laboratory Certification Program?	Yes
Contract Lab Name and Certification #	Sanders Laboratories, Inc. (South - E85457 & Nokomis - E84380)
Facility NELAC Certification #	N/A

	Deficiencies and Corrective Actions
3.1.1	The facility did not have any deficiencies relating to the Laboratory.
	Observations
3.2.1	The facility has a contract with **Sanders Laboratories, Inc. (South - E85457 & Nokomis - E84380)** to collect and analyze the samples outlined in their permit. The laboratory then submits the sample results back to the facility, who is responsible for properly and correctly reporting those results on their DMRs. A current copy of the laboratory certification is maintained on site. Please be aware that the DOH Certificate will expire on June 30 each year and should be replaced when expired.

4. Sampling

Compliance Rating	Significant Out of Compliance
Does this section apply to the facility?	Yes
Questions	
Does the facility collect and analyze samples as required by permit or enforcement action?	No
Sampling conducted during inspection?	Not Applicable

Sampling observed during inspection?	Not Applicable
Sampling conducted at locations identified by the permit?	Yes
Safe access to sampling locations?	Yes
Did the facility collect and/or analyze routine or follow-up toxicity samples as required by permit or enforcement action?	Not Applicable

Deficiencies and Corrective Actions		
4.1.10	The facility failed to collect and/or analyze samples as required by permit or enforcement action. [62-600.650(1) F.A.C., 62-620.610(18) F.A.C., 62-160.210(1) F.A.C., 62-600.660(1) F.A.C., DEP SOP FS 2400, ANCV]	**Deficiency (Narrative)** **A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. [62-610.463(4)] If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020 for the permit renewal. This was also included on the previous Warning Letter issued to the facility on January 18, 2024.** **January 18, 2024, Warning Letter:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1258449.1]&[profile=Enforcement_Legal]**
		Corrective Actions (Narrative) **Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future.**

Observations	
4.2.1	Please see Table A - Sampling Tables for Buffers/Standards, lot numbers, and expiration dates.
4.2.2	In facility log books or other documentation, the daily records are appropriately recorded including; composite sampler or other temperatures, and daily calibration of meters. [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FD 1000-6000]
4.2.3	The facility maintains records of their daily calibration of their pH meter and Chlorine meter. [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FD 1000-6000]
4.2.4	The facility maintains records of their daily checks of their in-line meter(s) with their field meter(s). [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FD 1000-6000]
4.2.5	Meters are calibrated and sample analysis conducted at the facility done in accordance with DEP SOP and NELAC guidelines. (Calibration frequency and sample bracketing for pH, Total Residual Chlorine (TRC), Turbidity) [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FT 1000]
4.2.6	All the primary and secondary standards used to calibrate and verify meters, are used prior to expiration dates and verified against primary standards appropriate for pH, TRC, Turbidity. [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FT 1000]
4.2.7	The inline meters are reading within established limits compared to the bench meters. (TRC = 20%, Turbidity = 20%, pH 0.2 SU). [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FT 1100]
4.2.8	Safe access points for obtaining representative influent/effluent samples are available. [62-600.650(2) F.A.C.]
4.2.9	Influent sampling points are put prior to internal facility return lines including supernatant, filter backwash and return activated sludge (RAS). [62-600.660(4)(a) F.A.C.]
4.2.10	The facility collected and/or analyzed samples as required by permit or enforcement action. [62-600.650(1) F.A.C., 62-620.610(18) F.A.C., 62-160.210(1) F.A.C., 62-600.660(1) F.A.C., DEP SOP FS 2400, ANCV]
4.2.11	Samples are being collected in the proper containers, preserved and analyzed in appropriate hold times in accordance with 40 CFR Part 136, Table II. [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., 62-620.610(18) F.A.C.]
4.2.12	The facility has a composite sampler with cooling system at the influent/effluent sampling location. There is a thermometer present in the sampler that is annually checked against NIST thermometers. [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FS 1006 3.1, DEP SOP FT 1000, DEP SOP FS 1400]
4.2.13	Composite sampling is being conducted appropriately; including purging, sampling velocity at least 2fps, clean tubing, individual sample volume of at least 100 mL, sample storage of = 6°C preservation, hold times and representative samples. [62-160.210(1) F.A.C., 62-160.800(1)(a) F.A.C., DEP SOP FS 2400, 62-160.300 F.A.C., 40 C.F.R. 136 Table II]
4.2.14	The facility has their Chain of Custody records. [62-160.210(1) F.A.C.]
4.2.15	The permittee reported "NO NEW NON-DOMESTIC WASTEWATER DISCHARGERS HAVE BEEN ADDED TO THE COLLECTION SYSTEM SINCE THE LAST RECLAIMED WATER OR EFFLUENT ANALYSIS WAS CONDUCTED." on the annual Reclaimed Water and/or Effluent Analysis Report (RSW-A DMR) for the following years: 2022, 2023, and 2024. [403.161(1)(b) F.S., 62-600.680 F.A.C.]

5. Records and Reports

Compliance Rating	Significant Out of Compliance
Does this section apply to the facility?	Yes
Questions	
Discharge Monitoring Reports (DMRs) Review Period:	**September 2024 - August 2025**
Does the facility have and maintain their Spill Prevention Control and Countermeasures (SPCC) Plan?	Not Applicable
Does the facility maintain records onsite for the required retention period(s)?	Yes
During the review period, has the facility submitted all required reports other than DMRs?	No
During the review period, has the facility submitted all required DMRs in a timely manner?	Yes
Has the permittee notified the Department of any event or activity that requires notification per the permit or rule?	Yes

Deficiencies and Corrective Actions		
5.1.1	The Discharge Monitoring Reports (DMRs) are completed properly. [403.161(1)(b) F.S., 62-600.680 F.A.C.]	**Deficiency (Narrative)** **There are transcription and calculation errors present on the Discharge Monitoring Reports (DMRs) in the review period. Please see Table B - Records and Reports in the Appendix for further information.**
		Corrective Actions (Narrative) **Please correct the errors outlined in the Appendix and resubmit the corrected DMRs to the Department for review.**
5.1.2	Does the facility submit their monitoring results for Giardia and Cryptosporidium in a timely manner?[62-610.463(4) F.A.C., 62-600.680 F.A.C.]	**Deficiency (Narrative)** **A records review revealed the facility has not submitted their monitoring results for Giardia and Cryptosporidium for the most recent monitoring period of the last permit renewal. Intervals between sampling for Giardia and Cryptosporidium shall not exceed five years. [62-610.463(4)] If sampling is required once every five years, the Pathogen Monitoring Report (DEP Form 62-610.300(4)(a)4) shall be submitted with the application for permit renewal. This was not done in 2020 for the permit renewal. This was also included on the previous Warning Letter issued to the facility on January 18, 2024.** **January 18, 2024, Warning Letter:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1258449.1]&[profile=Enforcement_Legal]**
		Corrective Actions (Narrative) **Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future.**

5.1.3	The facility failed to submit any report required by rule, permit, enforcement action or inspection activity except for DMRs. [62-610.870(3) F.A.C., 62-610.865(11) F.A.C., 62-600.405 F.A.C., 403.161(1)(b) F.S., FRPT]	**Deficiency (Narrative)** **The facility has not submitted the latest required Pathogen Monitoring Report (DEP Form 62-610, 300(4)(a)4, with the associated Laboratory Report.**
		Corrective Actions (Narrative) **Please complete and submit to the Department the Laboratory Report and Pathogen Monitoring Report for the missed monitoring of Giardia and Cryptosporidium and how the facility will prevent this in the future.**
Observations		
5.2.1	The entries in the operator logbook are clear, concise, informative and relevant. [62-602.650(4) F.A.C.]	
5.2.2	A copy of the current O&M manual was available at the time of the inspection. [62-600.720 F.A.C., 62-620.350 F.A.C.]	
5.2.3	There is a current operator license. [62-620.350(8) F.A.C.] Please refer to Table B - Records and Reports in the Appendix for additional information.	
5.2.4	The facility does not have any RPZs onsite.	
5.2.5	All required documents and reports available at the plant are well organized and complete. [62-4.160 F.A.C., 62-160.240 F.A.C., 62-160.340 F.A.C., 62-620.350 F.A.C.]	
5.2.6	The facility is maintaining records for the required retention period. [62-620.350(2) F.A.C., FMRR]	
5.2.7	The DMRs are submitted on the proper form. [403.161(1)(b) F.S., 62-620.610(18)(a) F.A.C., 62-600.680(1) F.A.C.]	
5.2.8	An authorized representative is signing the DMRs. [62-620.305 F.A.C.]	
5.2.9	The permittee submitted an Annual Reuse Report for the October 2022 - September 2023 and October 2023 - September 2024 timeframes by January 1 following the completion of each fiscal year. [62-610.300 F.A.C.]	
5.2.10	The permittee submitted an annual Reclaimed Water and/or Effluent Analysis Report (RSW-A DMR) for the following years: 2023 and 2024. [403.161(1)(b) F.S., 62-600.680 F.A.C.]	
5.2.11	The permittee submitted all DMRs required by rule, permit, or enforcement action in a timely manner. [403.161(1)(b) F.S., 62-600.680 F.A.C., 62-620.610(18)(a) F.A.C., FDMR]	
5.2.12	The permittee notified the department of any event or activity that requires notification as required by permit or rule. [403.161(1)(b) F.S., 62-4.130 F.A.C., RSWP]	

6. Facility Site Review

Compliance Rating		Out of Compliance
Does this section apply to the facility?		Yes
Questions		
Is the land application system being maintained?		Yes
Deficiencies and Corrective Actions		
6.1.1	The clarifier is free from excessive scum, algae and/or trash overflowing the weir. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the clarifier had excessive scum and floc floating at the top of the basin. See photos 13, 14, and 16 in the photo log for reference.**
		Corrective Actions (Narrative) **Please provide documentation to the Department indicating that the clarifiers no longer have excessive scum and floc floating at the top of the basin.**
6.1.2	The skimmer appear to be functional in the clarifier. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	**Deficiency (Narrative)** **Facility representatives stated that the rubber on the skimmer arm needs to be adjusted to better collect scum in the basin. Department staff noted that excessive scum and floc were present in the clarifier during the inspection. See photos 13, 14, and 16 in the photo log for reference.**
		Corrective Actions (Narrative) **Please provide documentation to the Department indicating that the clarifiers no longer have excessive scum and floc floating at the top of the basin, and that the skimmer arm is now functioning as intended.**
6.1.3	The air line(s) to the aeration basin(s)are free from leaks. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, excessive corrosion was noted on both the air lines to the aeration basins and on the handrails surrounding the facility. This corrosion has lead to multiple holes in the air lines. See photos 17 and 18 in the photo log.**
		Corrective Actions (Narrative) **Please provide documentation to the Department indicating that the facility has had the air lines and handrails replaced, and that there are no longer holes leaking air on the air lines.**
6.1.4	All blower motors were present and operational at the time of the inspection. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, there was only one operable blower motor for the surge tank. The secondary back-up blower was missing, but facility representatives stated that it should be replaced soon. See photo 1 in the photo log for reference.**
		Corrective Actions (Narrative) **A second operable blower was installed, and documentation was provided by facility representatives on October 22, 2025, showing the newly installed blower. No further action is required at this time.** **October 22, 2025, Oculus Link:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1439691.1]&[profile=Discovery_Compliance]**
6.1.5	The Chlorine Contact Chamber (CCC) effluent is clear and free from scum, solids accumulation and debris. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the effluent in the Chlorine Contact Chamber was excessively turbid.**
		Corrective Actions (Narrative) **The facility provided photo documentation on October 17, 2025, indicating that the effluent is no longer excessively turbid. No further action is required at this time.** **October 17, 2025, Oculus Link:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1435828.1]&[profile=Discovery_Compliance]**

6.1.6	At the lift station there are two functioning pumps that alternate. [62-604.500(3) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the first lift station that Department personnel visited only had one operable pump. See photos 41 and 42 in the photo log for reference to the lift station.**
		Corrective Actions (Narrative) **Facility representatives provided documentation on October 14, 2025, indicating that there are now two functioning pumps in the lift station. No further action is required.** **October 14, 2025, Oculus Link:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1435937.1]&[profile=Discovery_Compliance]**
6.1.7	The lift station visual and audio alarm are operating satisfactory. [62-604.500(3) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the first lift station that Department personnel visited only had the audible alarm functioning properly. The visual alarm was inoperable.**
		Corrective Actions (Narrative) **Facility representatives provided documentation on October 14, 2025, indicating that the visual alarm is now operating as intended. No further action is required.** **October 14, 2025, Oculus Link:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1435937.1]&[profile=Discovery_Compliance]**
6.1.8	The exterior of the tanks, wall, and/or pipes of the facility are free from leaks. [62-600.410 F.A.C., 62-620.300 (5) F.A.C., 62-620.610(7) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, Department personnel were informed that the reject tank seeps through the wall if the tank rises above half the capacity of the tank. See photo 6 in the photo log for reference to the exact basin.**
		Corrective Actions (Narrative) **Please provide documentation to the Department indicating that the reject tank has been repaired and no longer seeps when more than halfway full.**
6.1.9	The facility is providing safety measures at all times including adequate lighting. [62-600.410 F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the handrails and platforms around the facility had excessive corrosion and rotting occurring. The holes and unsecured railings around the facility could lead to unsafe operation and navigation of the facility. See photos 15, 17, and 18 in the photo log for reference.**
		Corrective Actions (Narrative) **Please provide documentation to the Department indicating that the handrails and platforms have been replaced/repaired and no longer pose a safety risk.**
6.1.8	Is the facility free from any Facility Site Review violation not listed above that needs to be addressed? [See Deficiency Narrative for Specific Rule Violated]	**Deficiency (Narrative)** **One of the two sand filters, needed for the high-level disinfection system, was inoperable.** **[Rule 62-600.410 F.A.C., 62-620.300 (5) F.A.C.]**
		Corrective Actions (Narrative) **Please provide documentation to the Department indicating that the second sand filter has been replaced/repaired.**

Observations	
HEADWORKS	
6.2.1	The headworks was free from excessive corrosion. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.2	The headwork is free from evidence of recent overflows. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.3	The bar screen is cleaned on a routine basis. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.4	Rags, grit and/or screening are being disposed of properly. [62-640.100(6)(g) F.A.C.]
6.2.5	Screenings and grit from the headworks are being disposed at a Class I Landfill. [62-620.300 F.A.C., 62-640.100(6)(g) F.A.C.]
CLARIFIER	
6.2.6	The clarifier is free from excessive sand and/or grit accumulation. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.7	The sludge collector and pump are functional in the clarifier. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.8	The clarifier weir(s) are level. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.9	The clarifier is free from short circuiting with loss over the weir. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
AERATION	
6.2.10	The aeration basins diffusers are free from clogs and providing adequate mixing. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.11	The time clock or manual controls for the aeration system were operational at the time of the inspection. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.12	The RAS line is properly located. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.13	The RAS line was free from excessive splashing that could cause solids to be discharged outside the tank. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.14	Dual blower motors are present as required by rule. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.15	The blower motors are equipped with belt guards. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.16	The blower motors are free from excessive noise. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.17	Spare parts are stored onsite. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.18	The electrical box wiring for the blower motors is adequately protected. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
DIGESTER	
6.2.19	The tank contents in the aerobic digester(s) were well mixed. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.20	The digester(s) are free from excessive odors and/or foaming. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.21	The digester is at the appropriate operational capacity. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
SURGE TANK	
6.2.22	There are two functioning pumps in the surge tank(s). [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
CHLORINE CONTACT CHAMBER (CCC)	
6.2.23	The baffles in the CCC are functioning as intended. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.24	The chlorine injection point provides optimal mixing to occur in the CCC. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]

6.2.25	The CCC chlorine pump is operational, providing adequate chlorine supply for disinfection and at the permitted location. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
STILLING WELL	
6.2.26	The stilling well is free from a thick layer of sludge and/or trash. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
LIFT STATION(S)	
6.2.27	The area around the lift station(s) is maintained. [62-604.500(3) F.A.C.]
6.2.28	There are warning signs with emergency contact information on and/or around the lift station(s). [62-604.400(2)(d) F.A.C.]
6.2.29	The facility has a fence around their lift station(s). [62-604.400(2)(d) F.A.C.]
6.2.30	The gate around the lift station and the cover to the lift station is locked. [62-604.400(2)(d) F.A.C.]
6.2.31	The cover to the lift station(s) is free from safety hazards. [62-604.500(3) F.A.C.]
6.2.32	The electrical panel is in good working order and free from needed repair and/or replacement. [62-604.500(3) F.A.C.]
6.2.33	The collection system or lift station is free from offsite objectionable odors. [62-604.130(2) F.A.C.]
6.2.34	**Corrosion was noted on the piping in the wet and dry wells at the second lift station. While it is not currently causing operational issues, please keep a close eye on further corrosion to avoid problems in the future.**
GENERATOR	
6.2.35	An alternative power source was available at the facility. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.36	The onsite generator is tested under load on a monthly basis. [62-600.300(4) F.A.C.]
6.2.37	The records for the testing of the generator are available. [62-600.300(4) F.A.C.]
FACILITY SITE OVERVIEW	
6.2.38	There is adequate access to all monitoring locations. [62-4.160(7) F.A.C., 62-600.650(2) F.A.C.]
6.2.39	The facility grounds are clean and well maintained. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]
6.2.40	The required signage is adequate. [62-610.418(1) F.A.C., 62-610.518(1) F.A.C.]
6.2.41	The facility was free from odors emanating from the facility. [62-600.400(2) F.A.C., 62-600.410(5) F.A.C.]
6.2.42	The facility was free from excessive noise which could be heard beyond the boundaries of the facility. [62-600.410(5)F.A.C., 62-604.400(2) F.A.C.]
6.2.43	The facility is disposing of sludge appropriately, with no sludge being disposed of on the facility grounds. [62-620.300 (5) F.A.C.]
6.2.44	The land application system was being maintained. [62-600.410 F.A.C., 62-620.300 (5) F.A.C., LASN]
6.2.45	The filter media was free from solids that could cause plugging and/or overflow. [62-600.410 F.A.C., 62-620.300 (5) F.A.C.]

7. Flow Measurement

Compliance Rating	In Compliance
Does this section apply to the facility?	Yes
Questions	
Flow meter present and location as per permit?	Yes
Easy access to flow meter?	Yes
Is the flow meter properly installed, maintained, and calibrated according to regulatory requirements?	Yes
Date of last flow meter calibration	9/26/2025
Deficiencies and Corrective Actions	
7.1.1	The facility did not have any deficiencies relating to Flow Measurement.
Observations	
7.2.1	There is easy access to flow meter. [62-600.650(2) F.A.C.]
7.2.2	The flow meter is in the correct location. [62-600.660(1) F.A.C.]
7.2.3	The facility has installed a flow measurement device, an approved flow measurement device, or a working flow measurement device. [62-600.660(1) F.A.C., NOFL]
7.2.4	The flow meter is calibrated at least annually and is it current. [62-600.200(25) F.A.C.]
7.2.5	The flow meters were last calibrated on **September 26, 2025**.
7.2.6	The flow measurement device is operating within +/- 10% of the actual flow.
7.2.7	The flow meter was operating properly at the time of the inspection. [62-600.660(1) F.A.C.]
7.2.8	The chart recorder and/or totalizer for the flow meter was operational at the time of the inspection. [62-600.410 F.A.C., 62-620.350(1) F.A.C., 62-600.660(1) F.A.C.]
7.2.9	The elapsed time meters on the lift station pumps were functioning. [62-600.410 F.A.C., 62-600.660(1) F.A.C.]

8. Operation and Maintenance

Compliance Rating		Out of Compliance
Does this section apply to the facility?		Yes
Questions		
Facility being operated as per permit?		Yes
Is the facility operated under the supervision of a certified operator that has the appropriate license level for the size of the plant?		Yes
Is the facility operating in accordance with its O&M Manual?		Yes
Is the facility free from an inflow and infiltration problem which would cause collection system and/or operational issues?		Yes
Deficiencies and Corrective Actions		
8.1.1	Handrails/catwalks/ladders were in good working order providing for safe conditions. [62-600.410(3) F.A.C., 62-620.300 (5) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the handrails and platforms around the facility had excessive corrosion and rotting occurring. The holes and unsecured railings around the facility could lead to unsafe operation and navigation of the facility. See photos 15, 17, and 18 in the photo log for reference.** **Corrective Actions (Narrative)** **Please provide documentation to the Department indicating that the handrails and platforms have been replaced/repaired and no longer pose a safety risk.**
Observations		
8.2.1	The facility has adequate plant staffing. [62-699.310(2) F.A.C.]	
8.2.2	The operator is performing treatment plant operation and maintenance duties in a responsible and professional manner. [62-602.650(1) F.A.C.]	
8.2.3	The plant O&M log is maintained in a hard-bound book with consecutive page numbering, or another approved format. [62-602.650(4) F.A.C.]	
8.2.4	The facility has an O&M manual, and the facility's O&M manual reflects the current configuration of the facility. [62-620.350(6) F.A.C., 62-600.720(1) F.A.C.]	
8.2.5	The facility is maintaining a log that documents routine equipment maintenance. [62-602.650(4) F.A.C., 62-620.350 F.A.C.]	
8.2.6	The plant is free of any treatment components that are in disrepair that would provide for unsafe operation. [62-600.410 F.A.C.]	
8.2.7	The facility replaces malfunctioning equipment, which can result in a high potential for water supply quality or health impacts. [62-600.410 (3) F.A.C., 62-620.300 (5) F.A.C.]	
8.2.8	The plant operator is fulfilling the minimum site requirements as required by the Permit. [62-699.310(2) F.A.C.]	
8.2.9	The facility maintains an adequate spare parts inventory. [62-600.720(1)(b) F.A.C.]	

9. Effluent Quality

Compliance Rating	Out of Compliance
Does this section apply to the facility?	Yes
Questions	
DMRs review period	**12/01/2023 - 08/31/2025**
Were the DMRs free from any exceedances?	**No**
Was the facility free of a discharge of wastewater that resulted in a fish kill?	Yes
*Was the effluent free from persistent acute toxicity documented through follow-up tests?	Not Applicable
*Was the effluent free from persistent chronic toxicity documented through follow-up tests?	Not Applicable
*Was the effluent free from persistent acute or chronic toxicity documented through the use of routine and follow-up tests?	Not Applicable
Is the facility's discharge in compliance with all applicable narrative effluent limitations?	Yes
Was sampling conducted by Department personnel?	Sampling was not conducted by Department personnel.

Deficiencies and Corrective Actions		
9.1.1	A review of the Discharge Monitoring Reports revealed the following effluent exceedance(s). [62-4 F.A.C., 62-302 F.A.C., 62-600 F.A.C., 62-610 F.A.C., 62-620 F.A.C.]	**Deficiency (Narrative)** **There are effluent exceedances present in the review period. Please see the DMR Exceedance Table below for further information.**
		Corrective Actions (Narrative) **The facility has not had an effluent exceedance since October 2024, and comments were provided on the Part A DMR to explain all exceedances in the review period. No further action is required at this time, but please continue to provide comments on the Part A DMR for any future exceedances.**
9.1.2	The effluent is free from excessive (suspended solids, foam, grease, scum) in the discharge stream. [62-620.300(4) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the effluent in the Chlorine Contact Chamber was excessively turbid.**
		Corrective Actions (Narrative) **The facility provided photo documentation on October 17, 2025, indicating that the effluent is no longer excessively turbid. No further action is required at this time.** **October 17, 2025, Oculus Link:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1435828.1]&[profile=Discovery_Compliance]**

Observations	
9.2.1	The Total Residual Chlorine was found to be in excess of >2.2 mg/L (as measured with DEP Meter #5).
9.2.2	Sampling was not conducted by Department personnel.
9.2.3	The effluent limits are without exceedances four out of six months (chronic criteria). [40 CFR Part 123.45]
9.2.4	The Total Residual Chlorine levels meet disinfection limits. [62-600.440(1) F.A.C., 600.510(1) F.A.C.]
9.2.5	The facility was free from any other violation with a high potential for water quality or health impacts. [62-620.300(4) F.A.C., 62-600.400(2)(a) F.A.C.]

Table 9.1: Exceedances Table

Monitoring Group	Date	Monitoring Location	Parameter	Description	Result	Limit	Units	Statistical Base	Comments
R-001	10/31/2024	EFB-01	P 00530	Solids, Total Suspended	12.2	5.0	mg/L	MB - Maximum	Hurricane Helene caused some flooding and power outages at the plant. This caused damage to the blowers and the generator was temporarily offline. These issues caused temporarily elevated TSS levels. The plant was in reject at this time and all substandard effluent was sent to a holding tank for retreatment.
R-001	8/31/2024	EFA-01	P 74055	Coliform, Fecal	200	25.0	#/100mL	MB - Maximum	The chlorine pump tubing failed and was replaced. Plant went into reject while the chlorine levels were below acceptable levels.
R-001	4/30/2024	EFB-01	P 00530	Solids, Total Suspended	8.4	5.0	mg/L	MB - Maximum	One of the blower motors went bad and caused the dissolved oxygen level to drop. Once the new blower motor was installed, the plant bounced back to normal operations.
R-001	12/31/2023	EFA-01	P 51005	Coliform, Fecal, % less than detection	67.74	75.0	percent	TM - Minimum Total Monthly	We upgraded the chlorine system to prevent exceeding in the future.

Table 9.2: Sampling Exceedances Table

Monitoring Group	Date	Monitoring Location	Parameter	Description	Result	Limit	Units	Statistical Base	Comments
Sampling was not conducted by Department personnel during this inspection.									

10. Effluent Disposal

Compliance Rating		Out of Compliance
Does this section apply to the facility?		Yes
Questions		
Facility discharging?		Yes
Discharge location(s) as per permit?		Yes
Deficiencies and Corrective Actions		
10.1.1	Are advisory signs posted in English and Spanish in areas where non-potable Public Access Reuse water is being applied (Part III, VII)? [62-610.468(2) F.A.C., 62-610.658(1) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, facility representatives and Department personnel were unable to locate reuse advisory signage on the non-potable Public Access Reuse water application areas. According to 62.610.468(2) F.A.C., advisory signage should be located at the 1st and 10th tees of the golf course and at the reuse ponds, or a statement could be provided on the scorecards for patrons of the golf course. Advisory signage was not seen at the 1st or 10th tees of the golf course, and advisory language was not provided on the scorecards as required.** **Corrective Actions (Narrative)** **Facility representatives provided documentation on October 27, 2025, indicating that signage has been added at the reuse ponds at holes 1 and 10, and that the verbiage on the scorecards is currently being worked on. Follow-up documentation will be provided once completed. No further actions.** **October 27, 2025, Oculus Link:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1439701.1]&[profile=Discovery_Compliance]**
Observations		
10.2.1	The discharge location(s) are as per permit. [62-620.300(3) F.A.C.]	
10.2.2	The facility is approved for a Part III Public Access Reuse System.	
10.2.3	All reclaimed water piping and equipment is color-coded Pantone purple (522C). [62-610.469(7)(f) F.A.C.]	
10.2.4	No significant ponding was observed on the reclaimed water application site. [62-610.500(2)(c) F.A.C.]	
10.2.5	There was no aerosol mist leaving the boundaries of the land application. [62-600.400(2)(a) F.A.C., 62-600.410(5) F.A.C., 62-610.419(1)(e) F.A.C.]	
10.2.6	There was no evidence of solids loss in the treatment process or from the plant. [62-610.523(6) F.A.C., 62-610.320(1) F.A.C.]	
10.2.7	The reclaimed water storage ponds have adequate freeboard. [62-610.414(7) F.A.C.]	
10.2.8	There was no evidence of a bypass or failure at the effluent storage and/or disposal site(s). [62-600.410(3) F.A.C., 62-620.610(22) F.A.C.]	
10.2.9	There was no evidence of a bypass or failure from the storage ponds observed during the inspection. [62-610.419(1)(b) F.A.C., 62-600.410(3) F.A.C.]	
10.2.10	No unauthorized discharge to waters of the state was observed during the inspection. [62-620.300(1)F.A.C.]	
10.2.11	The facility is meeting the minimum setback distances. [62-610.421 F.A.C.]	
10.2.12	The effluent disposal and/or storage area was free from sinkholes.	
10.2.13	The disposal system was being operated as designed with a low potential for water quality or health impacts. [62-302.500 F.A.C., 62-600.410(4) F.A.C.]	
10.2.14	There was no unauthorized operation or modification of the disposal system. [62-610.100(9)(b) F.A.C., 403.161(1)(b) F.S.]	
10.2.15	There were no dead animals observed in the discharge stream. [62-610.418(1) F.A.C., 62-610.518(1) F.A.C.]	

11. Biosolids

Compliance Rating		Out of Compliance
Does this section apply to the facility?		Yes
Deficiencies and Corrective Actions		
11.1.10	Did the permittee (source or receiving facility) submit all new written agreements to DEP within 30 days before transporting biosolids (unless approval given otherwise)? [62-640.880(1)(c)F.A.C.]	**Deficiency (Narrative)** **The permit states that "Biosolids generated by this facility may be disposed of in a Class I solid waste landfill. [62-620.320(6), 62- 640.880(1)". The facility's recent hauling slips indicate that hauling has been conducted by Karle Enviro Organic Recycling, Inc., but the location hauled to was only indicated as "shop". It cannot be determined if the facility is abiding by the permit and disposing of biosolids in a Class I solid waste landfill, as the hauling location is not indicated on the hauling slips and a hauling agreement has not been received by the Department.** **Corrective Actions (Narrative)** **Please provide documentation to the Department indicating where the facility is currently hauling their biosolids and provide a copy of the hauling agreement between the transferring and receiving facilities.**
Observations		
11.2.1	Biosolids generated by this facility may be disposed of in a Class I solid waste landfill. [62-620.320(6), 62- 640.880(1)]	
11.2.2	The facility last hauled 5,000 gallons of biosolids with Karle Enviro Organic Recycling, Inc.	
11.2.3	The facility's method of biosolids use or disposal match what is allowed in the facility permit (i.e., landfill, land application, distribution and marketing, transfer to another facility, biofuel/bioenergy). [62-640.100(6)(g) F.A.C.]	
11.2.4	The permittee keep records of biosolids quantities for five years, as applicable (quantities generated, received from source facilities, treated, distributed and marketed, land applied, used as a biofuel or for bioenergy, transferred to another facility, or landfilled. [62-640.650(4)(a) F.A.C.]	
11.2.5	Biosolids quantities are reported on the facility RMP-Q DMR. [62-640.650(5)(a)1. F.A.C.]	
11.2.6	The biosolids quantities reported on the RMP - Q DMRs are correct and accurate. [62-640.650(5)(a)1. F.A.C.]	
11.2.7	The facility's treatment, management, transportation, use, land application, or disposal of biosolids does not result in objectionable odors, i.e., does not result in a violation of the odor prohibition in subsection 62-296.320(2) [62-640.400(6) F.A.C.]	
11.2.8	Grit and screenings, etc., from the headworks are properly disposed of in a landfill. [62-640.100(6)(g) F.A.C.]	
11.2.9	The facility ensures no biosolids are spilled from or tracked off the treatment facility property by the hauling vehicle. [62-640.400(9) F.A.C.]	

12. Groundwater

Compliance Rating	Out of Compliance
Does this section apply to the facility?	Yes
Questions	
DMRs review period	**10/01/2023 - 08/31/2025**
Were the DMRs free from any exceedances?	No
All monitoring wells accessible, secured & locked?	No

Deficiencies and Corrective Actions		
12.1.1	After a review of the Discharge Monitoring Reports, are the compliance well parameters meeting the groundwater standards in the time period reviewed (12 months or greater)? [62-520.420 F.A.C.]	**Deficiency (Narrative)** **There are groundwater exceedances present in the review period. Please see the Groundwater Exceedance Table below for further information.**
		Corrective Actions (Narrative) **Please provide documentation to the Department indicating why the exceedances may have occurred, as well as how the facility plans to work towards mitigating future exceedances.**
12.1.2	Do the groundwater monitoring wells meet DEP requirements including; tamper-proof locks, unique well label(s), concrete well pad with protective bumpers not containing numerous cracks, and is free of clutter for sampling purposes? [62-520.600(6)(e) F.A.C.]	**Deficiency (Narrative)** **At the time of the inspection, the groundwater monitoring wells had rusted, inoperable locks. Department personnel were unable to provide a full inspection of all five wells since some of them could not be unlocked.**
		Corrective Actions (Narrative) **Facility representatives provided photo documentation on October 17, 2025, indicating that the locks have been replaced and that all groundwater wells are in satisfactory condition. No further action is required at this time.** **October 17, 2025, Oculus Link:** **https://depedms.dep.state.fl.us:443/Oculus/servlet/shell?command=getEntity&[guid=38.1435828.1]&[profile=Discovery_Compliance]**

Observations	
12.2.1	The groundwater monitoring results were sent to the Department on Discharge Monitoring Report, Form 62-620.910(10), F.A.C. and submitted by the DMR due date. [403.161(1)(b) F.S., 62-600.680 F.A.C.]
12.2.2	The facilities purging logs are on DEP Form FD 9000-24 and indicate that purging was done properly; including sufficient volume, purge rate, depth to water, and stability criteria (pH, Temperature, Conductivity, Dissolved Oxygen, Turbidity). [62-620.610(18)(e) F.A.C., 62-160 F.A.C.]
12.2.3	The groundwater monitoring reports are complete and accurate, including analysis method, laboratory method detection limits, static water level, purging logs, sample collection procedures and treatment. [62-520.900(2) F.A.C.]
12.2.4	The well(s) that the facility is sampling at are part of the approved groundwater monitoring plan. [62-610.412(2)(a) F.A.C., 62-552.600 F.A.C.]
12.2.5	The monitoring wells are operable to the extent that sampling is possible. [62-620.410(5) F.A.C.]
12.2.6	Groundwater samples are being collected and analyzed as required by the permit or enforcement action; including location, well type, sample type (grab/composite), time, and frequency. [62-600.670(1) F.A.C., 62-610.412(2)(a) F.A.C.]

Table 12.1: Groundwater Exceedances Table

Date	Monitoring Location	Parameter	Description	Result	Background Well Results	Limit	Units	Statistical Base	DMR Comments
3/31/2025	MWC-21304	P 00400	pH	6.44	7.06	6.5-8.5	s.u.	RG - RANGE	pH of groundwater is naturally low
3/31/2025	MWC-80019	P 74055	Coliform, Fecal	9	<1	0.0	#/100mL	MB - Maximum	Monitoring well needs new seal to prevent intrusion. And needs disinfection.
3/31/2025	MWC-80020	P 00620	Nitrogen, Nitrate, Total (as N)	12.6	<0.01	10.0	mg/L	MB - Maximum	Elevated nitrogen levels could be caused by fertilizer on the golf course and water intrusion into the well
6/30/2024	MWC-80019	P 74055	Coliform, Fecal	9	<1	0.0	#/100mL	MB - Maximum	Resample was taken from 5/2 to 6/22/24. Our max is 0 so we will always be in exceedance.
3/31/2024	MWC-80019	P 74055	Coliform, Fecal	1	<1	0.0	#/100mL	MB - Maximum	Our limit is 0 so we will always be in exceedance.
12/31/2023	MWC-80019	P 74055	Coliform, Fecal	2	<2	0.0	#/100mL	MB - Maximum	Our permit limit is 0.
12/31/2023	MWC-80020	P 74055	Coliform, Fecal	7	<2	0.0	#/100mL	MB - Maximum	The permit limit is 0.

13. SSO Survey

Compliance Rating	Significant Out of Compliance
Does this section apply to the facility?	Yes
Questions	
Collection System Action Plan update submitted annually by June 30?	Not Applicable
Does the facility have an Operation and Maintenance Manual for their collection system?	Yes
Does the facility track spills in their collection system?	Yes
Does the facility have procedures for minimizing spills?	Yes
Are those procedures included in the Operation and Maintenance Manual or in a separate document?	Yes
How often is the manual updated?	As needed.
Does the facility keep routine documentation and reporting records of spills, and/or operation and maintenance activities on the collection/transmission system(s)?	Yes
Does the facility perform routine preventative maintenance necessary to keep the collection/transmission system in good working order?	Yes
Was the facility free from any sewage spills which discharged to ground only (i.e., did not make it to surface waters)?	No
Was the facility free from any sewage spills that reached surface waters (including wetlands, stormwater collection/conveyance features or drainage ditches, or waterbodies such as streams, ponds, or lakes)?	Yes
Did the facility report spill(s) to the Department within 24 hours of discovery?	Yes
Did the facility collect and/or analyze bacteriological samples for sewage spills that reached surface waters?	Not Applicable

Deficiencies and Corrective Actions		
13.1.1	A sewage spill from any part of a collection/transmission system or treatment plant that did not make it to surface waters, i.e., stormwater collection system, drainage ditch, stream, pond, or lake. [62-604.130(1) F.A.C., SSO6]	Deficiency (Narrative) The facility has reported **13** Sanitary Sewer Overflows (SSOs) that reached the ground between August 1, 2024 and October 17, 2025. Please see the SSO Details Table below for additional information. Corrective Actions (Narrative) The facility has submitted all required documentation to address the eleven SSOs that occurred between August 1, 2024 and October 17, 2025. Please continue to notify the Department and submit all required documents for any future spills. **No further action required at this time, but The Department may require formal enforcement on the SSOs, pursuant to your permit conditions, Chapter 62-620, Fla. Admin. Code, and Chapter 403, Fla. Stat.**
Observations		
13.2.1	The facility has had **13** spills in the review period. The Department has developed new guidance on how Sanitary Sewer Overflows (SSO) are addressed statewide, which was implemented July 1, 2019. According to the guidance, each SSO incident is evaluated and rated and the appropriate document is filed/issued. Either a memo to file, a Compliance Assistance Offer, or Warning Letter is sent for each incident, if not covered by a current inspection report for the facility.	
13.2.2	Please note that Rule 62-600.705(1), F.A.C. and Rule 62-600.705(2), F.A.C., became effective on June 28, 2023. These rules require that each facility develop a Collection System Action Plan (CSAP) and a Power Outage Contingency Plan (POCP). These plans will be due at the time of new permit, permit renewal, substantial permit revision or in accordance with the schedule outlined in any substantial permit modification. Please note that a permit modification with a schedule to address these items may be issued at any time.	
13.2.3	The O&M manual reflect the current collection system configuration.	
13.2.4	The SORP and collection system maps are immediately available to SSO response staff, including during power failures. [62-604.300(5) F.A.C.]	
13.2.5	The facility maintains a ready-to-use supply of equipment, tools and materials for responding to SSOs. [62-604.300(5) F.A.C.]	
13.2.6	The facility does follow up on spills according to their procedures. [62-604.300(5) F.A.C.]	

Table 13.1: SSO Details Table

LOCATION	DATE DISCHARGE OCCURRED	DATE DISCHARGE REPORTED	SWO NUMBER	SPILL VOLUME (GAL)	SPILL VOLUME RECOVERED (GAL)	SPILL CHARACTERISTIC	CAUSE	AREA AFFECTED	CLEAN UP
16992 Timberlakes Drive	10/17/2025	10/17/2025		31300	100	RAW WASTEWATER	Blockage	Ground	Vac Truck; Applied lime
16992 Timberlakes Drive	10/12/2025	10/13/2025		31238	50	RAW WASTEWATER	Blockage	Ground	Applied lime
16992 Timberlakes Drive	10/4/2025	10/6/2025	2025-8586	1,500	1,500	RAW WASTEWATER	Blockage	Ground	VAC; Lime
16992 Timberlake Dr	10/3/2025	10/3/2025		500	500	RAW WASTEWATER	Overflow	Ground	VAC; Lime
16682 Bobcat Dr	9/10/2025	9/11/2025		Unknown (1,000)	0	RAW WASTEWATER	Overflow	Ground	Lime
67 Umber Ct	7/29/2025	7/29/2025		600	600	RAW WASTEWATER	Equipment	Ground	VAC; Lime
34 Umber Ct	7/9/2025	7/9/2025		300	300	RAW WASTEWATER	Blockage	Ground	VAC; Lime
16712 Bobcat Dr	6/25/2025	6/25/2025		200	200	RAW WASTEWATER	Blockage	Ground	VAC; Lime
16992 and 16994 Timberlakes Drive	6/13/2025	6/13/2025		600	500	RAW WASTEWATER	Blockage	Ground	VAC; Lime
15989 Old US Highway 41	5/16/2025	5/16/2025		700	600	REUSE/RECLAIM /TREATED	Power Outage	Ground	VAC; Lime
16556 BEAR CUB COURT	11/21/2024	11/21/2024		200	200	RAW WASTEWATER	EQUIPMENT	Ground	VAC; Lime
15235 S. Tamiami Trl	10/13/2024	10/14/2024		200	0	RAW WASTEWATER	Hurricane Milton	Ground	Lime
6308 Sugar Bush Ln	8/30/2024	8/30/2024		300	300	RAW WASTEWATER	Power Outage	Ground and Roadway	VAC; Lime

14. Other

Compliance Rating	Not Evaluated
Does this section apply to the facility?	Yes
Deficiencies and Corrective Actions	
14.1.1	Not evaluated during this inspection.
Observations	
14.2.1	Not evaluated during this inspection.

Appendix for Compliance Evaluation Inspection conducted on October 9, 2025

Forest Utilities, Inc. is authorized to convert the disinfection system of the wastewater treatment facility from a chlorine gas system to a bulk sodium hypochlorite disinfection system.

The following specific conditions are hereby added to Section VI., SCHEDULES of the current permit:

c. The permittee shall submit notification of completion of construction on DEP Form 62-620.910(12) prior to placing the newly constructed or modified portion of an existing facility into operation or any individual unit processes into operation, for any purpose other than testing for leaks and equipment operation. Provide notification to the Department on DEP Form 62-620.910(12) that construction has been completed. **RECEIVED OCTOBER 5, 2021.**

d. Within six months after a facility is placed in operation, the permittee shall provide written certification to the Department on Form 62-620.910(13) that record drawings pursuant to Chapter 62-600, F.A.C., and that an operation and maintenance manual pursuant to Chapters 62-600 and 62-610, F.A.C., as applicable, are available at the location specified on the form. [62-620.410(6) and 62-620.630(7) **RECEIVED OCTOBER 5, 2021.**

Table A - Sampling Tables

Reagent Expiration Dates		
Standard/Buffer	**Lot No.**	**Expiration Date**
pH 4.00	H1225A	8/12/2027
pH 7.00	H0125A	8/1/2027
pH 10.00	G2925A	1/29/2027
Chlorine Low Range Secondary Standards Kit	A3320	Nov-25
0.02 NTU	240157	Jan-26
10.0 NTU	240166	Jan-26
100 NTU	240169	Jan-26

Table B - Records and Reports

Operator Names and License Numbers			
Operator Name	**License Class**	**License Number**	**Expiration Date**
Adrian Charlton	A	0014895	4/30/2027
Ivory Gilbert	C	0015245	4/30/2027

DMR Transcription and Calculation Errors	
Monitoring Period	**Monthly (R-001 and R-002) DMR Deficiencies**
August 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.9 mg/L, while the Department calculated 5.06 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 5 mg/L, while the Department calculated 3.75 mg/L.
	Flow (FLW-01) Annual Average incorrect. The facility reported 0.479 MGD, while the Department calculated 0.487 MGD.
	Flow (FLW-01) Monthly Average incorrect. The facility reported 0.497 MGD, while the Department calculated 0.514 MGD.
	Percent Capacity incorrect. The facility reported 70.86%, while the Department calculated 64.38%.
July 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.83 mg/L, while the Department calculated 5.31 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 5 mg/L, while the Department calculated 2.75 mg/L.
	Percent Capacity incorrect. The facility reported 70.23%, while the Department calculated 59.46%.
June 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.92 mg/L, while the Department calculated 5.31 mg/L.
	CBOD (Effluent) Max Weekly Average incorrect. The facility reported 2 mg/L, while the Department indicated 7 mg/L.
	CBOD (Effluent) Maximum incorrect. The facility reported 2 mg/L, while the Department indicated 7 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 2 mg/L, while the Department calculated 4.2 mg/L.
	Flow (FLW-01) Monthly Average incorrect. The facility reported 0.483 MGD, while the Department calculated 0.499 MGD.
	Percent Capacity incorrect. The facility reported 68.75%, while the Department calculated 55.33%.
May 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.8 mg/L, while the Department calculated 5.4 mg/L.
	CBOD (Effluent) Max Weekly Average incorrect. The facility reported 2 mg/L, while the Department indicated 6 mg/L.
	CBOD (Effluent) Maximum incorrect. The facility reported 2 mg/L, while the Department indicated 6 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 2 mg/L, while the Department calculated 4.25 mg/L.
	Percent Capacity incorrect. The facility reported 61.21%, while the Department calculated 54.79%.
April 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.72 mg/L, while the Department calculated 5.48 mg/L.
	CBOD (Effluent) Max Weekly Average incorrect. The facility reported 5 mg/L, while the Department indicated 6 mg/L.
	CBOD (Effluent) Maximum incorrect. The facility reported 5 mg/L, while the Department indicated 6 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 5 mg/L, while the Department calculated 5.75 mg/L.
	Flow (FLW-01) Monthly Average incorrect. The facility reported 0.419 MGD, while the Department calculated 0.433 MGD.
	Percent Capacity incorrect. The facility reported 67.89%, while the Department calculated 57.29%.
March 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.63 mg/L, while the Department calculated 5.65 mg/L.
	CBOD (Effluent) Max Weekly Average incorrect. The facility reported 3.75 mg/L, while the Department indicated 7 mg/L.
	CBOD (Effluent) Maximum incorrect. The facility reported 3.75 mg/L, while the Department indicated 7 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 3.75 mg/L, while the Department calculated 4.75 mg/L.
	Percent Capacity incorrect. The facility reported 67.18%, while the Department calculated 57.63%.
February 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.49 mg/L, while the Department calculated 5.76 mg/L.
	CBOD (Effluent) Max Weekly Average incorrect. The facility reported 3.5 mg/L, while the Department indicated 8 mg/L.
	The facility indicated that no flow was received for the EFA-02 sampling location. Instead of indicating "NODI" (No Discharge) on the Part A DMR, the facility recorded "0" for each EFA-02 monitoring parameter. When no flow is received at a particular sampling location, the code "NODI" should be recorded for each corresponding parameter since sampling could not be conducted at an area with no effluent flow.
	Flow (FLW-01) Annual Average incorrect. The facility reported 0.412 MGD, while the Department calculated 0.486 MGD.
	Flow (FLW-01) Monthly Average incorrect. The facility reported 0.416 MGD, while the Department calculated 0.456 MGD.
	Percent Capacity incorrect. The facility reported 66.62%, while the Department calculated 59.88%.
January 2025	CBOD (Effluent) Annual Average incorrect. The facility reported 3.45 mg/L, while the Department calculated 5.51 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 8 mg/L, while the Department calculated 5.5 mg/L.
	Flow (FLW-01) Monthly Average incorrect. The facility reported 0.554 MGD, while the Department calculated 0.441 MGD.
	Percent Capacity incorrect. The facility reported 66.19%, while the Department calculated 62.92%.
December 2024	CBOD (Effluent) Annual Average incorrect. The facility reported 3.41 mg/L, while the Department calculated 5.34 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 7 mg/L, while the Department calculated 3.6 mg/L.
November 2024	CBOD (Effluent) Annual Average incorrect. The facility reported 3.29 mg/L, while the Department calculated 5.34 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 5 mg/L, while the Department calculated 3.25 mg/L.
	Percent Capacity incorrect. The facility reported 63.88%, while the Department calculated 64.29%.
October 2024	CBOD (Effluent) Annual Average incorrect. The facility reported 3.17 mg/L, while the Department calculated 5.13 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 6 mg/L, while the Department calculated 3.5 mg/L.
	Percent Capacity incorrect. The facility reported 61.93%, while the Department calculated 62.33%.
September 2024	CBOD (Effluent) Annual Average incorrect. The facility reported 3.12 mg/L, while the Department calculated 4.87 mg/L.
	CBOD (Effluent) Monthly Average incorrect. The facility reported 8 mg/L, while the Department calculated 4.6 mg/L.
	Percent Capacity incorrect. The facility reported 61.43%, while the Department calculated 60.29%.

Late DMRs			
Monitoring Period	**Due Date**	**Submittal Date**	**Number of Days Late**
There are no late or missing Effluent or Groundwater DMRs in the review period.			

Backflow Preventer (RPZ) Annual Certifications			
Manufacturer	**Serial Number**	**Date Calibrated**	**Passed?**
Facility representatives stated that there are no Backflow Preventers (RPZs) located onsite.			

Flow Meter Annual Certifications			
Monitoring Site Number	**Serial Number**	**Date Calibrated**	**Passed?**
Influent Flowmeter (Tektrol Tek-Flux 1400A)	1400S-V20021004	9/26/2025	Yes
North Contact Chamber Effluent Flowmeter (Prosonic S Channel 1 - 90 Degree V-Notch Weir)	S7006F150E6	9/26/2025	Yes
South Contact Chamber Effluent Flowmeter (Prosonic S Channel 2 - 90 Degree V-Notch Weir)	S7006F150E6	9/26/2025	Yes

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



1. Operable Blower (Right) & Location for Second Blower (Left)



2. Influent Piping (Right)



3. Influent Composite Sampler



4. Inside Influent Composite Sampler

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



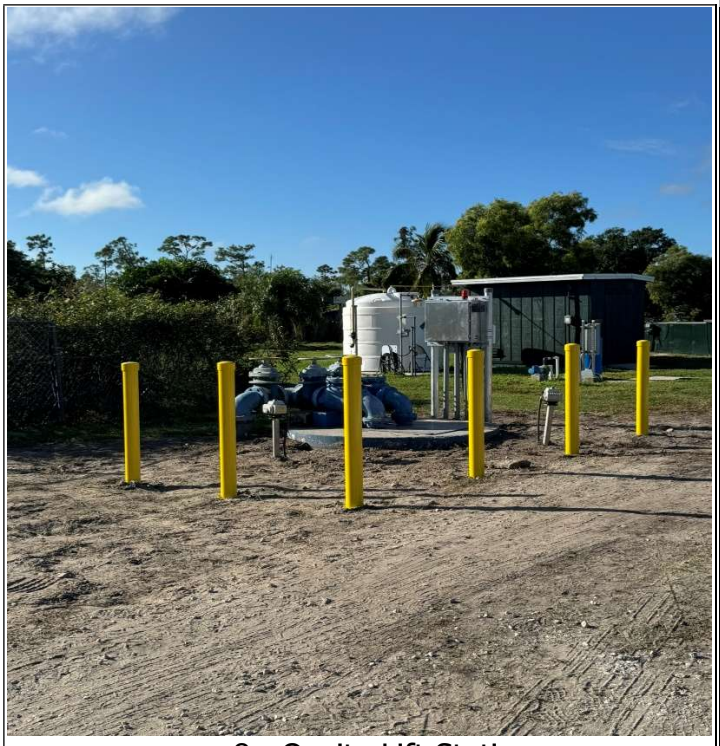
5. Splitter Box/Bar screen



6. Tank Overview (Far Tank = Seeping Reject Tank)



7. Facility Piping



8. Onsite Lift Station

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



9. Anoxic Zone



10. Exposed Rebar in Basin



11. Aeration Basin



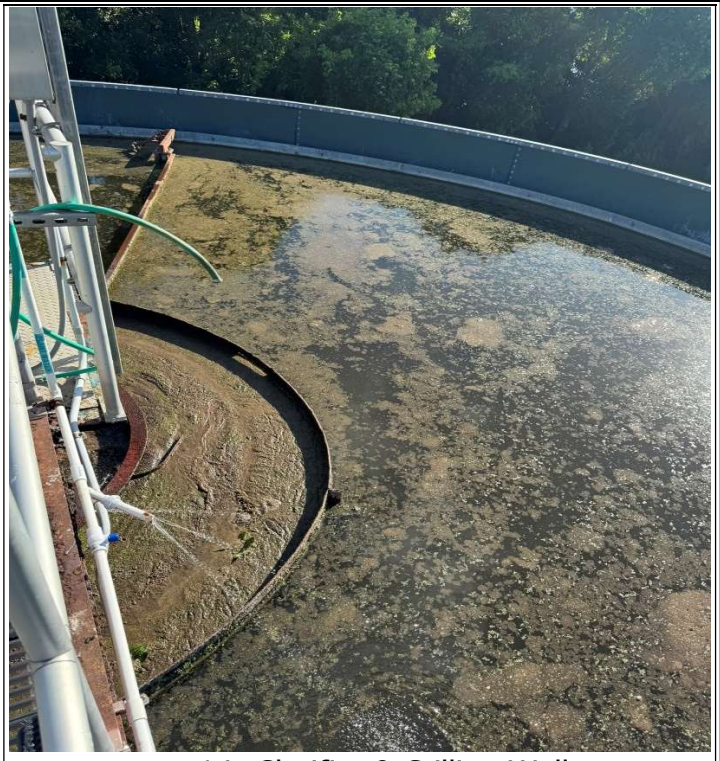
12. Digester

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

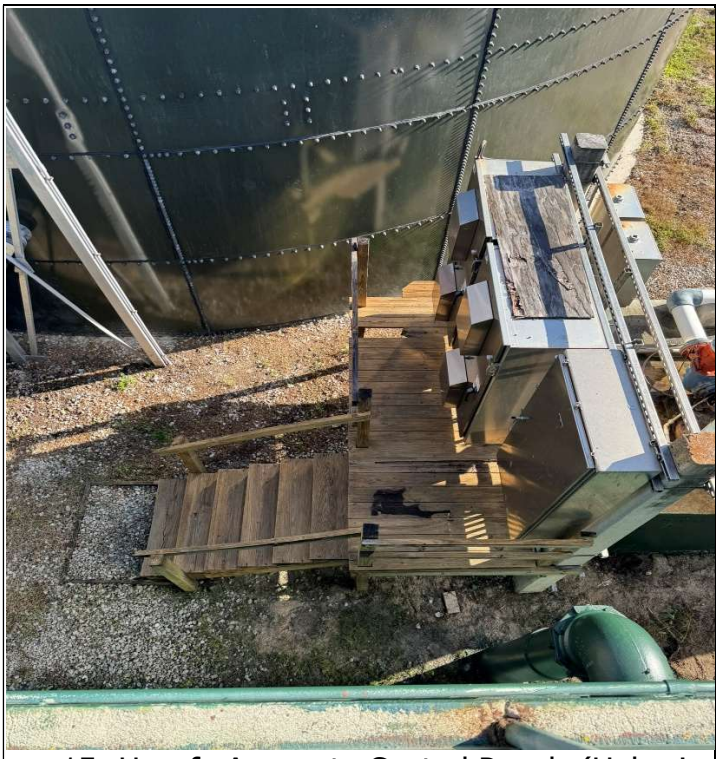
I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



13. Clarifier



14. Clarifier & Stilling Well



15. Unsafe Access to Control Panels (Holes in Floor/Rotting Wood)



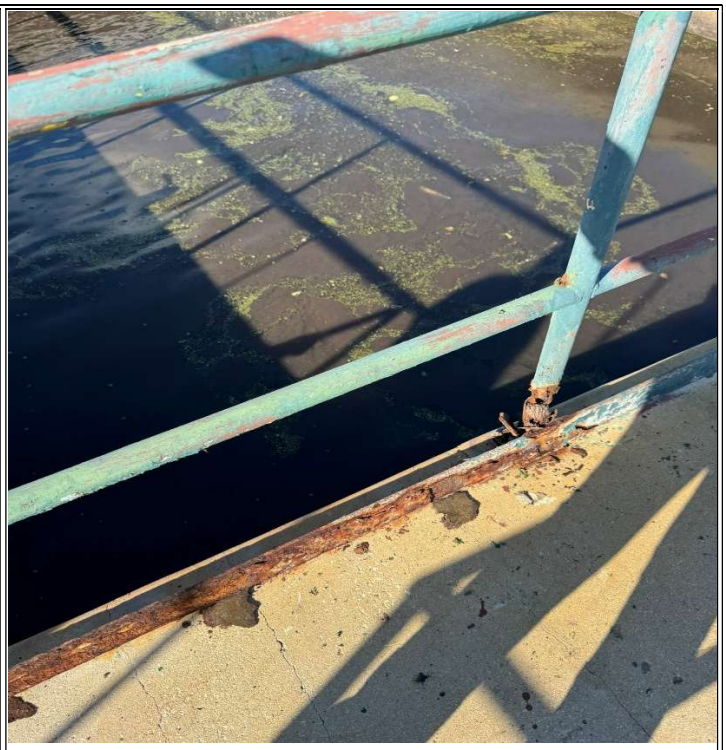
16. Clarifier Overview & View of Skimmer Arm

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



17. Excessive Corrosion & Holes on Airline Piping



18. Excessive Corrosion on Handrails



19. Unused Basins



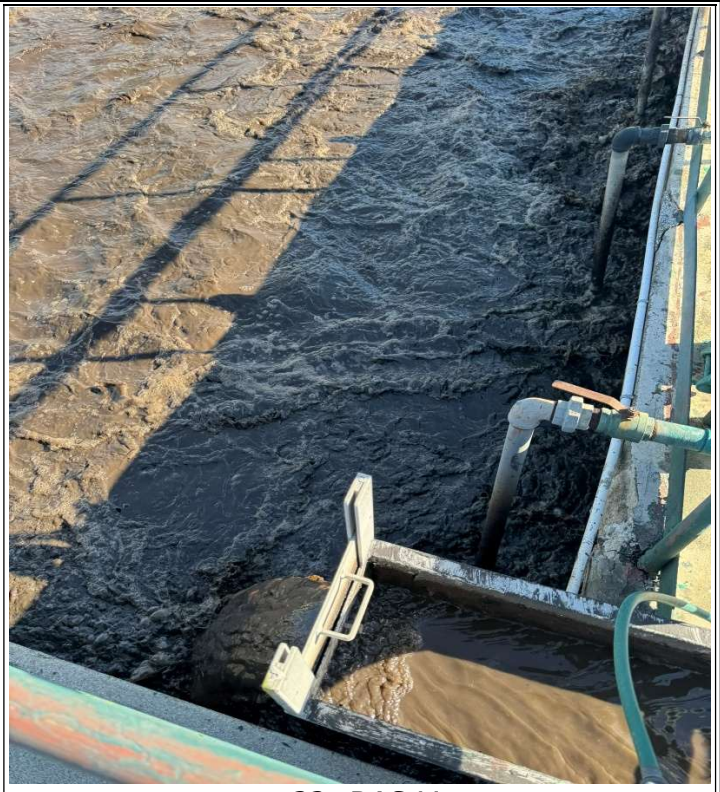
20. Unused Basins

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



21. Recently Replaced Airline Piping



22. RAS Line



23. Blower Motors



24. Sludge Drying Beds

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



25. Sand Filters (One online, one inoperable)



26. Chlorine Storage



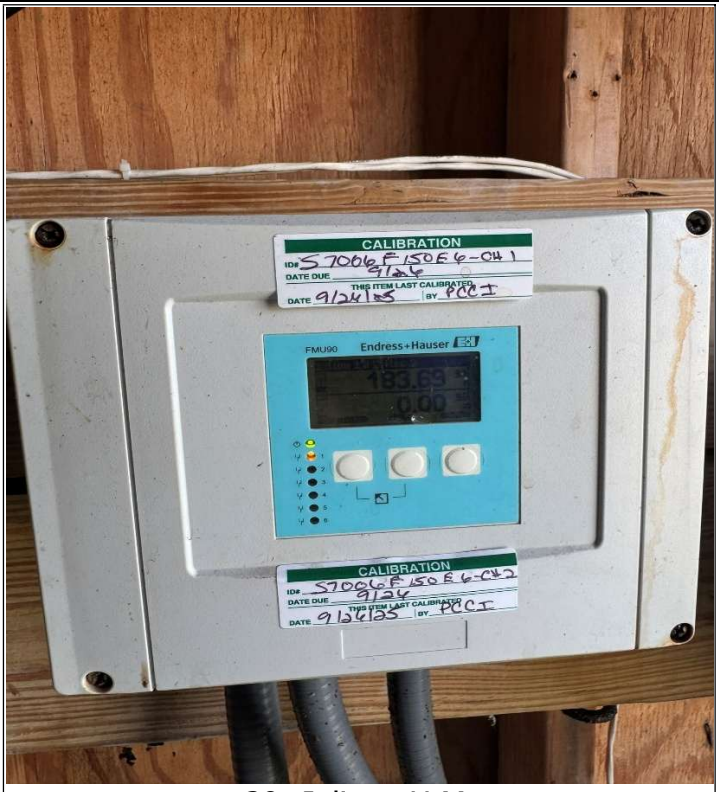
27. Inline Turbidimeter



28. Inline Chlorine Meter

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



29. Inline pH Meter


30. Chlorine Pumps


31. Ultrasonic Flowmeter @ CCC


32. CCC Effluent Outfall

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



33. Offline CCC



34. Effluent Composite Sampler



35. Inside Effluent Composite Sampler



36. Compliance Groundwater Monitoring Well (MWC-80019)

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



37. Compliance Groundwater Monitoring Well (MWC-80020)



38. Intermediate Groundwater Monitoring Well (MWI-21303)



39. Compliance Groundwater Monitoring Well (MWC-21304)



40. Background Groundwater Monitoring Well (MWB-21302)

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.



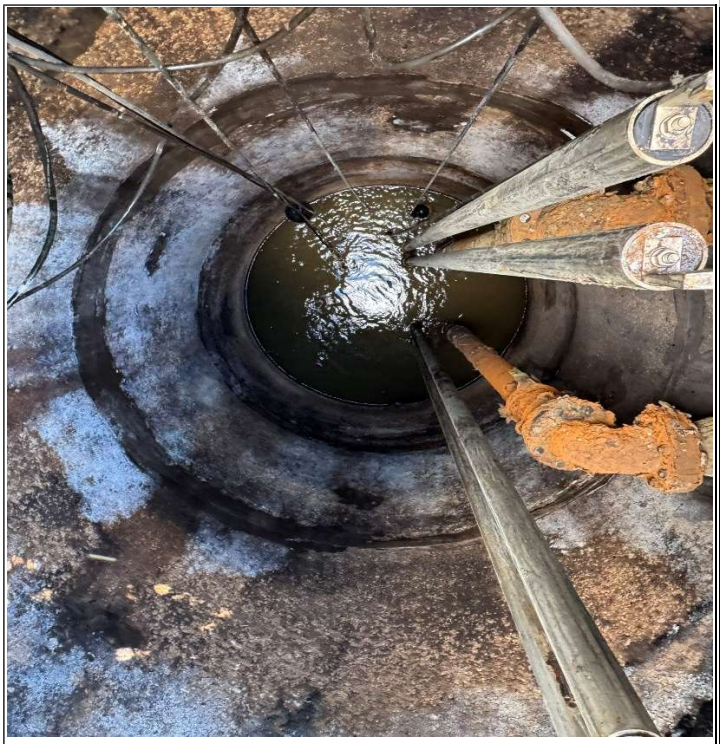
41. Lift Station Overview



42. Lift Station Wet Well



43. Lift Station Control Panel



44. Lift Station Wet Well

I certify that these photos represent the true on-site conditions observed and have not been altered in any way.

Forest Utilities WWTP (FLA014478)
Photos by Kaylee Turke on 10/09/2025



45. Lift Station Dry Well

WASTEWATER
SIGNIFICANT NONCOMPLIANCE (SNC) DOCUMENTATION

Facility:	Forest Utilities WWTP			**Inspection Date:**	October 9, 2025
Inspector:	K. Turke	**Permit No:**	FLA014478	**Permitted Capacity:**	0.800 MGD

1. Permit

☐ Operating without a valid wastewater permit
☐ Unpermitted discharge with a high potential for water quality of health impacts
☐ Unauthorized bypass with a high potential for water quality or health impacts
☐ Unpermitted collection system with a high potential for water quality of health impacts
☐ Unauthorized substantial plant modification placed into service
☐ Unauthorized residuals or sludge disposal with a high potential for water quality of health impacts

2. Compliance Schedule

☐ Start Construction milestone exceeded by 90 days or more
☐ End construction milestone exceeded by 90 days or more
☐ Attainment of final compliance milestone exceeded by 90 days or more
☐ Failure to meet any other enforcement order or compliance schedule milestones by 90 days or more

3. Records and Reports

☐ Surface Water Discharge Monitoring Report (DMR) late by 30 or more days
☐ Land-Application Effluent Discharge Monitoring Reports – 2 or more non-submittals in 6 mo. window
☐ Falsification of any record or report
☐ Compliance schedule report or final compliance report late by 30 or more days
☐ Pretreatment reports late by 30 or more days

4. Operation and Maintenance

☐ Improper operation resulting in a high potential for water quality or health impacts
☐ Failure to perform maintenance resulting in a high potential for water quality or health impacts
☐ Missing equipment resulting in a high potential for water quality or health impacts
☐ Failure to replace malfunctioning equipment resulting in a high potential for water quality or health impacts

5. Effluent

☐ Limit exceeded by TRC 2 out of 6 months (TRC Violation)
☐ Limit exceeded 4 out of 6 months (chronic effluent violation)
☐ Total Residual Chlorine for Disinfection below minimum 10% or more of the time in a rolling 6 month period
☐ Persistent acute toxicity through follow up tests
☐ Persistent chronic toxicity through follow up tests
☐ Pollutant passthrough with a high potential for water quality or health impacts (pretreatment)
☐ Any other violation with a high potential for water quality or health impacts

6. Effluent Disposal Method

☐ Operation of unauthorized disposal system
☐ Disposal system failure with a high potential for water quality or health impacts
☐ Failure to operate disposal system as designed with a high potential for water quality or health impacts
☐ Unauthorized modification of disposal system placed into service

7. Other Violations

☒ Any violation not listed above, or pattern of noncompliance, resulting in a high potential for water quality or health impacts – (Comments or Details supporting SNC finding must be provided.)

Comments/Details:

Failure to submit Pathogen Monitoring Report timely, which was noted on the previous Warning Letter from January 18, 2024. Also, SSO spills met the requirement of either >2 at the same locations or > six/per 100 miles of collection system piping in a 12-month period.

☐ Failure to implement pretreatment program or enforce indirect users where industrial contributions cause effluent limit or disposal violations
☐ Any violation considered Significant by Secretary, Deputy Secretary, Director of District Management, or the Division Director

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jay Collins
Lt. Governor

Alexis A. Lambert
Secretary

Annual Reuse Report Electronic Submission

DEP Review Initiated

12/17/2025

Dear Ivory Gilbert,

Reuse System Name:	Forest Utilities WWTP
WAFR ID:	FLA014478
Permittee:	Ivory Mitchell Gilbert
Address:	6341 Deer Run Road SW Fort Myers FL 33908
DEP District:	SOUTH DISTRICT
Water Management District:	South Florida Water Management District

The *Annual Reuse Report* for the Reuse System indicated above has been submitted for DEP Review. Attached is a summary of the information you have submitted. DEP is in the process of reviewing the data sent. Additional information may be requested. **Once the DEP Review process is complete, you will receive confirmation of report acceptance in a seperate e-mail.**

If you have any questions during this process, please contact SOUTH DISTRICT via e-mail at SD_newapps@FloridaDEP.gov for further information.

E-mail Recipients:
mitchgilbert@floridautilitysolutions.com
SD_newapps@FloridaDEP.gov
aws-reusecoordinator@sfwmd.gov
mitchgilbert@floridautilitysolutions.com
compliance@floridautilitysolutions.com

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
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Jay Collins
Lt. Governor

Alexis A. Lambert
Secretary

Annual Reuse Report Electronic Submission

Report Accepted

12/17/2025

Dear Ivory Gilbert,

Reuse System Name:	Forest Utilities WWTP
WAFR ID:	FLA014478
Permittee:	Ivory Mitchell Gilbert
Address:	6341 Deer Run Road SW Fort Myers FL 33908
DEP District:	SOUTH DISTRICT
Water Management District:	South Florida Water Management District

The *Annual Reuse Report* for the Reuse System indicated above has been accepted by the Department.

Enclosures:
All supporting documentation can be found here:
https://prodenv.dep.state.fl.us/DepNexus/public/facilitysearch?facility.id=FLA014478
Please allow up to three (3) business days for the above documents to appear.

If you have any questions during this process, please contact please contact SOUTH DISTRICT via e-mail at SD_newapps@FloridaDEP.gov for further information.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.

E-mail Recipients:
mitchgilbert@floridautilitysolutions.com
SD_newapps@FloridaDEP.gov
Tim.McGann@FloridaDEP.gov
mitchgilbert@floridautilitysolutions.com
compliance@floridautilitysolutions.com

Florida Department of Environmental Protection

Annual Reuse Report

Part I – Instructions

1. This form is to be submitted on or before January 1 following the completion of each fiscal year (October 1 through September 30). Submittal is required by Rule 62-610.870, F.A.C. This report will be used to develop and maintain a reuse inventory. It will not be used for determination of compliance with permit limitations, other than requirements to submit this report. If flow monitoring information is not available for individual reuse types or types of users, please provide your best estimates of flows allocated to individual reuse types or types of users.

2. Submit the report (including all attachments):

   a. Electronically using the DEP Online Business Portal (https://www.fldepportal.com/DepPortal/go/home).

   b. To the appropriate water management district.

3. When submitting the form electronically through the DEP online business portal, you do not need to submit a hard copy of the form as well to the Department. Once the form is submitted and accept through the DEP online business portal, a copy of the report will be generated and available through the DEP online document warehouse. That copy of the report can be submitted to the appropriate water management district to fulfill reporting requirements.

4. Completion of this report is required for all domestic wastewater facilities having permitted capacities of 0.1 mgd or larger which contribute reclaimed water to one or more reuse systems permitted under Chapter 62-610, F.A.C. This form is to be completed annually for each separate reuse system. For purposes of this form, "reuse system" means a network of pipes, pumping facilities, storage facilities, and appurtenances designed to convey and distribute reclaimed water from one or more domestic wastewater treatment facilities to one or more users of reclaimed water.

5. Use the units specified in the form. For flows, show annual average flows (in mgd). This can be obtained by averaging daily flows over a 365-day period, dividing the total annual volume by 365, or by averaging the 12 monthly average flow values.

6. Be sure to submit the required attachments (see Part X on pages 8 and 9 of this form).

7. The cover sheet of your permit will identify portions of your project classified as "reuse" and portions classified as "effluent disposal." Rule 62-610.810, F.A.C., lists the criteria for classifying projects (or portions of projects) as "reuse" or "effluent disposal."

Part II - General Information

1. Reporting Period: October 1, 2024 through September 30, 2025
2. Date Submitted: 12/17/2025
3. Person Completing This Form

   Name: Ivory Gilbert

   Title: President

   Organization: Florida Utility Solutions

   Mailing Address: 15275 Collier Blvd Suite 201-268

   City/State/Zip Code: Naples, FL 34119

   Telephone: (239) 513-0445

   E-mail: compliance@floridautilitysolutions.com
4. Reuse System Name: Forest Utilities WWTP
5. Domestic Wastewater Treatment Facilities Providing Reclaimed Water to This Reuse System

   a. Location of Facilities

   City: Fort Myers County: Lee

DEP District (check one):

- ☐ Northwest (Pensacola)
- ☐ Northeast (Jacksonville)
- ☐ Southwest (Tampa)
- ☐ Central (Orlando)
- ☐ Southeast (West Palm Beach)
- ☑ South (Ft. Myers)

Water Management District (check one):

- ☐ Northwest Florida (Havana)
- ☐ Suwannee River (Live Oak)
- ☐ Southwest Florida (Brooksville)
- ☐ St. Johns River (Palatka)
- ☑ South Florida (West Palm Beach)

b. Domestic Wastewater Treatment Facility Information

Enter the name of the facility, the DEP identification number, disinfection level,[a] permitted capacity, and annual average flow for each treatment facility providing reclaimed water to this reuse system.

Table I. Facility Information

Facility Name	DEP Identification Number	Disinfection Level [a]	Permitted Capacity (mgd)	Average Flow (mgd)
Please see the attached sheet.	Please see the attached sheet.	Please see the attached sheet.	Please see the attached sheet.	Please see the attached sheet.
Total Treated Wastewater				0.49

[a] Enter one of the following codes for disinfection level for each treatment facility:
HI = High-level disinfection, as described in Rule 62-600.440(6), F.A.C.
IM = Intermediate disinfection, as described in Rule 62-600.440(7), F.A.C.
BA = Basic disinfection, as described in Rule 62-600.440(5), F.A.C.
LL = Low-level disinfection, as described in Rule 62-600.440(8), F.A.C.
HB = High-level disinfection & basic disinfection for portions of the treated flow.
FT = Full treatment disinfection, as described in Rule 62-610.563(3)(b), F.A.C.

Part III - Reclaimed Water and/or Effluent Available for Reuse or Disposal

Table II. Available Reclaimed Water and/or Effluent

Source of Water	Average Flow (mgd)
Treated Wastewater [Enter the Total Average Flow from Table I]	0.49
Supplemental Water Supplies added by the utility - Surface Water	
Supplemental Water Supplies added by the utility - Stormwater	
Supplemental Water Supplies added by the utility - Ground Water	
Supplemental Water Supplies added by the utility - Drinking Water	
Demineralization Concentrate (Blended with final reclaimed water only)	
Water Recovered from ASR [b]	
Total Water Available for Reuse or Disposal [Should be equal to the Total Reuse Flow in Table III below]	0.4900

[b] Aquifer Storage and Recovery (ASR) - This activity is described in Rule 62-610.466, F.A.C. If you have an ASR system included in your permit for the reuse system, please make separate entries in

both Part III (for the total average flow withdrawn from the ASR well) and in Part VI (for the total average flow injected into the ASR well).

Part IV - Reuse

For each reuse activity, enter the permitted capacity, average flows, and acreage. Do not duplicate any of these entries in Part V of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the reuse types listed in this part. Make discrete entries (do not show ranges). Show totals at the bottom of the table.

Table III. Reuse Activities

Reuse Type	Reuse Sub-Type	Part	Capacity (mgd)	Flow (mgd)	Area (acres)
Public Access Areas & Landscape Irrigation	Golf Course Irrigation	III	0.800	0.490	160
	Residential Irrigation	III			
	Other Public Access Areas	III			
Agricultural Irrigation & Sprayfields	Edible Crops (Be sure to attach the inventory of edible crop irrigation. See Part X of this form.)	III			
	Grass, Pasture, Other Crops	II			
Ground Water Recharge & Indirect Potable Reuse	Rapid Infiltration Basins (Including Some Perc Ponds) [c]	IV			
	Absorption Fields [c]	IV			
	Surface Water Augmentation (Discharge to Class I Waters)	V			
	Injection to Potable Aquifers	V			
Industrial	At Treatment Plant	VII			
	At Other Facilities	VII			
Toilet Flushing		III			
Fire Protection		III			

Wetlands				
Other (Specify)				
Total Reuse **[Enter total flow on Line 1 in Part VI of this form.]**		0.8	0.49	160.0

° To be considered "reuse," either of the following conditions must exist:

* There are multiple basins or absorption fields that are routinely wetted, dried, and maintained in accord with Part IV of Chapter 62-610, F.A.C., or
* Continuously-loaded ponds must meet the higher treatment/disinfection requirements in Rule 62-610.525, F.A.C.

If neither condition is met, the perc pond or absorption field is "effluent disposal" and should be recorded in Part V in this form (under "Other").

Part V - Effluent Disposal

For each effluent disposal activity, enter the permitted capacity and average flow. Do not duplicate any of these entries in Part IV of this form. Using available flow records, other available information, and your best judgment, please allocate the average flows for all treatment facilities among the effluent disposal types listed in this part. Make discrete entries (do not show ranges) for capacity and flow. Show totals at the bottom of the table.

Table IV. Disposal Activities

Disposal Type	Disposal Sub-Type	Permitted Capacity (mgd)	Average Flow (mgd)
Surface Water Discharges	Ocean Outfall		
	To Coastal or Estuarine Waters		
	To Wetlands	N/A	N/A
	To Other Surface Waters		
Deep Well Disposal			
Other (specify)			
Total Flow Disposed **[Enter total flow on Line 2 in Part VI of this form.]**		0.0	0.0

Part VI - Summary of Reuse and Disposal

Table V. Reuse and Disposal Summary

Reuse or Disposal Activity	Average Flow (mgd)
1. **Reuse** (From Total Flow of Table III)	0.49
2. **Effluent Disposal** (From Total Flow of Table IV)	0.0
3. **Flow Stored in ASR** (See note [b] on ASR in Part III.)	0.0
Total (Should equal Total Flow of Table II) [d]	0.49

[d] The totals in Tables II and V will not be equal if one of the following conditions exists (check as appropriate):

- ☐ The reuse system includes an ASR system and the amounts injected and withdrawn during the year differ.
- ☐ The reuse system includes one or more reuse activities in which reclaimed water is returned to the treatment facility after its use, where it is then available for reuse or disposal.

Part VII – Reuse Activities, Numbers of Customers, and Backup Discharges

1. How many single-family residences have reclaimed water service?
   0
2. How many golf courses are irrigated using reclaimed water?
   2
3. How many parks or playgrounds are irrigated using reclaimed water?
   0
4. How many schools are irrigated using reclaimed water?
   0
5. Is reclaimed water used to flush toilets? ☐ Yes ☑ No If yes, list locations where reclaimed water is used for toilet flushing: _____
6. Is reclaimed water used for fire protection? ☑ No ☐ Yes, in sprinkler systems
   ☐ Yes, in fire hydrants ☐ Yes, other (please describe): _____
7. How many cooling towers use reclaimed water from this reuse system? 0

8. List or describe any unique or unusual uses of reclaimed water. N/A

9. Is there a surface water discharge that serves as a backup discharge for the reuse system?

☑ No ☐ Yes, a Limited Wet Weather Discharge permitted under Rule 62-610.860, F.A.C.

☐ Yes, permitted under the APRICOT Act [Section 403.086(7), F.S.]

☐ Yes, permitted under other rules governing surface water discharges

10. Do you require construction of reclaimed water piping in new residential or other developments?

☐ Yes ☑ No

11. Do you require connection to the reclaimed water system when reclaimed water service becomes available?

☐ Yes ☑ No

Part VIII – Cross-Connection Control Activities

Rule 62-610.469, F.A.C., imposes cross-connection control requirements on reuse systems permitted under Part III of Chapter 62-610, F.A.C. This includes requirements for the implementation of cross-connection control programs by all public water supply systems serving areas that are within the general reclaimed water service area. Color-coding, labeling, and separation distance requirements are included. In addition, inspections within the reclaimed water service area are required. For purposes of this form, "cross-connection" means a pipe-to-pipe connection between drinking water pipes and reclaimed water pipes.

1. Are all public water supply systems serving areas that are within the general reuse service area actively implementing and enforcing their cross-connection control programs?
   ☑ Yes ☐ No

   a. Have all of these cross-connection control programs been accepted by the DEP or the approved county health department? ☑ Yes ☐ No

2. How many illegal cross-connections have been identified during the reporting period? 0

   a. How many of these cross-connections have been eliminated? 0

   b. Please, attach a description of identified cross-connections and efforts taken to eliminate them.

3. How many new connections were made to the reclaimed water system during the reporting period? 0

   a. How many of the new reclaimed water connections were inspected at the time of initial connection? 0

4. How often are the reclaimed water connections of existing residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)?
   Not Inspected

   a. How often are the reclaimed water connections of existing non-residential reclaimed water customers inspected (i.e., daily, weekly, monthly, annually)? Not Inspected

5. In addition to the number of new connections inspected in Item 3 above, how many existing connections were inspected during the reporting period?
   0

Part IX - Rates Charged for the Use of Reclaimed Water

Please, list the fees charged for the use of reclaimed water. Please do not enter wastewater or sewer charges. If reclaimed water is provided at no cost, enter zeroes in both blanks. If the fee structure includes both flat rate and gallonage charge components, make a positive entry in both spaces. Make all entries in the units shown.

1. How much do you charge a single-family residential customer (assume a 0.2-acre lot) for the use of reclaimed water?

   Flat rate ($/month/connection) _____

   Gallonage charge (cents/1000 gal.) _____

2. How much do you charge non-residential customers, such as golf courses, (assume 0.1 mgd on a 50-acre site) for the use of reclaimed water?

   Flat rate ($/month/connection) 0

   Gallonage charge (cents/1000 gal.) 0.15

Part X - Required Attachments

Check, as appropriate, and attach the required documentation.

☐ **Inventory of Edible Crop Irrigation** - If reclaimed water is used to irrigate edible crops at commercial agricultural sites, attach a copy of the current edible crop irrigation inventory as required by Rules 62-610.475 and 62-610.870, F.A.C. The inventory shall include the following information:

   a. Name of the agricultural operation.
   b. Name and telephone number of the owner or operator of the agricultural operation.
   c. Address of the agricultural operation.
   d. Edible crops irrigated using reclaimed water.
   e. Type of application (irrigation) method used.
   f. Approximate area (acres) under irrigation using reclaimed water on which edible crops are grown.

☑ **Inventory of Storage Facilities** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a copy of the current inventory of storage facilities, as required by Rules 62-610.464, 62-610.830, and 62-610.870, F.A.C. The inventory shall include the following information:

a. Name or identifier for the storage system.

b. Location.

c. Function of the storage system (system storage or reject storage).

d. Type of facility (covered tank, uncovered tank, lined pond, unlined pond).

e. Indication of whether or not the storage facility is a water of the state or discharges to a water of the state.

f. Distance to the nearest public water supply well.

g. Distance to the nearest potable water supply well, which is not a public water supply well.

h. Volume of each storage tank/pond and the total storage volume of all storage tanks and ponds (in units of million gallons).

☑ **Summary of Public Notification Program** - If this reuse system was permitted under Part III of Chapter 62-610, F.A.C., attach a summary of the public notification program activities during the reporting period, as required by Rule 62-610.468(6), F.A.C. The summary shall include the following:

a. Details of written public notification activities (include copies of written notices).

b. Summary of activities involving the news media.

c. Use of advisory signs.

d. Other public notification activities.

☑ **Summary of Metering and Rate Structure** – As noted in 403.064(16), Florida Statutes, utilities implementing reuse projects are encouraged to meter use of reclaimed water by all end users and to charge for the use of reclaimed water based on the actual volume used when such metering and charges can be shown to encourage water conservation. Metering and the use of volume-based rates are effective water management tools for the following reuse activities: residential irrigation, agricultural irrigation, industrial uses, landscape irrigation, irrigation of other public access areas, commercial and institutional uses such as toilet flushing, and transfers to other reclaimed water utilities. As required by 403.064(16), F.S., if this reuse system provides reclaimed water for any of the uses listed above, attach a summary of the utility's metering activities and the rate structure that the utility currently employs or plans to employ. The summary shall include the following:

a. Number of meters employed to monitor volume of reclaimed water used by customers.

b. If information is available, please provide per capita reclaimed water use for areas that meter and for unmetered areas. If available, please provide historical per capita usage data for before and after the utility began metering reclaimed water.

c. Provide information on the type of rate structure (i.e., inclining or declining block rates) for reclaimed water employed by the utility.

d. Provide a description of the utility's use of master meters (i.e., for a subdivision) or the use of individual meters (i.e., for single-family residential customers).

e. Provide a summary of the utility's plans for metering reclaimed water customers.

☐ **None of these items are required for this reuse system.**

Part XI - Permittee's Certification

I certify that the statements made in this report of reclaimed water utilization are true, correct, and complete to the best of my knowledge and belief.

Date: 12/17/2025 _____ Signature

Phone: (239) 513-0445 Ivory M. Gilbert | President
Name and Title (please print/type)

Company Name: Florida Utility Solutions

Address: 15275 Collier Blvd Suite 201-268

City/State/Zip Code: Naples, FL 34119

E-Mail: compliance@floridautilitysolutions.com



Florida Utility Solutions

15275 Collier Blvd., Suite 201-268

Naples, FL 34119

(239) 513-0445

Attachments for Part X of Annual Reuse Report for Forest Utilities WWTP

Inventory of Storage Facilities

There are no storage facilities at this WWTP. Effluent is discharged into a mixed lake.

Summary of Public Notification Program

Public advisory signs, consisting of required documentation, are posted in public access areas where reuse is used around the community.



Florida Utility Solutions

15275 Collier Blvd., Suite 201-268

Naples, FL 34119

(239) 513-0445

Meter Rate and Structure Street

1” - $39.96

1.5” – 79.82

2” – 127.85

10” Turbine - $2,314.95

Reclaimed – Golf course only - .15/1,000 gallons

FLORIDA DEPARTMENT OF
Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jay Collins
Lt. Governor

Alexis A. Lambert
Secretary

Receipt for Submission

Sanitary Sewer Overflow Reporting

Thank you for submitting a Report of a Sanitary Sewer Spill or Overflow Incident in accordance with 62-620.610 and/or 62-604.550, F.A.C. You have indicated that the incident is on-going or that this is not the final closeout report for this incident, please ensure that you return to the system in the future to close out this incident.

Your DEP Incident ID is **31906**. Please use this ID during any future correspondence with the Department concerning this incident.

Type of Notice: Initial Report
Date of Notice: 12/22/2025

Incident Information
Name of Incident: Station overflowed due to power failure
State Watch Office Report Number:
PNP Incident Number:
Start of Incident: 12/22/2025 08:00
End of Incident: 12/22/2025 09:00
Incident Description: Station overflowed due to power failure, debris compromised the float system.
Wastewater Type: Untreated
Cause: Power
Spill Volume: 25
Volume Recovered: 0
Waterbodies Impacted: NA
Clean-up Status: Complete
Clean-up Actions: Applied lime
Agencies Notified:

Incident Location
Address Line 1: SE Bay St
Address Line 2:
Directions:
City: Fort Myers
State: FL
Zip Code: 33912

County: Lee
Coordinates (in decimal degrees):
Lat: 26.537642409272724 Long: -81.83034291534281
Other Impacted Counties: Lee

Facility Information
Facility ID: FLA014478
Facility/Installation Name: Forest Utilities WWTP
Operating Entity Name: NA
Address Line 1: 6341 Deer Run
Address Line 2:
Facility/System Type: DOMESTIC WASTEWATER
City: Fort Myers
State: FL
Zip Code: 33908

Incident Reported By
Name: Mitch Gilbert
Affiliation: President
Phone: (239) 513-0445
Email Address: mitchgilbert@floridautilitysolutions.com
Relationship: Operator of the Facility/Installation

On-Site Contact
Name: Matt Gillisspie
Phone: (239) 218-0933
Email Address: matt@floridautilitysolutions.com

Florida Department of Environmental Protection

EXHIBIT M

WASTEWATER TARIFF

FOREST UTILITIES, INC.
NAME OF COMPANY

FILED WITH

FLORIDA PUBLIC SERVICE COMMISSION

WS-15-0094

DAVID SWOR
ISSUING OFFICER

PRESIDENT
TITLE

WASTEWATER TARIFF

FOREST UTILITIES, INC.
NAME OF COMPANY

6341 Deer Run, S.W.

Fort Myers, Florida 33908-4399
(ADDRESS OF COMPANY)

(239) 481-0111 – Business
(239) 482-1300 or 482-6818 - Emergency
(Business & Emergency Telephone Number)

FILED WITH

FLORIDA PUBLIC SERVICE COMMISSION

DAVID SWOR
ISSUING OFFICER

PRESIDENT
TITLE

WASTEWATER TARIFF

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Rules and Regulations	6.0
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TERRITORY AUTHORITY

CERTIFICATE NUMBER – 300-S

COUNTY – Lee

COMMISSION ORDER(s) APPROVING TERRITORY SERVED -

Order Number	Date Issued	Docket Number	Filing Type
10430	12/02/1981	810006-S	Grandfather Certificate
15382	11/21/1985	850789-SU	Amendment of Certificate
PSC-96-0930-FOF-SU	07/17/1996	960229-SU	Amendment of Certificate
PSC-06-0538-FOF-SU	06/26/2006	060169-SU	Amendment of Certificate
PSC-14-0641-FOF-SU	11/03/2014	130230-SU	Amendment of Certificate

DESCRIPTION OF TERRITORY SERVED

Order No. 10430

The Southeast Quarter (SE 1/4) of Section 35, Rs4E, T45S; and that part of the Southwest Quarter (SW 1/4) of Section 36; R24E, T45S lying Southwesterly of U.S. 41;

and the East half (E 1/2) of Section 2, Rs4E, T46S; and that part of Section 1, R23E, T46S lying Southwesterly of U.S. 41;

and the Northwest Quarter (NW 1/4) of Section 11, R24E, T46S;

and the North half (N 1/2) of Section 12, R24E, T46S

Order No. 15382

Township 46 South, Range 24 East, Sections 11 and 12, the South 1/2 of Section 12, and the East 1/2 of Section 11.

Order No. PSC-96-0930-FOF-SU

The northeast portion of Section 1, Township 46 South, Range 24 East, lying east of US 41 (State Road 45) in Lee County, Florida and

The south half of the south half of Section 36, Township 45 South, Range 24 East, lying east of US 41 (State Road 45) in Lee County, Florida and

The northeast quarter of the southwest quarter of Section 36, Township 45 South, Range 24 East, lying east of US 41 (State Road 45) in Lee County, Florida.

Laurel Oaks Subdivision
Phases I and II

Laurel Oaks, Unit 1, according to the Plat thereof, recorded in Plat Book 52, Pages 24 through 29, inclusive, of the Public Records of Lee County, Florida

Laurel Oaks, Unit II, a subdivision, as recorded in Plat Book 56, Pages 13 through 17, inclusive, of the Public Records of Lee County, Florida

Also described as:

The South One-Half (S1/2) of the North One-Half (N1/2) of the Southeast Quarter (SE1/4) of Section 36, Township 45 South, Range 24 East, Lee County, Florida

(Continued on Sheet No. 3.2)

(Continued from Sheet No. 3.1)

PARCEL I:
The South 222 feet of the Southeast quarter (SE ¼) of the Southeast quarter (SE ¼) of Section 25, Township 45 South, Range 24 East, excepting the former Iona Drainage District right of way, Public Records of Lee County, Florida.

PARCEL II:
The Northeast quarter (NE 1/4) LESS right of way for railroad, of Section 36, Township 45 South, Range 24 East.

PARCEL III:
The North half (N 1/2) of the Northwest quarter (NW 1/4) of Section 36, Township 45 South, Range 24 East, lying East of State Road No. 45.

Excepting therefrom a commercial strip of land 300 feet wide described as follows:

PARCEL A:
Beginning at the Northwest corner of Jamaica Bay West, said point being on the Northeasterly right of way of U.S. No. 41, thence 764.70 feet along the arc of a curve concave to the Northeast having a radius of 2732.79 feet and subtended by a chord having a length of 762.21 feet and bearing South 23º33'00" East to a point of tangency; thence South 31º34'00" East along said right of way for 52.37 feet to a point of curvature; thence 39.27 feet along the arc of a curve concave to the Northeast having a radius of 25.00 feet and subtended by a chord having a length of 35.36 feet and bearing south 76º34'00" East to a point of reverse curvature on the Northerly right of way of Jamaica Bay Drive; thence 169.85 feet along said right of way along the arc of a curve concave to the Southwest having a radius of 144.83 feet and subtended by a chord having a length of 160.28 feet and bearing South 87º58'11" East to a point of reverse curvature on said Northerly right of way; thence 239.88 feet along said Northerly right of way along the arc of a curve concave to the Northeast having a radius of 500 feet and subtended by a chord having a length of 237.59 feet and bearing South 68º07'01" East to a point on a line 300 feet, as measured perpendicular, from the Northeasterly right of way of U.S. No. 41; thence North 31º34'00" West parallel with and 300 feet from said Northeasterly right of way for 356.92 feet to a point of curvature; thence 600.64 feet along said 300 foot line along the arc of a curve concave to the Northeast having a radius 2432.79 feet and subtended by a chord having a length of 599.11 feet and bearing North 24º29'38" West to the North line of Jamaica Bay West; thence South 89º21'17" West along the North line of Jamaica West for 311.79 feet to the Point of Beginning.

Also excepting therefrom:

PARCEL B:
Beginning at the Southwest corner of Jamaica Bay West , said point being on the Northeasterly right of way of U.S. No.41 and the South line of the North half (N ½) of the Northwest quarter (NW ¼) of Section 36, Township 45 South, Range 24 East; thence North 31º34'00" West along said right of way 526.87 feet to a point of curvature; thence 39.27 feet along the arc of a curve concave to the Southeast having a radius of 25.00 feet and subtended by a chord having a length of 35.36 feet and bearing North 13º26'00" East to a point of compound curvature on the Southerly right of way of Jamaica Bay Drive; thence 106.39 feet along said Southerly right of way along the arc of a curve concave to the South having a radius of 96.62 feet and subtended by a chord having a length of 101.09 feet and bearing North 89º58'36" East to a point of reverse curvature on said Southerly right of way; thence 288.54 feet along said Southerly right of way along the arc

(Continued on Sheet No. 3.3)

(Continued from Sheet No. 3.2)

of a curve concave to the Northeast having a radius of 570 feet and subtended by a chord having a length of 285.47 feet and bearing South 72º58'54" East to a point on a line 300 feet; as measured perpendicular, from the Northeast right of way of U.S. No. 41; thence South 31º34'00" East along said 300 foot line 463.50 feet to the South line of the North half (N 1/2) of the Northwest quarter (NW ¼) of Section 36, Township 45 South, Range 24 East, thence South 89º12'02" West along said South line for 349.14 feet to the Point of Beginning.

PARCEL IV:
The Northeast quarter (NE 1/4) of the Southeast quarter (SE 1/4) of the Northwest quarter (NW ¼) of Section 36, Township 45 South, Range 24 East.

PARCEL V:
Beginning at a point in the North line of the Southeast quarter (SE ¼) of the Northeast quarter (NE ¼) of Section 36, Township 45 South, Range 24 East, distance 116 feet Westerly from the Northeast corner thereof, and in the Westerly right of way line of Iona Drainage District, running thence Southerly on said Westerly right of way line of Iona Drainage District 2641.33 feet to its intersection with the South line of the Northeast quarter (NE ¼) of the Southeast quarter (SE ¼) of said Section 36 at a point therein distant 117 feet Westerly from the Southeast corner thereof; thence Westerly on said South line of the Northeast quarter (NE ¼) of the Southeast quarter (SE ¼) a distance of 138.6 feet; thence Northerly on a straight line parallel with and 50 feet Westerly from center line of main trac of Seaboard All Florida Railway as surveyed and staked across lands of grantor, 2641.56 feet to North line of said Southeast quarter (SE ¼) of the Northeast quarter (NE ¼) of Section 36; thence Easterly on said North line, 120.3 feet to the Point of Beginning.

PARCEL C:
Commencing at Northeast corner of Section 36, Township 45 South, Range 24 East, then South 89º10'56" West along the North line of said Section 36 for 183.30 feet to the Point of Beginning; thence continue South 89º10'56" West along said North line for 37.30 feet to the Westerly former right-of-way of the Seaboard All Florida Railroad; thence South 0º15'01" West along said Westerly right-of-way line for 1320.51 feet to the South line of the Northeast quarter (NE ¼) of the Northeast quarter (NE ¼) of said Section 36; thence North 89º07'32" East along said South line for 37.30 feet; thence North 0º15"01" East parallel with and 37.30 feet as measured at right angle from said Westerly right of way for 1320.48 feet to the Point of Beginning.

COMMUNITIES SERVED LISTING

County Name	Development Name	Rate Schedule Available	Sheet No.

TECHNICAL TERMS AND ABBREVIATIONS

1.0 "BFC" - The abbreviation for "Base Facility Charge" which is the minimum amount the Company may charge its Customers and is separate from the amount the Company bills its Customers for wastewater consumption.

2.0 "CERTIFICATE" - A document issued by the Commission authorizing the Company to provide wastewater service in a specific territory.

3.0 "COMMISSION" - The shortened name for the Florida Public Service Commission.

4.0 "COMMUNITIES SERVED" - The group of Customers who receive wastewater service from the Company and whose service location is within a specific area or locality that is uniquely separate from another.

5.0 "COMPANY" - The shortened name for the full name of the utility which is FOREST UTILITIES, INC.

6.0 "CUSTOMER" - Any person, firm or corporation who has entered into an agreement to receive wastewater service from the Company and who is liable for the payment of that wastewater service.

7.0 "CUSTOMER'S INSTALLATION" - All pipes, shut-offs, valves, fixtures and appliances or apparatus of every kind and nature used in connection with or forming a part of the installation for rendering wastewater service to the Customer's side of the Service Connection whether such installation is owned by the Customer or used by the Customer under lease or other agreement.

8.0 "MAIN" - A pipe, conduit, or other facility used to convey wastewater service to individual service lines or through other mains.

9.0 “RATE” - Amount which the Company may charge for wastewater service which is applied to the Customer’s actual consumption.

10.0 "RATE SCHEDULE" - The rate(s) or charge(s) for a particular classification of service plus the several provisions necessary for billing, including all special terms and conditions under which service shall be furnished at such rate or charge.

11.0 "SERVICE" - As mentioned in this tariff and in agreement with Customers, “Service” shall be construed to include, in addition to all wastewater service required by the Customer, the readiness and ability on the part of the Company to furnish wastewater service to the Customer. Service shall conform to the standards set forth in Section 367.111 of the Florida Statutes.

12.0 "SERVICE CONNECTION" - The point where the Company's pipes or meters are connected with the pipes of the Customer.

13.0 "SERVICE LINES" - The pipes between the Company's Mains and the Service Connection and which includes all of the pipes, fittings and valves necessary to make the connection to the Customer's premises, excluding the meter.

14.0 "TERRITORY" - The geographical area described, if necessary, by metes and bounds but, in all cases, with township, range and section in a Certificate, which may be within or without the boundaries of an incorporated municipality and may include areas in more than one county.

INDEX OF RULES AND REGULATIONS

	Sheet Number:	Rule Number:
Access to Premises	9.0	14.0
Adjustment of Bills	10.0	22.0
Application	7.0	3.0
Applications by Agents	7.0	4.0
Change of Customer's Installation	8.0	11.0
Continuity of Service	8.0	9.0
Customer Billing	9.0	16.0
Delinquent Bills	7.0	8.0
Evidence of Consumption	10.0	22.0
Extensions	7.0	6.0
Filing of Contracts	10.0	25.0
General Information	7.0	1.0
Inspection of Customer's Installation	9.0	13.0
Limitation of Use	8.0	10.0
Payment of Water and Wastewater Service Bills Concurrently	10.0	18.0
Protection of Company’s Property	8.0	12.0
Refusal or Discontinuance of Service	7.0	5.0
Right-of-way or Easements	9.0	15.0
Tariff Dispute	7.0	2.0
Termination of Service	9.0	17.0
Type and Maintenance	7.0	7.0
Unauthorized Connections - Wastewater	10.0	19.0

RULES AND REGULATIONS

1.0 GENERAL INFORMATION - These Rules and Regulations are a part of the rate schedules and applications and contracts of the Company and, in the absence of specific written agreement to the contrary, apply without modifications or change to each and every Customer to whom the Company renders wastewater service.

The Company shall provide wastewater service to all Customers requiring such service within its Certificated territory pursuant to Chapter 25-30, Florida Administrative Code and Chapter 367, Florida Statutes.

2.0 TARIFF DISPUTE – Any dispute between the Company and the Customer or prospective Customer regarding the meaning or application of any provision of this tariff shall be resolved pursuant to Rule 25-22.032, Florida Administrative Code.

3.0 APPLICATION - In accordance with Rule 25-30.310, Florida Administrative Code, a signed application is required prior to the initiation of service. The Company shall provide each Applicant with a copy of the brochure entitled “Your Water and Wastewater Service,” prepared by the Florida Public Service Commission.

4.0 APPLICATIONS BY AGENTS - Applications for wastewater service requested by firms, partnerships, associations, corporations, and others shall be rendered only by duly authorized parties or agents.

5.0 REFUSAL OR DISCONTINUANCE OF SERVICE - The Company may refuse or discontinue wastewater service rendered under application made by any member or agent of a household, organization, or business in accordance with Rule 25-30.320, Florida Administrative Code.

6.0 EXTENSIONS - Extensions will be made to the Company's facilities in compliance with Commission Rules and Orders and the Company's tariff.

7.0 TYPE AND MAINTENANCE - In accordance with Rule 25-30.545, Florida Administrative Code, the Customer's pipes, apparatus and equipment shall be selected, installed, used and maintained in accordance with standard practice and shall conform with the Rules and Regulations of the Company and shall comply with all laws and governmental regulations applicable to same. The Company shall not be responsible for the maintenance and operation of the Customer's pipes and facilities. The Customer expressly agrees not to utilize any appliance or device which is not properly constructed, controlled and protected or which may adversely affect the wastewater service. The Company reserves the right to discontinue or withhold water service to such apparatus or device.

(Continued on Sheet No. 8.0)

(Continued from Sheet No. 7.0)

8.0 CONTINUITY OF SERVICE - In accordance with Rule 25-30.250, Florida Administrative Code, the Company will at all times use reasonable diligence to provide continuous wastewater service and, having used reasonable diligence, shall not be liable to the Customer for failure or interruption of continuous wastewater service.

If at any time the Company shall interrupt or discontinue its service, all Customers affected by said interruption or discontinuance shall be given not less than 24 hours written notice.

9.0 LIMITATION OF USE - Wastewater service purchased from the Company shall be used by the Customer only for the purposes specified in the application for wastewater service. Wastewater service shall be rendered to the Customer for the Customer's own use and the Customer shall not sell or otherwise dispose of such wastewater service supplied by the Company.

In no case shall a Customer, except with the written consent of the Company, extend his lines across a street, alley, lane, court, property line, avenue, or other way in order to furnish wastewater service to the adjacent property through one meter even though such adjacent property may be owned by him. In case of such unauthorized extension, sale, or disposition of service, the Customer's wastewater service will be subject to discontinuance until such unauthorized extension, remetering, sale or disposition of service is discontinued and full payment is made to the Company for wastewater service rendered by the Company (calculated on proper classification and rate schedules) and until reimbursement is made in full to the Company for all extra expenses incurred for clerical work, testing, and inspections. (This shall not be construed as prohibiting a Customer from remetering.)

10.0 CHANGE OF CUSTOMER'S INSTALLATION - No changes or increases in the Customer's installation, which will materially affect the proper operation of the pipes, mains, or stations of the Company, shall be made without written consent of the Company. The Customer shall be liable for any charge resulting from a violation of this Rule.

11.0 INSPECTION OF CUSTOMER'S INSTALLATION - All Customer's wastewater service installations or changes shall be inspected upon completion by a competent authority to ensure that the Customer's piping, equipment, and devices have been installed in accordance with accepted standard practice and local laws and governmental regulations. Where municipal or other governmental inspection is required by local rules and ordinances, the Company cannot render wastewater service until such inspection has been made and a formal notice of approval from the inspecting authority has been received by the Company.

Not withstanding the above, the Company reserves the right to inspect the Customer's installation prior to rendering wastewater service, and from time to time thereafter, but assumes no responsibility whatsoever for any portion thereof.

(Continued on Sheet No. 9.0)

(Continued from Sheet No. 8.0)

12.0 ACCESS TO PREMISES - In accordance with Rule 25-30.320(2)(f), Florida Administrative Code, the Customer shall provide the duly authorized agents of the Company access at all reasonable hours to its property. If reasonable access is not provided, service may be discontinued pursuant to the above rule.

13.0 PROTECTION OF COMPANY'S PROPERTY – The Customer shall exercise reasonable diligence to protect the Company's property. If the Customer is found to have tampered with any Company property or refuses to correct any problems reported by the Company, service may be discontinued in accordance with Rule 25-30.320, Florida Administrative Code. In the event of any loss or damage to property of the Company caused by or arising out of carelessness, neglect, or misuse by the Customer, the cost of making good such loss or repairing such damage shall be paid by the Customer.

14.0 RIGHT-OF-WAY OR EASEMENTS - The Customer shall grant or cause to be granted to the Company, and without cost to the Company, all rights, easements, permits, and privileges which are necessary for the rendering of wastewater service.

15.0 CUSTOMER BILLING - Bills for wastewater service will be rendered - Monthly, Bimonthly, or Quarterly - as stated in the rate schedule.

In accordance with Rule 25-30.335, Florida Administrative Code, the Company may not consider a Customer delinquent in paying his or her bill until the twenty-first day after the Company has mailed or presented the bill for payment.

A municipal or county franchise tax levied upon a water or wastewater public Company shall not be incorporated into the rate for water or wastewater service but shall be shown as a separate item on the Company's bills to its Customers in such municipality or county.

If a Company utilizes the base facility and usage charge rate structure and does not have a Commission authorized vacation rate, the Company shall bill the Customer the base facility charge regardless of whether there is any usage.

16.0 PAYMENT OF WATER AND WASTEWATER SERVICE BILLS CONCURRENTLY - In accordance with Rule 25-30.320(2)(g), Florida Administrative Code, when both water and wastewater service are provided by the Company, payment of any water service bill rendered by the Company to a Customer shall not be accepted by the Company without the simultaneous or concurrent payment of any wastewater service bill rendered by the Company.

17.0 DELINQUENT BILLS – When it has been determined that a Customer is delinquent in paying any bill, wastewater service may be discontinued after the Company has mailed or presented a written notice to the Customer in accordance with Rule 25-30.320, Florida Administrative Code.

(Continued on Sheet No. 10.0)

(Continued from Sheet No. 9.0)

18.0 TERMINATION OF SERVICE - When a Customer wishes to terminate service on any premises where wastewater service is supplied by the Company, the Company may require reasonable notice to the Company in accordance with Rule 25-30.325, Florida Administrative Code.

19.0 UNAUTHORIZED CONNECTIONS - WASTEWATER - Any unauthorized connections to the Customer's wastewater service shall be subject to immediate discontinuance without notice, in accordance with Rule 25-30.320, Florida Administrative Code.

20.0 ADJUSTMENT OF BILLS - When a Customer has been undercharged as a result of incorrect application of the rate schedule, incorrect reading of the meter, incorrect connection of the meter, or other similar reasons, the amount may be refunded or billed to the Customer as the case may be pursuant to Rules 25-30.340 and 25-30.350, Florida Administrative Code.

21.0 FILING OF CONTRACTS - Whenever a Developer Agreement or Contract, Guaranteed Revenue Contract, or Special Contract or Agreement is entered into by the Company for the sale of its product or services in a manner not specifically covered by its Rules and Regulations or approved Rate Schedules, a copy of such contracts or agreements shall be filed with the Commission prior to its execution in accordance with Rule 25-9.034 and Rule 25-30.550, Florida Administrative Code. If such contracts or agreements are approved by the Commission, a conformed copy shall be placed on file with the Commission within 30 days of execution.

22.0 EVIDENCE OF CONSUMPTION – The initiation or continuation or resumption of water service to the Customer’s premises shall constitute the initiation or continuation or resumption of wastewater service to the Customer’s premises regardless of occupancy.

INDEX OF RATES AND CHARGES SCHEDULES

	Sheet Number
Customer Deposits	14.0
General Service, GS	12.0
Irrigation Reuse Service, IRS	13.1
Miscellaneous Service Charges	15.0
Residential Service, RS	13.0

GENERAL SERVICE

RATE SCHEDULE (GS)

AVAILABILITY - Available throughout the area served by the company.

APPLICABILITY - For wastewater service to all Customers for which no other schedule applies.

LIMITATIONS - Subject to all of the Rules and Regulations of this Tariff and General Rules and Regulations of the Commission.

BILLING PERIOD - Monthly

RATE -

Meter Sizes	Base Facility Charge
5/8” x 3/4"	$ 18.29
3/4"	$ 27.44
1”	$ 45.73
1 1/2"	$ 91.45
2”	$ 146.32
3” Compound	$ 292.64
3” Turbine	$ 320.08
4” Compound	$ 457.25
4” Turbine	$ 548.70
6” Compound	$ 914.50
6” Turbine	$ 1,143.13
8” Compound	$ 1,463.20
8” Turbine	$ 1,646.10
10” Compound	$ 2,103.35
10” Turbine	$ 2,652.05
Charge per 1,000 gallons	$ 5.04

MINIMUM CHARGE - Base Facility Charge

TERMS OF PAYMENT - Bills are due and payable when rendered. In accordance with Rule 25-30.320, Florida Administrative Code, if a Customer is delinquent in paying the bill for wastewater service, service may then be discontinued.

EFFECTIVE DATE - June 11, 2024

TYPE OF FILING - 2024 Price Index

RESIDENTIAL SERVICE

RATE SCHEDULE (RS)

AVAILABILITY - Available throughout the area served by the company.

APPLICABILITY - For wastewater service for all purposes in private residences and individually metered apartment units.

LIMITATIONS - Subject to all of the Rules and Regulations of this Tariff and General Rules and Regulations of the Commission.

BILLING PERIOD - Monthly

RATE -

Meter Sizes	Flat Rate
All meter sizes	$ 33.91

MINIMUM CHARGE - Flat Rate

TERMS OF PAYMENT - Bills are due and payable when rendered. In accordance with Rule 25-30.320, Florida Administrative Code, if a Customer is delinquent in paying the bill for wastewater service, service may then be discontinued.

EFFECTIVE DATE - June 11, 2024

TYPE OF FILING - 2024 Price Index

IRRIGATION REUSE SERVICE

RATE SCHEDULE (IRS)

AVAILABILITY - Available to customers within those areas of the Utility's certificated service territory which are connected to the Utility's reuse system.

APPLICABILITY - To the extent of its capacity and wastewater flows, the Utility shall provide irrigation quality water using treated wastewater effluent.

LIMITATIONS - Subject to all of the Rules and Regulations of this Tariff and General Rules and Regulations of the Commission.

BILLING PERIOD - Monthly

RATE -

Base Facility Charge	$	0.00
Charge per 1,000 gallons	$	0.16

MINIUMUM CHARGE- None

TERMS OF PAYMENT - Bills are due and payable when rendered. In accordance with Rule 25-30.320, Florida Administrative Code, if a Customer is delinquent in paying the bill for water service, service may then be discontinued.

EFFECTIVE DATE - July 21, 2023

TYPE OF FILING - 2023 Price Index

CUSTOMER DEPOSITS

ESTABLISHMENT OF CREDIT - Before rendering water service, the Company may require an Applicant for service to satisfactorily establish credit, but such establishment of credit shall not relieve the Customer from complying with the Company's rules for prompt payment. Credit will be deemed so established if the Customer complies with the requirements of Rule 25-30.311, Florida Administrative Code.

AMOUNT OF DEPOSIT - The amount of initial deposit shall be the following according to meter size:

Residential Service	General Service
N/A	N/A

ADDITIONAL DEPOSIT - Under Rule 25-30.311(7), Florida Administrative Code, the Company may require a new deposit, where previously waived or returned, or an additional deposit in order to secure payment of current bills provided.

INTEREST ON DEPOSIT - The Company shall pay interest on Customer deposits pursuant to Rules 25-30.311(4) and (4a).

REFUND OF DEPOSIT - After a residential Customer has established a satisfactory payment record and has had continuous service for a period of 23 months, the Company shall refund the Customer's deposit provided the Customer has met the requirements of Rule 25-30.311(5), Florida Administrative Code. The Company may hold the deposit of a non-residential Customer after a continuous service period of 23 months and shall pay interest on the non-residential Customer's deposit pursuant to Rules 25-30.311(4) and (5), Florida Administrative Code.

Nothing in this rule shall prohibit the Company from refunding a Customer's deposit in less than 23 months.

EFFECTIVE DATE - June 30, 2015

TYPE OF FILING - Reorganization to Conform to Model Tariff

MISCELLANEOUS SERVICE CHARGES

The Company may charge the following miscellaneous service charges in accordance with the terms stated herein. If both water and wastewater services are provided, only a single charge is appropriate unless circumstances beyond the control of the Company require multiple actions.

INITIAL CONNECTION - This charge may be levied for service initiation at a location where service did not exist previously.

NORMAL RECONNECTION - This charge may be levied for transfer of service to a new Customer account at a previously served location or reconnection of service subsequent to a Customer requested disconnection.

VIOLATION RECONNECTION - This charge may be levied prior to reconnection of an existing Customer after disconnection of service for cause according to Rule 25-30.320(2), Florida Administrative Code, including a delinquency in bill payment.

PREMISES VISIT CHARGE (IN LIEU OF DISCONNECTION) - This charge may be levied when a service representative visits a premises for the purpose of discontinuing service for nonpayment of a due and collectible bill and does not discontinue service because the Customer pays the service representative or otherwise makes satisfactory arrangements to pay the bill.

Schedule of Miscellaneous Service Charges

Initial Connection Charge	N/A
Normal Reconnection Charge	N/A
Violation Reconnection Charge	N/A
Premises Visit Charge (in lieu of disconnection)	N/A

EFFECTIVE DATE - June 30, 2015

TYPE OF FILING - Reorganization to Conform to Model Tariff.

INDEX OF SERVICE AVAILABILITY POLICY AND CHARGES

Description	Sheet Number
Schedule of Charges	18.0
Service Availability Policy	17.0

SERVICE AVAILABILITY POLICY

For service where meters have not been previously installed, there is a main extension charge and plant capacity charge as shown on Sheet No. 18.0.

SERVICE AVAILABILITY CHARGES

Description	Amount
Main Extension Charge	
Residential	$1,043.00
All other per gallon	$ 6.135
Plant Capacity Charge	
Residential	$933.00
All other per gallon	$ 5.488

EFFECTIVE DATE - June 30, 2015

TYPE OF FILING - Reorganization to Conform to Model Tariff.

INDEX OF STANDARD FORMS

Description	Sheet No.
APPLICATION FOR WASTEWATER SERVICE.....	20.0
COPY OF CUSTOMER'S BILL.....	21.0

APPLICATION FOR WASTWATER SERVICE

FOREST UTILITIES, INC.
3525 Presidential Court S.W.
Executive Park
Fort Myers, Florida 33907

SEWER SERVICE
USERS AGREEMENT

This agreement, made and entered into this_____day of _____, 19__ between FOREST UTILITIES, INC., a Florida Corporation hereinafter referred to as The Utility Company and_____ hereinafter referred to as
(Customer Name)
Customer, with address_____
of the property to be served.

WHEREAS, the Customer desires sewer service from the Utility Company and to enter into a sewer service users agreement as required by the extension policy of the Utility Company.
NOW THEREFORE in consideration of the mutual covenants, promises and agreements contained herein, it is mutually agreed by and between the parties hereto as follows:

1. The Utility Company shall furnish, subject to limitations herein provided for, such sewer service in connection with the occupancy of the property listed herein.

2. The Customer shall furnish and install at his own expense, a sewer service line which shall begin at his property line and extend to the dwelling and other portion of his premises.

3. The Customer shall pay for such sewer service at such rates, time and place as determined by the Utility Company and as approved by the State of Florida Public Service Commission.

APPLICATION FOR WASTWATER SERVICE

4. The Utility Company shall have final jurisdiction relative to the location of any sewer service line connection and shall have the authority to inspect and approve the Customer's sewer service line to ensure that the Customer's piping, equipment and devices have been installed in accordance with accepted standard practice.

5. The failure of a Customer to pay sewer service charges duly imposed shall result in the automatic imposition of the following penalties:
   A. Receipts not collected within 15 days following the billing date are considered delinquent, a written notice will be mailed allowing five (5) additional days, after which time sewer service will be discontinued.
   B. Service will be resumed only upon payment of all past-due bills and penalties, together with a re-connection charge established on the basis of the expenses incurred in the reconnection and restoration of service which shall be nondiscriminatory in its application. There shall be no liability of any kind against the Utility Company by reason of dis-continuance of sewer service to the Customer for failure of the Customer to pay the bills on time.

6. No partial payment of any bill will be accepted by the Utility Company, except by agreement with the Utility Company or by order of the State of Florida Public Service Commission.

Sewer Connection Fee $_____
Deposit $_____

TOTAL $_____

AUTHORIZED
SIGNATURES
FOREST UTILITIES, INC.
by: _____ (Representative)

COPY OF CUSTOMER'S BILL

Reprinted Billing Statement

FOREST UTILITIES, INC.
PO BOX 919073
ORLANDO, FL 32891-9073
(239) 481-5333

6100 CLUB BLVD
FORT MYERS FL 33908-4340

Current Meter Reading	1,472,200	6/22/2016
Prior Meter Reading	1,463,200	
Usage Amount	9,000	

Due Date:07/15/16

Service	Charges
Flat Sewer	79.92
Metered Sewer	390.51
Balance Due:	$470.43

Customer Name:
Service Address: 6100 CLUB BOULEVARD
Account 2 Route Number: 10

Please return this portion of the bill with your payment.

FOREST COUNTRY CLUB
6100 CLUB BOULEVARD
Account #: 2
Billing Date: 7/6/2016
Balance 470.43
Due Date: 07/15/16
Amount Enclosed: _____

Reprinted Billing Statement

EXHIBIT N

UTILITY NAME: **Forest Utilities, Inc.**

YEAR OF REPORT
31-Dec-24

COMPARATIVE BALANCE SHEET
ASSETS AND OTHER DEBITS

ACCT. NO. (a)	ACCOUNT NAME (b)	REF. PAGE (c)	PREVIOUS YEAR (d)	CURRENT YEAR (e)
	UTILITY PLANT			
101-106	Utility Plant	F-7	$ 8,145,889	$ 8,189,695
	Less: Accumulated Depreciation and Amortization	F-8	(5,384,765)	(5,423,625)
	Net Plant		$ 2,761,124	$ 2,766,070
114-115	Utility Plant Acquisition adjustment (Net)	F-7	-	-
116 *	Other Utility Plant Adjustments			
	Total Net Utility Plant		$ 2,761,124	$ 2,766,070
	OTHER PROPERTY AND INVESTMENTS			
121	Nonutility Property	F-9	$ -	$ -
122	Less: Accumulated Depreciation and Amortization		-	-
	Net Nonutility Property		$	$
123	Investment In Associated Companies	F-10	-	-
124	Utility Investments	F-10	-	-
125	Other Investments	F-10	-	-
126-127	Special Funds	F-10	-	-
	Total Other Property & Investments		$ -	$ -
	CURRENT AND ACCRUED ASSETS			
131	Cash		$ 840,649	$ 479,630
132	Special Deposits	F-9	-	-
133	Other Special Deposits	F-9	-	-
134	Working Funds			
135	Temporary Cash Investments			
141-144	Accounts and Notes Receivable, Less Accumulated Provision for Uncollectible Accounts	F-11	74,609	47,587
145	Accounts Receivable from Associated Companies	F-12		
146	Notes Receivable from Associated Companies	F-12		
151-153	Material and Supplies			
161	Stores Expense			
162	Prepayments			
171	Accrued Interest and Dividends Receivable			
172 *	Rents Receivable			
173 *	Accrued Utility Revenues			
174	Misc. Current and Accrued Assets	F-12		
	Total Current and Accrued Assets		$ 915,259	$ 527,217

* Not Applicable for Class B Utilities

UTILITY NAME: **Forest Utilities, Inc.**

YEAR OF REPORT
31-Dec-24

COMPARATIVE BALANCE SHEET
EQUITY CAPITAL AND LIABILITIES

ACCT. NO. (a)	ACCOUNT NAME (b)	REF. PAGE (c)	PREVIOUS YEAR (d)	CURRENT YEAR (e)
	DEFERRED CREDITS			
251	Unamortized Premium On Debt	F-13	$ -	$ -
	Advances For Construction	F-20		-
253	Other Deferred Credits	F-21	-	
255	Accumulated Deferred Investment Tax Credits		-	
	Total Deferred Credits		$ -	$ -
			-	
	OPERATING RESERVES			
261	Property Insurance Reserve		$ -	$
262	Injuries & Damages Reserve		-	
263	Pensions and Benefits Reserve		-	
265	Miscellaneous Operating Reserves		-	
	Total Operating Reserves		$ -	$ -
	CONTRIBUTIONS IN AID OF CONSTRUCTION			
271	Contributions in Aid of Construction	F-22	$ 5,905,611	$ 5,905,611
272	Accumulated Amortization of Contributions in Aid of Construction	F-22	(4,524,090)	(4,724,881)
	Total Net C.I.A.C.		$ 1,381,521	$ 1,180,730
	ACCUMULATED DEFERRED INCOME TAXES			
281	Accumulated Deferred Income Taxes - Accelerated Depreciation		$ 423,293	$ 423,293
282	Accumulated Deferred Income Taxes - Liberalized Depreciation			
283	Accumulated Deferred Income Taxes - Other			
	Total Accumulated Deferred Income Tax		$ 423,293	$ 423,293
	TOTAL EQUITY CAPITAL AND LIABILITIES		$ 3,676,383	$ 3,293,287

EXHIBIT O

NOTICE OF APPLICATION FOR AUTHORITY TO TRANSFER WASTEWATER CERTIFICATE OF AUTHORIZATION TO ANOTHER REGULATED UTILITY

DOCKET NO. _____

APPLICATION FOR TRANSFER OF FACILITIES OF FOREST UTILITIES, INC. AND WASTEWATER CERTIFICATE NO. 300-S TO CSWR-FLORIDA UTILITY OPERATING COMPANY, LLC, IN LEE COUNTY

DATE OF CUSTOMER NOTICE - ___/___ /_____

Notice is hereby given that CSWR-Florida Utility Operating Company, LLC ("Central States Water Resources"), has filed an Application for Approval of Transfer of the Wastewater System of Forest Utilities, Inc. in Lee County, Florida, pursuant to Section 367.071, Florida Statutes, and Rule 25-30.037, Florida Administrative Code.

Central States Water Resources is not requesting a change to rates, classifications, charges, or rules and regulations; therefore, your current rates will not be affected by this transfer. The Forest Utilities, Inc. wastewater system provides service to Laurel Oaks Subdivision in the following described service territory in Lee County, Florida:

The following is a simplified legal description of the Utility's service territory. For the full legal description, please contact Central States Water Resources at the contact information below.

LEGAL DESCRIPTION

Portions of various Sections in Township 45 South, Range 24 East and Township 46 South, Range 24 East

Common Street Names Affected by Transfer: Terraverde Ct, S. Tamiami Trail, Old Wedgewood Ct, Hampton View Ct, Forest Oaks Dr, Old US 41, Timberlakes Dr, Heron Coach Way, Island Park Rd, Partridge Club Rd, Bear Cub Ct, Panther Paw Ct, Bobcat Ct, Bobcat Dr, Forest Blvd, Pheasant Ct, Fox Den, Villas Square, Terraverde Cir, Coral Cay Lane, Ravens Roost Blvd, Hawks Nest, Key Vizcaya Ct, Terraverde Blvd, Eagle Trace, Coastal Ridge Dr, Gulf Preserve Dr, Birchwood Ln, Overhill Dr, Heron Ln, Park Village Blvd, Youngquist Rd, Deer Run, Forest Villas Cir, Montego Bay Loop, Waterway Bay Dr, Spotted Fawn Ct, Club Blvd, Key Biscayne Blvd, Emerald Bay Ct, Estero Bay Dr, Bay Ridge Way, Rolland Ct, Seawind Dr, Stony Run Ct, Lake Devonwood Dr, Cottontail Ct, Falcon Crest Ct

For more information concerning this notice, please contact the Utility at the address below:

Central States Water Resources, 1630 Des Peres Rd., Suite 140, St. Louis, MO 63131
Office: (314) 736-4672; Toll Free: (855) 476-1942; Fax: (314) 736-4743
Email address: regulatory@cswrgroup.com

Any objection to the application must be filed with the Office of Commission Clerk, Florida Public Service Commission, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, no later than thirty (30) days after the last date that the notice was mailed or published, whichever is later.