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October 14, 2025

Adam Teitzman, Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: First Coast Regional Utilities, Inc. ("First Coast"); Undocketed Filing of Oct. 14

Dear Mr. Teitzman,

Attached please Exhibit D to First Coast's Application for Amendment of Water and Wastewater Service Territories filed earlier today.

Should you have any questions or comments concerning the above, please do not hesitate to contact me.

Sincerely,

SUNDSTROM & MINDLIN, LLP

/s/ F. Marshall Deterding

F. Marshall Deterding
Of Counsel

WES/brf

Enclosure

Exhibit D
FDEP Permits

FLORIDA DEPARTMENT OF Environmental Protection

Northeast District
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

Ron DeSantis
Governor

Alexis A. Lambert
Secretary

April 11, 2025

In the Matter of an
Application for Permit by:

Mr. Robert Kennelly
President, First Coast Regional Utilities, Inc
Post Office 238
Lake Butler, Florida 32054
Phone: (904) 309-9977
Email: rkennelly@bhkcap.com

File Number FL0A00068-001-DW1P
Duval County
First Coast Regional Utilities WRF

Enclosed is Permit Number FL0A00068, to construct and operate First Coast Regional Utilities Water Reclamation Facility (WRF), which is a new 1.0 MGD domestic advanced wastewater treatment (AWT) facility. First Coast Regional Utilities WRF uses an activated sludge treatment process that includes screening, biological treatment, clarification, filtration, and chlorine disinfection. The reclaimed wastewater will be primarily conveyed to a slow-rate public access reuse system that will serve the 301 Villages residential development, with rapid infiltration basins (RIBs) serving as a secondary means of effluent disposal and wet weather storage. A 0.30 MGD annual average daily flow combinations of APRICOT Act and Limited Wet Weather emergency discharge to an unnamed slough connected to Deep Creek is used as backup to the reclaimed system during extreme wet weather conditions. The biosolids are stabilized on-site through aerobic digestion and then transported to JEA Buckman Wastewater Treatment Facility (WWTF), FLA188077, for final treatment and disposal/reuse. The facility will be located at latitude 30° 14' 53.921" N, longitude 82° 02' 47.198" W, on Rattlesnake Road, Baldwin, Florida 32234 in Duval County. The permit is issued under Chapter 403, Florida Statutes (F.S.).

Monitoring requirements under this permit are effective on completion and placing into service of the domestic treatment wastewater facility. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements, if any.

NOTICE OF RIGHTS

Judicial Review
Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68, F.S., by the filing of a notice of appeal under Florida Rules of Appellate Procedure 9.110 and 9.190 with the Clerk of the Department of Environmental Protection in the Office of General Counsel (Mail 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 after this order is filed with the Clerk of the Department.

EXECUTION AND CLERKING
Executed in Duval County, Florida.
STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Katie Sula Miller
Permitting Program Administrator

KSM/snt/rc/dv

Attachment(s):
1. Permit No. FL0A00068
2. Fact Sheet
3. DMR
4. Pathogen Monitoring Report

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:

Timothy Norman, P.E., TNorman@mittauer.com
Paula Presley, P.G., SJRWMD, ppresley@sjrwmd.com
US EPA, Region IV; r4npdespermits@epa.gov
FL Fish & Wildlife Conservation Com; fwcconservationplanningservices@myfwc.com
U.S. Fish and Wildlife Service, FW4FLESRegs@fws.gov
FL Dept. of State Division of Historical Resources, Compliance.Permits@dos.fl.gov
Duval County Health Department, DCHD.Contact@flhealth.gov; scott.turner@flhealth.gov
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Lauren Gottfreid, FDEP
Monica Sudano, FDEP
Katie Miller, FDEP NED
Shannon Taylor, FDEP NED
D. Anh Vo, P.E., FDEP NED
Robert L. Martin, P.G., FDEP NED

FILING AND ACKNOWLEDGMENT
FILED, on this date April 11, 2025, pursuant to Section 120.52, F.S., with the designated Department Clerk, receipt of which is hereby acknowledged.

Lori Traylor — April 11, 2025
Clerk **Date**

FLORIDA DEPARTMENT OF Environmental Protection

Northeast District
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

STATE OF FLORIDA
DOMESTIC WASTEWATER FACILITY PERMIT

PERMITTEE:
First Coast Regional Utilities, Inc

PERMIT NUMBER:	FL0A00068 (Minor)
FILE NUMBER:	FL0A00068 – DW1P
ISSUANCE DATE:	April 11, 2025 (001/NP)
EFFECTIVE DATE:	April 11, 2025
EXPIRATION DATE:	April 10, 2030

RESPONSIBLE OFFICIAL:
Robert Kennelly
President, First Coast Regional Utilities, Inc
Post Office 238
Lake Butler, Florida 32054
Phone: (904) 430-9997
Email: rkennelly@bhkcap.com

FACILITY:
First Coast Regional Utilities WRF
Rattlesnake Road
Baldwin, Florida 32234
Duval County
Latitude: 30° 14' 53.921" N Longitude: 82° 02' 47.198" 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.) and constitutes authorization to discharge to waters of the state under the National Pollutant Discharge Elimination System. 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 construct and operate the facilities in accordance with the documents attached hereto and specifically described as follows:

WASTEWATER TREATMENT:

To construct and operate a new 1.0 MGD annual average daily flow (AADF) permitted capacity Class I reliability, advanced wastewater treatment (AWT) facility with an activated sludge treatment process. Construction of the new 1.0-MGD AADF AWT facility will include main treatment components below:

(1) Headworks: The Headwork will consist of two (2) 0.100-inch rotary wedge wire cylindrical screens with each sheet having a peak hydraulic capacity of 5.3 MGD (3,681 gpm) with screenings washer/compactor.

(2) Biological Treatment Unit (BTU): The biological treatment unit consists of a 0.2-MGD 4-stage Bardenpho biological treatment unit and an 1.0-MGD 5-stage Bardenpho biological treatment unit that uses an activated sludge process to remove nitrogen and phosphorus from water.

a. The 0.2-MGD 4-stage Bardenpho biological treatment unit (BTU) with two anoxic zones and two aerobic zones will be divided into 4 stages: First: Pre-anoxic stage, second: aeration stage, third: post-anoxic stage, and fourth: post-aeration stage. The 0.2-MGD 4-stage BTU is a concentric circle tank of which the center compartment will be for the pre-anoxic volume with the aeration-nitrification, post-anoxic, and re-aeration tankage located in the outer ring of the tank.

- The pre-anoxic compartment, which will have a volume of 0.107 million gallons (Mgal), a side water depth of 12.0 ft, a detention time of 12.9 hrs., will be mixed using submersible mixers. The mixed liquor recycle pumps will consist of two self-priming centrifugal pumps equipped with VFDs and capable of recycling a minimum of 6Q of nitrified mixed liquor from the end of the aeration- nitrification tank to the pre-anoxic tank.
- The aeration-nitrification compartment will have a volume of 0.190 Mgal, a side water depth of 12.0 ft, and a detention time of 22.8 hrs. Aeration will be accomplished using coarse bubble diffusers located along the inner wall of the aeration-nitrification compartment. Two 60 HP positive displacement blowers will be provided with a single blower capable of providing the 1,100 scfm of air with the other blower serving as a standby.
- The post-anoxic compartment, which will have a volume of 0.094 Mgal, a side water depth of 12.0 ft, a detention time of 11.3 hrs., will be mixed by submersible mixers located at either end of the compartment.
- The re-aeration compartment will have a volume of 0.017 Mgal, a side water depth of 12.0 ft, and a detention time of 2.0 hrs. Aeration will be accomplished using coarse bubble diffusers located along the inner wall of re-aeration compartment. Two 60 HP positive displacement blowers will be provided with a single blower capable of providing the 1,100 scfm of air with the other blower serving as a standby.

b. The 1.0-MGD 5-stage Bardenpho biological treatment unit (BTU) that uses five reactors to remove nitrogen and phosphorous from water: anaerobic reactor, first anoxic or pre-anoxic reactor, first aerobic or aerobic-nitrification reactor, second anoxic or post anoxic reactor, and second aerobic or re-aeration reactor. A Carrousel-oxidation ditch configurated as 5-stage Bardenpho BTU will be constructed:

- The anaerobic zone, which will have a volume of 0.063 Mgal, a side water depth of 12.0 ft, a detention time of 1.5 hrs., will be mixed by a BioMIx system, which uses air guns to produce very large bubbles that mix the tank contents as they rise through the liquid but do not transfer significant amounts of oxygen to affect the anaerobic process.
- The pre-anoxic zone, which will have a volume of 0.36 million gallons (Mgal), a side water depth of 12.0 ft, a detention time of 8.6 hrs., will be mixed using BioMIx system.
- The aerobic-nitrification zone will have a volume of 1.01 Mgal, a side water depth of 12.0 ft, and a detention time of 24 hrs. Aeration will be accomplished by mechanical surface aerators. The Carrousel Process consists of vertically mounted, low speed surface aerators in an aeration basin with partitions used to establish a continuous channel. Two variable speed mechanical surface aerators will be provided in a single aeration basin. These aerators will be 100 HP and will be equipped with VFDs and oxygen/ORP sensors and will speed up and slow down based on maintaining a constant preset DO level at the end of the aeration basin. One of the aerators will be capable of providing sufficient oxygen for the process with the other aerator serving as a standby.

- The post-anoxic zone, which will have a volume of 0.223 Mgal, a side water depth of 12.0 ft, a detention time of 5.4 hrs., will be mixed by BioMIx system.
- The Aeration-nitrification Zone, will have a volume of 0.021 Mgal, a side water depth of 12.0 ft, and a detention time of 0.5 hrs. Aeration will be accomplished using coarse bubble diffusers which will be installed in the re-aeration tankage with two positive displacement blowers providing the necessary air for aeration and mixing.

c. Alum Addition System: Installation of an alum addition system which will consist of two 1,500-gallon cross-linked, high-density polyethylene double- containment storage tanks and two chemical metering pumps with a pumping capacity of 20 gph. These metering pumps will be flow paced based on a 4-20 mA signal from the effluent flowmeter with the dosage set manually.

(3) Secondary Clarification System: The secondary clarification system is composed of two 90-ft diameter center-feed clarifiers (one duty and one standby). Each clarifier will have a side water depth of 15 feet, an operation volume of 0.71Mgal, an overflow rate of 157 gpd ft^{-2} at 1.0 MGD AADF and 465 gpd ft^{-2} at 3.0 MGD FHF, a solids loading at 9.2 lb ft^{-2} day^{-1} at 1.0 MGD AADF and 19.7 lb ft^{-2} day^{-1} at 3.0 MGD PHF, a weir loading rate of 3,745 gpd ft^{-1} at 1.0 MGD AADF and 11,234 gpd ft^{-1} at 3.0 MGD PHF, and a hydraulic detention time or 17.1 hrs. at 1.0 MGD AADF and 5.7 hrs. at 3.0 MGD PHF. Sludge will be collected in a center sump using spiral blade collectors. A peripheral weir and launder will collect the clarified effluent. A full radius scum trough will be provided. Scum will flow by gravity to the Scum Pump Station, where it will be pumped to the Aerobic Digester. Return sludge will be withdrawn from the center sump of each clarifier and returned via the RAS pumps to the anaerobic zone of the Carrousel Process after mixing with the incoming raw sewage. Waste sludge will be withdrawn from the center sump of each clarifier and pumped via the WAS pumps to the Aerobic Digester. The WAS pumps and the scum pumps will be manifolded via an interconnected force main.

(4) Return/Waste-Activated Sludge (RAS/WAS) Pump Station: The RAS/WAS Pump Station will consist of two (2) self-priming RAS pumps, and two (2) self- priming WAS pumps, with provision for a future third RAS pump in Phase 2.

The RAS pump, which will be powered by a 25 hp motor, will have a pump capacity range from 300 gpm to 1,350 gpm, a pump speed range from 350 rpm to 1250 rpm, a operating head range from 6 ft to 32 ft. The WAS pump, which will be powered by a 20 hp motor, will have a pump capacity range from 100 gpm to 700 gpm, a pump speed range from 650 rpm to 1,650 rpm, a operating head range from 8 ft to 52 ft.

The RAS and WAS pumps will be constructed in a manifolded arrangement, with each pump able to serve each clarifier through manual valve operation. Each pump will be equipped with a VFD. The speed of the RAS pumps can be controlled automatically based on a signal from the effluent flowmeter or it can be set manually by the operator, if desired. The WAS pumps will be controlled manually by the operator. Magnetic flowmeters will be located in the discharge lines from each pump to allow the operator to observe the RAS flow rate.

(5) In-Plant Pump Station & Scum Pump Station:

a. In-Plant Pump Station: Installation of an in-plant pump station which will consist of three 20-hp submersible triplex variety pumps. Each pump will be equipped with a VFD to allow it to be able to operate in the 350 to 1,050 gpm range. The In-Plant Pump Station will also have the

capacity of returning effluent stored in the RIBs/wet weather storage ponds to the head of the plant for reprocessing into public access reuse via a system of automated valves and flow meters.

b. Scum Pump Station: Installation of a scum pump station which will consist of a duplex submersible pump station that will be located between the two clarifiers to receive gravity flow from the scum trough drains of each clarifier. The scum troughs collect scum and floating debris as dual-radius skimmer arms rotate around the clarifiers and direct floating scum into the troughs. Each trough is equipped with an automatic flush valve that is activated by the skimmer arm to flush the scum trough to the Scum Pump Station. Operation of the Scum Pump Station will be float controlled.

(6) Filtration System: Construction of a new filtration system, which will include two cloth-media disk filter units in separate stainless steel tanks. Each filter unit will contain nine (9) filter disks with a total filtration area of 864 ft2 (96 ft^2 per disk), provide a filtration rate of 2.4 gpm ft^{-2} @ PHF. The filter units will be of the automatic vacuum backwash variety. Excessive headloss through the filter disks at a preset elevation in the tank will trigger the backwash system operation. The backwash system utilizes actuated valves connected to self-priming backwash pumps to vacuum the disks in sequence. The sequence of backwashing leaves the remainder of the disks in operation for continuous filtration. The backwash system also allows for vacuuming of settled solids at the bottom of the tanks below the disks. Backwash water from the filter, which constitutes approximately 2.2% of AADF or 22,000 gal day^{-1} (Phase 1), will be pumped to a nearby manhole for gravity flow to the In-Plant Pump Station, where it will be returned to the head of the plant.

(7) Disinfection System: Construction of a new disinfection system which includes a chlorine contact chamber and chlorine storage and feed system.

a. Chlorine Contact Chamber: the chlorine contact chamber (CCC) will have a total volume of 73,600 gallons that will be divided into two equal-sized isolatable compartments. The CCC will have a side water depth 6.5ft @ PHF, length: width ratio of 69:1 and depth: width ratio of 1.95:1. The CCC provides a hydraulic detention time of 105 minutes @ 1.0 MGD AADF and 35 minutes @ 3.0 MHD PHF. A 90° V-notch weir and ultrasonic flowmeter will be located at the end of each CCC compartment to measure.

b. Chlorine Storage and Feed System: Sodium hypochlorite will be utilized for disinfection.

- Sodium hypochlorite will be stored in two cross-linked, high-density polyethylene double-containment storage tanks, each having a capacity of 1,500 gallons. The tanks will be located under a metal roof to prevent exposure to direct sunlight. In excess of 30 days of storage of hypochlorite will be provided.
- Two chemical metering pumps will be dedicated to feeding hypochlorite at the 16" filter effluent pipe, one duty and one standby. These metering pumps will be compound loop controlled based on 4-20 mA signals from the effluent flowmeter and the chlorine residual analyzer. The capacity of each metering pump will be 18.0 gph, which will allow for 8.0 mg/L dosage at the 5.3 MGD Phase 2 PHF with a 10% HOCL solution concentration. One additional chemical metering pump will be provided for feeding hypochlorite ahead of the filters.

(8) Aerobic Digestion System: Construction of a new aerobic digestion system, which will consist of a 0.54-Mgal digester tank (62.5 ft diameter and 23.5 ft side water depth), an aeration/mixing system, two blowers powered by 75 hp monitor, and two compressors powered by 15 hp motor. Aeration/mixing of the digester will be accomplished using Enviromix's "Bio-Cycle-D Optimized Aerobic Digestion Process". Mixing is accomplished using large bubbles of compressed air. A

diffused aeration system, which operates independently from the mixing system, provides the necessary oxygen for volatile solids reduction. The digester will also be equipped with a telescopic valve to allow for decanting. Supernatant will flow by gravity to the In-Plant Pump Station, where it will be returned to the head of the plant.

(9) Reuse Reclaimed Water System: Construction of a new reuse reclaimed water system which will consist of a reclaimed water storage tank, a high-service reclaimed water pump station, and reclaimed water distribution system.

a. Reclaimed Water Storage Tank: Construction of a new 2.0-Mgal domed-top prestressed reclaimed water ground storage tank (100 ft diameter with a 34.0 ft SWD).

b. High-service Reclaimed Water Pump Station: Construction a high-service reclaimed water pump station which will consist of a total of four split-case pumps with VFDs and two 6,768-gallon hydropneumatic tanks.

Biosolids generated by this facility may be transferred to JEA Buckman Biosolids Treatment Facility (FLA188077) or disposed of in a Class I solid waste landfill.

REUSE OR DISPOSAL OF EFFLUENT:

Surface Water Discharge – Combination of APRICOT Act Discharge and Limited Wet Weather Discharge, D-001: A new 0.30 MGD annual average daily flow (AADF) or 27.3 million gallons maximum annual volume permitted capacity of surface discharge which is authorized under a combination of APRICOT Act discharge and Limited Wet Weather Discharge (LWWD), D-001. During extreme wet weather conditions, the discharge, D-001, may occur from the overflow structures of Pond # 3 and/or Pond # 6 to two small streams on an unnamed slough (Class III fresh waters, WBID# 2325), which then flows to Deep Creek (Class III, fresh, WBID 2245A, Upper St. Marys River Basin). The point of discharge is located approximately at latitude 30°14' 39" N, longitude 82°2' 43" W.

Land Application R-001: A new 1.0 MGD annual average daily flow permitted capacity slow-rate public access system, R-001, which consists of 738.8 acres of irrigable area. The reuse system, R-001, is located at multiple locations throughout western Duval County.

Land Application R-002: A new 0.1275 MGD annual average daily flow permitted capacity rapid-rate infiltration system, R-002, which consists of six rapid infiltration basins (RIBs) with total area of 30 acres and total storage volume of 30.0 MG as detailed in the table below:

RIB Number	Area		Max Volume	Infiltration Rate
	(Sq ft)	*(Acre)*	*(Mgal)*	*(MGD)*
RIB # 1	175,000	4.01	3.94	0.0167
RIB # 2	115,324	2.65	2.60	0.0110
RIB # 3	272,355	6.25	6.13	0.0260
RIB # 4	248,750	5.71	5.60	0.0238
RIB # 5	249,853	5.74	5.63	0.0239
RIB # 6	271,623	6.24	6.13	0.0260
Total	**1,332,905**	**30.60**	**30.03**	**0.1275**

The rapid-rate infiltration system is located approximately at latitude 30°14' 39" N, longitude 82°2' 43" W.

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 54 of this permit.

I. RECLAIMED WATER AND EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Surface Water Discharges

1. During the period beginning on the effective date and lasting through the expiration date of this permit, the permittee is authorized to discharge effluent from Outfall D-001 to an Unnamed Slough which flows into Deep Creek. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.D.6. :

			Effluent Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/ Min**	**Limit**	**Statistical Basis**	**Frequency of Analysis**	**Sample Type**	**Monitoring Site**	**Notes**
Flow, Discharge from Pond # 3	MGD	Max	Report	Annual Average	Continuous *(During Discharge)*	Recording Flow Meter with Totalizer	FLW–4	See Cond. I.A.4
		Max	Report	Monthly Average				
Flow, Discharge from Pond # 6	MGD	Max	Report	Annual Average	Continuous *(During Discharge)*	Recording Flow Meter with Totalizer	FLW–5	See Cond. I.A.4
		Max	Report	Monthly Average				
Flow, *Surface Water Discharge (i.e. Combination of Apricot Discharge and LWWD)*	MGD	Max	0.30	Annual Average	Daily, 24 hours *(During Discharge)*	Calculated	CAL–SUM	
		Max	Report	Monthly Average				
Flow, Total Volume of Effluent Discharge under the APRICOT Act & LWWD	Mgal/yr	Max	27.3	Annual Total	Monthly	Calculated	CAL–1	See Cond. I.A.7
	Mgal/Mon	Max	Report	Monthly Total				
Duration Discharge *(Cumulative Number of Days Apricot Discharge and LWWD)*	Day	Max	Report	Monthly Total	Daily *(When Discharge)*	Document	OTH–1	See Cond. I.A.8
		Max	Report	Annual Total				

PERMITTEE: First Coast Regional Utilities, Inc
FACILITY: First Coast Regional Utilities WRF

PERMIT NUMBER: FL0A00068 (MI)
EXPIRATION DATE: April 10, 2030

			Effluent Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/ Min**	**Limit**	**Statistical Basis**	**Frequency of Analysis**	**Sample Type**	**Monitoring Site**	**Notes**
Stream Flow	cfs	Min	Report	Daily Minimum	Daily *(When Discharge)*	Instrument/ Meter	SWB–1	See Cond. I.A.10
Stream Dilution Factor	Ratio	Min	17.5	Minimum Value	Daily *(When Discharge)*	Calculated	CAL–1	See Cond. I.A.6
Rainfall	Inches	Min	Report	Annual Average	Daily *(When Discharge)*	Instrument/ Meter	OTH–2	See Cond. I.A.6 & I.A.10
	Inches	Min	Report	Daily Average				
BOD, Carbonaceous 5-day, 20°C	mg/L	Max	5.00	Annual Average	Weekly *(During Discharge)*	24-hr FPC	EFA–1	
		Max	6.25	Monthly Average				
		Max	7.50	Weekly Average				
		Max	10.00	Single Sample				
Solids, Total Suspended	mg/L	Max	5.00	Single Sample	Daily *(During Discharge)*	Grab	EFB–1	
Coliform, Fecal	#/100 mL	Max	25	Single Sample	Daily *(During Discharge)*	Grab	EFA–1	
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	Monthly *(During Discharge)*	Calculated	CAL–1	See Cond. I.B.5

PERMITTEE: First Coast Regional Utilities, Inc
FACILITY: First Coast Regional Utilities WRF

PERMIT NUMBER: FL0A00068 (MI)
EXPIRATION DATE: April 10, 2030

			Effluent Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/ Min**	**Limit**	**Statistical Basis**	**Frequency of Analysis**	**Sample Type**	**Monitoring Site**	**Notes**
E. Coli	#/100 mL	Max	126	Monthly Geometric Mean	Weekly *(During Discharge)*	Grab	EFA–1	See Cond. I.A.12 & I.A.13
		Max	410	90th Percentile				
Total Kjeldahl Nitrogen (as N)	mg/L	Max	Report	Single Sample	Weekly *(During Discharge)*	24-hr FPC	EFA–1	
		Max	2.50	Monthly Average				
Total Chlorine Residuals *(Disinfection)*	#/100 mL	Min	1.2	Single Sample	Continuous *(During Discharge)*	Grab/Meter	EFA–1	
Total Chlorine Residuals *(Dechlorination)*	#/100 mL	Max	0.01	Single Sample	Daily *(During Discharge)*	Grab	EFD–1	
Dissolved Oxygen	mg/L	Min	5.0	Single Sample	Daily *(During Discharge)*	Meter	EFD–1	See Cond. I.A.19
pH	s.u.	Min	6.00	Single Sample	Continuous *(During Discharge)*	Meter	EFA–1	See Cond. I.A.3
		Max	8.5	Single Sample				
Temperature, Water	°C	Min	Report	Single Sample	Weekly *(During Discharge)*	Meter	EFA–1	See Cond. I.A.17
Nitrogen Ammonia, Total (as N) ***(Effluent)***	mg/L	Max	Report	Single Sample	Weekly *(During Discharge)*	Grab	EFD–1	See Cond. I.A.17
		Max	Report	Monthly Average				
Nitrogen Ammonia, Total (as N) **(Limit)**	mg/L	Max	Report	Single Sample	Weekly *(During Discharge)*	Calculated	CAL–1	See Cond. I.A.17
		Max	Report	Monthly Average				

PERMITTEE: First Coast Regional Utilities, Inc
FACILITY: First Coast Regional Utilities WRF

PERMIT NUMBER: FL0A00068 (MI)
EXPIRATION DATE: April 10, 2030

			Effluent Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/ Min**	**Limit**	**Statistical Basis**	**Frequency of Analysis**	**Sample Type**	**Monitoring Site**	**Notes**
Nitrogen Ammonia, Total (as N) ***(Compliance = Effluent – Limit)***	mg/L	Max	0.00	Single Sample	Weekly *(During Discharge)*	Calculated	CAL–1	See Cond. I.A.17
		Max	0.00	Monthly Average				
Nitrogen Total (as N)	mg/L	Max	3.00	Annual Average	Weekly *(During Discharge)*	24-hr FPC	EFD–1	See Cond. I.A.18
		Max	3.75	Monthly Average				
		Max	4.50	Weekly Average				
		Max	6.00	Single Sample				
Nitrogen Total, Load	Lb/Yr	Max	683	Annual Total	Monthly *(During Discharge)*	Calculated	CAL–1	See Cond. I.A.18
	Lb/Mon	Max	Report	Monthly Total				
Phosphorus, Total (as P)	mg/L	Max	1.00	Annual Average	Weekly *(During Discharge)*	24-hr FPC	EFD–1	See Cond. I.A.18
		Max	1.25	Monthly Average				
		Max	1.50	Weekly Average				
		Max	2.00	Single Sample				
Phosphorus Total, Load	Lb/Yr	Max	228	Annual Total	Monthly *(During Discharge)*	Calculated	CAL–1	See Cond. I.A.18
	Lb/Mon	Max	Report	Monthly Total				

PERMITTEE: First Coast Regional Utilities, Inc
FACILITY: First Coast Regional Utilities WRF

PERMIT NUMBER: FL0A00068 (MI)
EXPIRATION DATE: April 10, 2030

			Effluent Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/ Min**	**Limit**	**Statistical Basis**	**Frequency of Analysis**	**Sample Type**	**Monitoring Site**	**Notes**
Chlorophyll a	µg/L	Max	Report	Single Sample	Monthly *(During Discharge)*	Grab	EFD–1	
Iron, Total Recoverable	µg/L	Max	Report	Single Sample	Quarterly *(During Discharge)*	Grab	EFD–1	
Lead, Total Recoverable	µg/L	Max	Report	Single Sample	Quarterly *(During Discharge)*	Grab	EFD–1	
Hardness, Water	mg/L	Max	Report	Single Sample	Quarterly *(During Discharge)*	Grab	EFD–1	
Chronic Whole Effluent Toxicity, 7-Day IC25 *(Ceriodaphnia dubia)*	percent	Min	100	Single Sample	Semi-Annually *(One every 6 months)*	Grab	EFD–1	See Cond. I.A.20
Chronic Whole Effluent Toxicity, 7-Day IC25 *(Pimephales promelas)*	percent	Min	100	Single Sample	Semi-Annually *(One every 6 months)*	Grab	EFD–1	See Cond. I.A.20
Acute Whole Effluent Toxicity, 96-hr LC_{50} (*Ceriodaphnia dubia*)	percent	Min	100	Single Sample	Semi-Annually *(One every 6 months)*	Grab	EFD–1	See Cond. I.A.21
Acute Whole Effluent Toxicity, 96-hr LC_{50} (*Cyprinella leedsi*)	percent	Min	100	Single Sample	Semi-Annually *(One every 6 months)*	Grab	EFD–1	See Cond. I.A.21
Mercury, Total Recoverable	µg/L	Max	0.012	Single Sample	One every 2 years	Grab	EFD–1	See Cond. I.A.22

PERMITTEE: First Coast Regional Utilities, Inc
FACILITY: First Coast Regional Utilities WRF

PERMIT NUMBER: FL0A00068 (MI)
EXPIRATION DATE: April 10, 2030

			Effluent Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/ Min**	**Limit**	**Statistical Basis**	**Frequency of Analysis**	**Sample Type**	**Monitoring Site**	**Notes**
Temperature	Deg °C	Max	Report	Single Sample	Quarterly *(During Discharge)*	Meter	SWB–1 SWD–1	See Cond. I.A.23
pH	S.U.	Max	Report	Single Sample	Quarterly *(During Discharge)*	Meter	SWB–1 SWD–1	See Cond. I.A.23
Specific Conductance	µmhos/cm	Max	Report	Single Sample	Quarterly *(During Discharge)*	Meter	SWB–1 SWD–1	See Cond. I.A.23
Dissolved oxygen	mg/L	Min	Report	Single Sample	Quarterly *(During Discharge)*	Meter (@ Mid Depth)	SWB–1 SWD–1	See Cond. I.A.23
Dissolved oxygen, Percent Saturation	Percent	Min	Report	Single Sample	Quarterly *(During Discharge)*	Calculated	SWB–1 SWD–1	See Cond. I.A.23
BOD, Carbonaceous 5-day, 20°C	mg/L	Max	Report	Single Sample	Quarterly *(During Discharge)*	Grab	SWB–1 SWD–1	See Cond. I.A.23
Solids, Total Suspended	mg/L	Max	Report	Single Sample	Quarterly *(During Discharge)*	Grab	SWB–1 SWD–1	See Cond. I.A.23
Escherichia coli Bacteria	#/100mL	Max	Report	Single Sample	Quarterly *(During Discharge)*	Grab	SWB–1 SWD–1	See Cond. I.A.23
Chlorophyll a	µg/L	Max	Report	Single Sample	Quarterly *(During Discharge)*	Grab	SWB–1 SWD–1	See Cond. I.A.23
		Max	Report	Annual Geometric Mean				

PERMITTEE: First Coast Regional Utilities, Inc
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			Effluent Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/ Min**	**Limit**	**Statistical Basis**	**Frequency of Analysis**	**Sample Type**	**Monitoring Site**	**Notes**
Total Kjeldahl nitrogen (TKN), as N	mg/L	Max	Report	Single Sample	Quarterly *(During Discharge)*	Grab	SWB–1 SWD–1	See Cond. I.A.23
Total ammonia (as N)	mg/L	Max	Report	Single Sample	Quarterly *(During Discharge)*	Grab	SWB–1 SWD–1	See Cond. I.A.23
Nitrite nitrogen + nitrate nitrogen (as N)	mg/L	Max	Report	Single Sample	Quarterly *(During Discharge)*	Grab	SWB–1 SWD–1	See Cond. I.A.23
Total nitrogen (as N)	mg/L	Max	Report	Annual Geometric Mean	Quarterly *(During Discharge)*	Grab	SWB–1 SWD–1	See Cond. I.A.23
		Max	Report	Single Sample				
Ortho-Phosphate (as P)	mg/L	Max	Report	Single Sample	Quarterly *(During Discharge)*	Filtered Grab	SWB–1 SWD–1	See Cond. I.A.23
Total phosphorus (as P)	mg/L	Max	Report	Annual Geometric Mean	Quarterly *(During Discharge)*	Grab	SWB–1 SWD–1	See Cond. I.A.23
		Max	Report	Single Sample				
Biological Assessment and SCI Assessment	-	-	Report	Single Sample	Every Two Years *(During Discharge)*	-	SWB–1 SWD–1	See Cond. I.A.23, I.A.26, I.A.27

2. Effluent 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-4	Flow meter to monitor for the APRICOT/Wet Weather discharge from Pond #3
FLW-5	Flow meter to monitor for the APRICOT/Wet Weather discharge from Pond # 6
CAL–SUM	Sum of surface water discharge from Pond # 3 and Pond # 6 (i.e. CAL–SUM = FLW-4 + FLW-5)
CAL–1	Calculated value
EFA–1	Effluent sample point after high level disinfection prior to conveying to the ruse system R-001 or R-002.
EFB–1	Effluent sample point immediately after filtration and prior to disinfection
EFD–1	Effluent sample point after dichlorination or at the outfalls structure of Pond 3 and Pond 6 and prior to discharge to streams connected to Deep Creek
SWD–1	Approximately 300 ft upstream of the Point of Discharge
SWD–2	Approximately 500 ft downstream of the Point of Discharge

3. Hourly measurement of pH and total residual chlorine for disinfection during the period of required operator attendance may be substituted for continuous measurement. *[62-600.660(1)]*

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. The discharge shall not contain components that, alone or in combination with other substances or in combination with other components of the discharge:
   a. Settle to form putrescent deposits or otherwise create a nuisance; or
   b. Float as debris, scum, oil, or other matter in such amounts as to form nuisances; or
   c. Produce color, odor, taste, turbidity, or other conditions in such degree as to create a nuisance; or
   d. Are acutely toxic; or
   e. Are present in concentrations which are carcinogenic, mutagenic, or teratogenic to human beings or to significant, locally occurring, wildlife or aquatic species, unless specific standards are established for such components in subsection 62-302.500(2) or Rule 62-302.530, F.A.C.; or
   f. Pose a serious danger to the public health, safety, or welfare.

   [62-302.500(1)(a)1-6]

6. Discharging of the effluent from the Outfall D-001 to the surface water is authorized only:

a. When the dilution ratio (stream flow of in the unnamed ditch divided by Apricot discharge) equals or exceeds the minimum stream dilution factor (SDF) of 17.5; OR

b. When rainfall intensity equals or exceeds 0.38 inches per hour for duration of 5 hours, or rainfall – intensity – duration curve a storm event of 8.5 inches/hr.

[62–620.320(6)] [62 – 650.400]

7. The year of discharge is a 12–month period beginning from the date of completion and placing into service of the POD. The monthly volume discharge in units of million gallons (Mgal.) is the sum of the volumes of discharged on each day during the current reporting month. The annual volume discharge in units of Mgal. is the sum of the monthly volumes discharged for the most recent 12 months (including the current reporting month). *[62–620.320(6)]*

8. The surface water discharge is proposed to be used 55 days per year and shall not be activated more than 91 days in the calendar year. The monthly average daily flow is defined as the total gallons discharged divided by the number of days of discharge. *[62–620.320(6), 62-610.860]*

9. Cumulative number of days in a calendar month on which the effluent is discharged from Outfall D–001 shall be reported on the DMR. *[BPJ, 62-620.320(6)]*

10. The rainfall – intensity – duration curve and the cumulative rainfall during the calendar month, during which discharge from the Outfall D-001 occurs, shall be reported using the value measured at the Town of Baldwin rainfall gauge station. *[62-610.860]*

11. Stream flow of the unnamed slough, which is located upstream of the POD, shall be reported daily when discharge occurs. The stream flow can be either measured using a stream gauge, or estimated by the Manning equation, or estimated based on the rainfall – intensity – duration curve. *[62 – 650.400] [62-620.320(6)]*

12. The effluent limitation for the monthly geometric mean for bacteriological quality (E. coli) is only applicable if 10 or more values are reported. If fewer than 10 values are reported, the monthly geometric means shall be calculated and reported on the Discharge Monitoring Report but shall not be used to determine compliance with the limitations for the monthly geometric mean. All other bacteriological quality effluent limitations included in permit condition I.A.1. apply regardless of the number of values reported. *[62-600.440(5)(b)]*

13. To report the "90th percentile,"

- Place the bacteria results in ascending order (from lowest to highest value) and assign each sample a number, 1 for the lowest value.

- Multiply the total number of samples by 0.9 to determine the 90th percentile level.

- Report the value of the sample that corresponds to the 90th percentile level (e.g., 10 samples x 0.9 = 9, report the value of the 9th sample). If the 90th percentile level is not a whole number, rounding or interpolation should be used to determine the 90th percentile. When rounding, round down to the nearest whole number if the decimal is 0.4 or lower and round up to the nearest whole number if the decimal is 0.5 or higher (e.g., 12 samples x 0.9 = 10.8, report the value of the 11th sample if rounding).

[62-302.530(6)(a) and (6)(b)]

14. In accordance with subsections 62-600.420(1) and (2), F.A.C., the monthly average effluent CBOD5 and TSS concentrations shall not exceed 15% of their respective influent values (i.e., 85% removal). *[62-600.420(1) and (2)]*

15. 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)]*

16. Total residual chlorine must be maintained for a minimum contact time of 15 minutes based on peak hourly flow. *[62-600.440(5)(c), (6)(b), and (7)(c)]*

17. Effluent (i.e. the final treated wastewater) shall be monitored for pH and temperature at the same time and location as total ammonia nitrogen (TAN). The TAN monthly average value shall not exceed the average of the values calculated from the below equation, with no single value exceeding 2.5 times the value from the equation. To determine compliance with the monthly average and single sample limits for TAN is following calculations steps below:

    a. Calculate TAN Criterion Value for a collected sample using the below equation:

$$TAN\ Criterion = 0.8876 \left(\frac{0.0278}{1+10^{7.688-pH}} + \frac{1.1994}{1+10^{pH-7.688}}\right) \times \left(2.126 \times 10^{0.028(20-T)}\right)$$

    Where:

    - T and pH are the paired temperature (in degrees Celsius) and pH associated with the effluent TAN sample, i.e., measured at the same time and location as the effluent TAN sample is collected.
    - For purposes of TAN criterion calculations, pH is subject to the range of 6.5 to 9.0. In the TAN criterion equation, the pH shall be set to 6.5 if the measured pH is less than 6.5 and set to 9.0 if the measured pH is greater than 9.0.
    - The value of T shall be set to 7 if the measured temperature is less than 7°C.

    b. Calculate TAN Limits:

    - TAN Monthly Average Limit = TAN Average Criterion Values of the Month =

$$= \frac{\sum TAN\ Criterion\ Value}{\sum \#\ of\ values}$$

    - TAN Single Sample limit = 2.5 x Calculated TAN Criterion Value

    For convenience, a calculator that may be used to determine monthly average and single sample limits for total ammonia nitrogen (TAN) is located at: https://floridadep.gov/dear/water-quality-standards-program/documents/total-ammonia-nitrogen-calculator%C2%A0.

    c. Calculate TAN Compliances:

    1. The total ammonia nitrogen (TAN) monthly average effluent value shall be recorded on the DMR in the parameter row for "(effluent)." The calculated effluent limit shall be recorded on the DMR in the parameter row for "(calculated limit)." Compliance with the effluent limitation is determined by calculating the difference between the measured effluent value

and the calculated. The compliance value shall be recorded on the DMR in the parameter row for "(effluent minus calculated limit)." The compliance value shall not exceed 0.0.

2. TAN Mon. Avg. Compliance = TAN Monthly Avg. Eff. –TAN Monthly Avg. Limit ≤ 0.0

3. To determine compliance with the total ammonia nitrogen (TAN) single sample effluent limitation, compare each TAN effluent sample value with the calculated TAN single limit (calculated using the equation above), report the greatest difference between effluent sample value and TAN single limit calculated for that sample. The compliance value shall not exceed 0.0.

TAN Single Sample Compliance = TAN Single Sample Eff.– TAN Single Sample Limit ≤ 0.0

[62-302.530(3)]

18. The permittee shall report the nutrient mass loads of total nitrogen (TN) and total phosphorus (TP) discharged to the unnamed slough (Class III fresh waters, WBID# 2325), which then flows to Deep Creek via outfall D-001. The monthly mass load (MML) and annual mass load (AML) of total nitrogen (TN) and total phosphorus (TP) to be reported on the DMR shall be calculated as follows;

A. Monthly Mass Load (ML)

$$\textbf{ML (Lbs/mo)} = [\textbf{Flow}(\tfrac{MG}{Mon}) \textbf{ x (TN or TP)}(\tfrac{mg}{L}) \textbf{ + x 8.34 }(\tfrac{L}{MG})(\tfrac{Lbs}{mg})]$$

Where:

ML	=	Monthly mass load of total nitrogen and total phosphorus; (Lbs/mo)
Flow	=	Total monthly volume of effluent discharged from Outfall D-001; (MG/month)
TN	=	Monthly average concentration of TN collected at EFD–1; (mg/L)
TP	=	Monthly average concentration of TP collected at EFD–1; (mg/L)

B. Annual Mass Load (AL). The AL is computed using a rolling or moving twelve (12) – month period. The calculation shall be the sum of the twelve most recent monthly mass loads of total nitrogen or total phosphorus starting from the current reporting month and eleven previous months, as noted below:

$$\textbf{Annual Mass Load}_i = (ML)_i + \sum [(ML)_{i-1} + (ML)_{i-2} + \ldots\ldots + (ML)_{i-11}]$$

19. The effluent limitations for DO and other pollutants such as CBOD5, TN/TKN, etc. shall be met such that the discharge does not degrade the DO concentration of the receiving water below the limit set for in Chapter 62-302.533.

[62-302.533(1)(a)]

20. **Chronic Whole Effluent Toxicity Monitoring:** The permittee shall comply with the following requirements to evaluate chronic whole effluent toxicity of the discharge from outfall D-001.

1. Effluent Limitation

a. In any routine or additional follow-up test for chronic whole effluent toxicity, the 25 percent inhibition concentration (IC25) for reproduction or growth shall not be less than 100% effluent. [Rules 62-302.530(62) and 62-4.241(1)(b), F.A.C.]

b. For acute whole effluent toxicity, the 96-hour LC50 shall not be less than 100% effluent in any test. [Rule 62-302.500(1)(a)4. and 62-4.241(1)(a), F.A.C.]

2. Monitoring Frequency
   a. Routine toxicity tests shall be conducted once every three months, the first starting within 60 days of the effective date of this permit and lasting for the duration of this permit.
   b. Upon completion of four consecutive valid routine tests that demonstrate compliance with the effluent limitation in 20.a.(1) above, the permittee may submit a written request to the Department for a reduction in monitoring frequency to once every six months. The request shall include a summary of the data and the complete bioassay laboratory reports for each test used to demonstrate compliance. The Department shall act on the request within 45 days of receipt. Reductions in monitoring shall only become effective upon the Department's written confirmation that the facility has completed four consecutive valid routine tests that demonstrate compliance with the effluent limitation 20.a.(1) above.
   c. If a test within the sequence of the four is deemed invalid based on the acceptance criteria in EPA-821-R-02-013, but is replaced by a repeat valid test initiated within 21 days after the last day of the invalid test, the invalid test will not be counted against the requirement for four consecutive valid tests for the purpose of evaluating the reduction of monitoring frequency.

3. Sampling Requirements
   a. For each routine test or additional follow-up test conducted, a total of three grab samples of final effluent shall be collected and used in accordance with the sampling protocol discussed in EPA-821-R-02-013, Section 8.
   b. The first sample shall be used to initiate the test. The remaining two samples shall be collected according to the protocol and used as renewal solutions on Day 3 (48 hours) and Day 5 (96 hours) of the test.
   c. Samples for routine and additional follow-up tests shall not be collected on the same day.

4. Test Requirements
   a. Routine Tests: All routine tests shall be conducted using a control (0% effluent) and a minimum of five test dilutions: **100%, 50%, 25%, 12.5%,** and **6.25%** final effluent.
   b. The permittee shall conduct a daphnid, **Ceriodaphnia dubia**, Survival and Reproduction Test and a fathead minnow, **Pimephales promelas**, Larval Survival and Growth Test, concurrently.
   c. All test species, procedures and quality assurance criteria used shall be in accordance with **Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms**, 4th Edition, EPA-821-R-02-013. Any deviation of the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use. In the event the above method is revised, the permittee shall conduct chronic toxicity testing in accordance with the revised method.
   d. The control water and dilution water shall be moderately hard water as described in EPA-821-R-02-013, Section 7.2.3.

5. Quality Assurance Requirements
   a. A standard reference toxicant (SRT) quality assurance (QA) chronic toxicity test shall be conducted with each species used in the required toxicity tests either concurrently or initiated no more than 30 days before the date of each routine or additional follow-up test conducted. Additionally, the SRT test must be conducted concurrently if the test organisms are obtained from outside the test laboratory unless the test organism supplier provides control chart data from at least the last five monthly chronic toxicity tests using the same reference toxicant and test conditions. If the organism supplier provides the required SRT data, the organism

supplier's SRT data and the test laboratory's monthly SRT-QA data shall be included in the reports for each companion routine or additional follow-up test required.

b. If the mortality in the control (0% effluent) exceeds 20% for either species in any test or the "test acceptability criteria" are not met, the test for that species (including the control) shall be invalidated and the test repeated. Test acceptability criteria for each species are defined in EPA-821-R-02-013, Section 13.12 (**Ceriodaphnia dubia**) and Section 11.11 (**Pimephales promelas**). The repeat test shall begin within 21 days after the last day of the invalid test.

c. If 100% mortality occurs in all effluent concentrations for either test species prior to the end of any test and the control mortality is less than 20% at that time, the test (including the control) for that species shall be terminated with the conclusion that the test fails and constitutes non-compliance.

d. Routine and additional follow-up tests shall be evaluated for acceptability based on the observed dose-response relationship as required by EPA-821-R-02-013, Section 10.2.6., and the evaluation shall be included with the bioassay laboratory reports.

6. Reporting Requirements

a. Results from all required tests shall be reported on the Discharge Monitoring Report (DMR) as follows:

i. Routine and Additional Follow-up Test Results: The calculated IC25 for reproduction or growth for each test species shall be entered on the DMR.

b. A bioassay laboratory report for each routine test shall be prepared according to EPA-821-R-02-013, Section 10, Report Preparation and Test Review, and mailed to the Department at the address below within 30 days after the last day of the test.

c. For additional follow-up tests, a single bioassay laboratory report shall be prepared according to EPA-821-R-02-013, Section 10, and mailed within 30 days after the last day of the second valid additional follow-up test.

d. Data for invalid tests shall be included in the bioassay laboratory report for the repeat test.

e. The same bioassay data shall not be reported as the results of more than one test.

f. All bioassay laboratory reports shall be sent to:

Florida Department of Environmental Protection
Northeast District Office
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256-7577

7. Test Failures

a. A test fails when the test results do not meet the limits in 20.a.(1).

b. Additional Follow-up Tests:

i. If a routine test does not meet the chronic toxicity limitation in 20.a.(1) above, the permittee shall notify the Department at the address above within 21 days after the last day of the failed routine test and conduct two additional follow-up tests on each species that failed the test in accordance with 20.d.

ii. The first test shall be initiated within 28 days after the last day of the failed routine test. The remaining additional follow-up tests shall be conducted weekly thereafter until a total of two valid additional follow-up tests are completed.

iii. The first additional follow-up test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 50%, 25%, 12.5%, and 6.25% effluent. The permittee may modify the dilution series in the second additional follow-up test to more accurately bracket the toxicity such that at least two dilutions above and two

dilutions below the target concentration and a control (0% effluent) are run. All test results shall be analyzed according to the procedures in EPA-821-R-02-013.

c. In the event of three valid test failures (whether routine or additional follow-up tests) within a 12-month period, the permittee shall notify the Department within 21 days after the last day of the third test failure.
   i. The permittee shall submit a plan for correction of the effluent toxicity within 60 days after the last day of the third test failure.
   ii. The Department shall review and approve the plan before initiation.
   iii. The plan shall be initiated within 30 days following the Department's written approval of the plan.
   iv. Progress reports shall be submitted quarterly to the Department at the address above.
   v. During the implementation of the plan, the permittee shall conduct quarterly routine whole effluent toxicity tests in accordance with .20.d. Additional follow-up tests are not required while the plan is in progress. Following completion or termination of the plan, the frequency of monitoring for routine and additional follow-up tests shall return to the schedule established in 20.b.(1). If a routine test is invalid according to the acceptance criteria in EPA-821-R-02-013, a repeat test shall be initiated within 21 days after the last day of the invalid routine test.
   vi. Upon completion of four consecutive quarterly valid routine tests that demonstrate compliance with the effluent limitation in .20.a.(1) above, the permittee may submit a written request to the Department to terminate the plan. The plan shall be terminated upon written verification by the Department that the facility has passed at least four consecutive quarterly valid routine whole effluent toxicity tests. If a test within the sequence of the four is deemed invalid, but is replaced by a repeat valid test initiated within 21 days after the last day of the invalid test, the invalid test will not be counted against the requirement for four consecutive quarterly valid routine tests for the purpose of terminating the plan.

d. If chronic toxicity test results indicate greater than 50% mortality within 96 hours in an effluent concentration equal to or less than the effluent concentration specified as the acute toxicity limit in 20.a.(2), the Department may revise this permit to require acute definitive whole effluent toxicity testing.

e. The additional follow-up testing and the plan do not preclude the Department taking enforcement action for acute or chronic whole effluent toxicity failures.

[62-4.241, 62-620.620(3)]

21. **Acute Whole Effluent Toxicity Monitoring**. When the discharge from Outfall D–001 to the unnamed slough (Class III fresh waters, WBID# 2325) does not meet the sampling criteria listed in Condition I.A.22. for evaluating chronic whole effluent toxicity, the permittee shall comply with the following to evaluate acute whole effluent toxicity. Routine tests will not be required more than once for each half of the year.

   a. Effluent Limitation

      (1) In any routine or additional follow-up test for acute whole effluent toxicity, the 96-hour LC50 shall not be less than 100% effluent. *[Rules 62-302.200(1), 62-302.500(1)(a)4., 62-4.244(3)(a), and 62-4.241, F.A.C.]*

   b. Monitoring Frequency

      (1) Routine toxicity tests shall be conducted semi-annually (once every 6 months), the first starting within 60 days of the effective date of this permit and lasting for the duration of this permit.

c. Sampling Requirements

(1) All tests shall be conducted on a single grab sample of final effluent.

d. Test Requirements

(1) Routine Tests: All routine tests shall be conducted using a control (0% effluent) and a minimum of five dilutions: **100%, 75%, 50%, 25%**, and **12.5%** effluent.

(2) The permittee shall conduct 96-hour acute static renewal multi-concentration toxicity tests using the daphnid, ***Ceriodaphnia dubia***, and the bannerfin shiner, ***Cyprinella leedsi***, concurrently.

(3) All test species, procedures and quality assurance criteria used shall be in accordance with Methods for Measuring Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th Edition, EPA-821-R-02-012. Any deviation of the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use. In the event the above method is revised, the permittee shall conduct acute toxicity testing in accordance with the revised method.

(4) The control water and dilution water shall be moderately hard water as described in EPA-821-R-02-012, Table 7.

e. Quality Assurance Requirements

(1) A standard reference toxicant (SRT) quality assurance (QA) acute toxicity test shall be conducted with each species used in the required toxicity tests either concurrently or initiated no more than 30 days before the date of each routine or additional follow-up test conducted. Additionally, the SRT test must be conducted concurrently if the test organisms are obtained from outside the test laboratory unless the test organism supplier provides control chart data from at least the last five monthly acute toxicity tests using the same reference toxicant and test conditions. If the organism supplier provides the required SRT data, the organism supplier's SRT data and the test laboratory's monthly SRT-QA data shall be included in the reports for each companion routine or additional follow-up test required.

(2) If the mortality in the control (0% effluent) exceeds 10% for either species in any test, the test for that species (including the control) shall be invalidated and the test repeated. The repeat test shall begin within 14 days after the last day of the invalid test.

(3) If 100% mortality occurs in all effluent concentrations for either species prior to the end of any test and the control mortality is less than 10% at that time, the test (including the control) for that species shall be terminated with the conclusion that the test fails and constitutes non-compliance.

(4) Routine and additional follow-up tests shall be evaluated for acceptability based on the concentration-response relationship, as required by EPA-821-R-02-012, Section 12.2.6.2., and included with the bioassay laboratory reports.

f. Reporting Requirements

(1) Results from all required routine and additional follow-up tests shall be reported on the Discharge Monitoring Report (DMR) as the calculated LC50 effluent concentration for each test species.

(2) A bioassay laboratory report for the routine test shall be prepared according to EPA-821-R-02-012, Section 12, Report Preparation and Test Review, and **emailed** or mailed to the Department at the address below **within 30 days** after the last day of the test.

(3) For additional follow-up tests, a single bioassay laboratory report shall be prepared according to EPA-821-R-02-012, Section 12, and mailed or **emailed within 30 days** after the last day of the second valid additional follow-up test.

(4) Data for invalid tests shall be included in the bioassay laboratory report for the repeat test.

(5) The same bioassay data shall not be reported as the results of more than one test.

(6) All bioassay laboratory reports shall be mailed or **emailed within 30 days** to Jacksonville only:

Florida Department of Environmental Protection
Northeast District – Wastewater Section
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

g. Test Failures

(1) A test fails when the test results do not meet the limits in 21.a.(1).

(2) Additional Follow-up Tests:

a. If a routine test does not meet the acute toxicity limitation in 21.a.(1) above, the permittee shall notify the Department at the address above within 21 days after the last day of the failed routine test and conduct two additional follow-up tests on each species that failed the test in accordance with 21.d.

b. The first test shall be initiated within 28 days after the last day of the failed routine test. The remaining additional follow-up tests shall be conducted weekly thereafter until a total of two valid additional follow-up tests are completed.

c. The first additional follow-up test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 75%, 50%, 25%, and 12.5% effluent. The permittee may modify the dilution series in the second additional follow-up test to more accurately bracket the toxicity such that at least two dilutions above and two dilutions below the target concentration and a control (0% effluent) are run. All test results shall be statistically analyzed according to the procedures in EPA-821-R-02-012.

(3) In the event of three valid test failures (whether routine or additional follow-up tests) within a 12-month period, the permittee shall notify the Department within 21 days after the last day of the third test failure.

a. The permittee shall submit a plan for correction of the effluent toxicity within 60 days after the last day of the third test failure.

b. The Department shall review and approve the plan before initiation.

c. The plan shall be initiated within 30 days following the Department's written approval of the plan.

d. Progress reports shall be submitted quarterly to the Department at the address above.

e. During the implementation of the plan, the permittee shall conduct quarterly routine whole effluent toxicity tests in accordance with 21.d. Additional follow-up tests are not required while the plan is in progress. Following completion or termination of the plan, the frequency of monitoring for routine and additional follow-up tests shall return to the schedule established in 21.b.(1). If a routine test is invalid according to the acceptance criteria in EPA-821-R-02-012, a repeat test shall be initiated within 14 days after the last day of the invalid routine test.

f. Upon completion of four consecutive quarterly valid routine tests that demonstrate compliance with the effluent limitation in 21.a.(1) above, the permittee may submit a written request to the Department to terminate the plan. The plan shall be terminated upon written verification by the Department that the facility has passed at least four consecutive quarterly valid routine whole effluent toxicity tests.

g. If a test within the sequence of the four is deemed invalid, but is replaced by a repeat valid test initiated within 14 days after the last day of the invalid test, the invalid test will

not be counted against the requirement for four consecutive quarterly valid routine tests for the purpose of terminating the plan.

(4) The additional follow-up testing and the plan do not preclude the Department taking enforcement action for whole effluent toxicity failures.

[62-4.241, 62-620.620(3)]

21. The permittee shall collect the effluent sample and use EPA Method 1631E or clean techniques to analyze for mercury, total recoverable. An alternative EPA approved method such as Method 245.1 or 245.7 with an MDL of 12.0 ng/L operated in the high sensitivity mode can be used as for initial screening for mercury. If mercury is not detected (e.g., the results are less than the MDL of 14.0 ng/L), then mercury is in compliance with the water quality criterion of Rule 62-302.530(41), FAC. However, for any sample results that have a value greater than the MDL but less than the PQL, the permittee shall conduct an additional evaluation for mercury using clean techniques such as Method 1631E. If testing results show quantifiable mercury levels in the effluent, the permittee shall prepare and implement a mercury minimization plan addressing sources of mercury. *[62-304.900]*

22. The permittee shall conduct regular monitoring of Big Davis Creek for maintaining data on the impact of the discharge to the water quality of the surface water body. Monitoring shall be conducted on a quarterly basis during the quarterly monitoring periods noted in condition I.A.1 and shall coincide with the quarterly nutrient monitoring of the facility effluent discharge. Test results showing parameters and corresponding concentrations in mg/L shall be submitted to the Department with the discharge monitoring report (DMR) corresponding to the month during which the samples were taken. *[62-620.320(6)]*

23. Within 18 months prior to place the First Coast Regional Utilities WRF into operation, the Permittee shall conduct a Biological Assessment (which includes but not limited to monitoring for chlorophyll a levels, algal mats or blooms, nuisance macrophyte growth, changes in algal species composition, etc.) and qualitative stream condition index (SCI) assessment of the segment of the Creek. *[62-302.531(2)(c) and 62-620.100(3)(h)][62-620.320(6)]*

24. The Florida water quality criteria and standards shall not be violated as a result of the discharge. *[62-620.320(9)] & [62-302.530]*

B. Reuse and Land Application Systems (Public access slow rate irrigation system)

1. During the period beginning upon placing the new construction into operation 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 condition **I.D.6.:**

			Reclaimed Water Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site	Notes
Flow to the Slow-rate Public Access Reuse System	MGD	Max	1.0	Annual Average	Continuous	Recording Flow Meter with Totalizer	FLW–2	See Cond I.B.3
		Max	Report	Monthly Average				
BOD, Carbonaceous 5-day, 20°C	mg/L	Max	5.0	Annual Average	Weekly	24-hour flow proportioned composite	EFA–1	
		Max	6.25	Monthly Average				
		Max	7.50	Weekly Average				
		Max	10.0	Single Sample				
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	Daily (7 days/week)	Grab	EFB–1	See Cond I.B.14
Turbidity	NTU	Max	Report	Single Sample	Continuous	Meter	EFB–1	See Cond I.B.7 & I.B.8
Coliform, Fecal	#/100mL	Max	25	Single Sample	Daily (7 days/week)	Grab	EFA–1	
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	Monthly	Calculated	CAL–1	See Cond I.B.5
pH	s.u.	Min	6.0	Single Sample	Continuous	Meter	EFA–1	See Cond I.B.3

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			Reclaimed Water Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site	Notes
		Max	8.5	Single Sample				
Total Chlorine Residuals	mg/L	Min	1.2	Single Sample	Continuous	Meter	EFA–1	See Cond I.B.6 & I.B.8
Total Nitrogen, as N	mg/L	Max	5.0	Monthly Average	Monthly	24-hour flow proportioned composite	EFA–1	
	mg/L	Max	10.0	Single Sample				
Total Phosphorus, as P	mg/L	Max	Report	Single Sample	Monthly	24-hour flow proportioned composite	EFA–1	
Primary Drinking Water Standards (Reclaimed Water)	mg/L	Max	Report	Single Sample	Annually	24-hour flow proportioned composite	RWS–A	See Cond I.D.7
Secondary Drinking Water Standards (Reclaimed Water)	mg/L	Max	Report	Single Sample	Annually	24-hour flow proportioned composite	RWS–A	See Cond I.D.7
Giardia	cysts/100L	Max	Report	Single Sample	Bi-Annually (Every Two Years)	Grab	EFA–1	See Cond I.B.10
Cryptosporidium	oocysts/ 100L	Max	Report	Single Sample	Bi-Annually (Every Two Years)	Grab	EFA–1	See Cond I.B.10

2. Reclaimed water samples shall be taken at the monitoring site locations listed in Permit Condition I. B. 1. and as described below:

Monitoring Site	Description of Monitoring Site
FLW–2	Flow meter monitor for reclaimed water reuse
CAL–1	Calculated value
EFA–1	Sample point after final disinfection and prior to conveying the reclaimed water to the reuse system.
EFB–1	Sample point after filtration system, prior to the chlorination disinfection system.
RWS–A	Sample point (same as EFA–1) for Primary and Secondary drinking water standards.

3. During the period of required operator attendance, hourly measurement of pH may be substituted for continuous measurement during the period of required operator attendance. *[62-600.660(1)]*

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. 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)]*

6. 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(5)(b); 62-610.460(2); and 62-610.463(2)]*

7. The maximum set point for turbidity shall be limited as described in the approved operating protocol, such that the permit limitations for total suspended solids (Grab sample at EFB-1) and fecal coliforms will be achieved. *[62-610.463(2)]*

8. Instruments for continuous on-line monitoring of total residual chlorine and turbidity shall be equipped with an automated data logging or recording device. Continuous on-line monitoring instruments shall be calibrated according to the requirements of Chapter 62-160 and 600, F.A.C. Continuous on-line monitoring instrument shall be maintained according to the manufacture's operation and maintenance instructions. *[62-610.463(2) & .865(8)(d)]*

9. The treatment facilities shall be operated in accordance with the 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 the rejected water ponds. The 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 for review and approval upon revision of the operating protocol(s) and with each permit application. *[62-610.320(6) and 62-610.463(2)]*

10. Intervals between sampling for Giardia and Cryptosporidium shall not exceed two years. Sampling results shall be reported on DEP Form 62-610.300(4)(a)4 which is attached to this permit. This form shall be submitted to the District and to DEP's Reuse Coordinator in Tallahassee. *[62-610.463(4)]*

C. Reuse and Land Application Systems (RIB System and Restricted Public Access Irrigation System)

1. During the period beginning on the issuance date and lasting through completion and placing into service the expansion, the permittee is authorized to direct reclaimed water to Reuse System R-002. Such reclaimed water shall be limited and monitored by the permittee as specified below and reported in accordance with condition I.D.6.:

			Reclaimed Water Limitations		Monitoring Requirements			
Parameter	Units	Max./ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site	Notes
Flow (Restricted Public Irrigation)	MGD	Max	0.1275	Annual Average	Continuous	Recording Flow Meter with Totalizer	FLW–3	See I.C. 4
		Max	Report	Monthly Average				
BOD, Carbonaceous 5-day, 20°C	mg/L	Max	5.0	Annual Average	Weekly	24-hr FPC	EFA–1	
		Max	6.25	Monthly Average				
		Max	7.50	Weekly Average				
		Max	10.0	Single Sample				
Solids, Total Suspended	mg/L	Max	5.0	Annual Average	Weekly	24-hr FPC	EFA–1	
		Max	6.25	Monthly Average				
		Max	7.50	Weekly Average				
		Max	10.0	Single Sample				
pH	s.u.	Min	6.0	Single Sample	Continuous	Meter	EFA–1	See I.C. 3
		Max	8.5	Single Sample				
Coliform, Fecal	#/100mL	Max	25	Single Sample	Daily (7 days/week)	Grab	EFA–1	See I.C. 5
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	Monthly	Calculated	CAL–1	See Cond I.B.5

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			Reclaimed Water Limitations		Monitoring Requirements			
Parameter	Units	Max./ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site	Notes
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.2	Single Sample	Continuous	Meter	EFA–1	See I.C.3 and I.C.6
Nitrogen, Nitrate Total (as N)	mg/L	Max	12.0	Single Sample	Monthly	24-hr FPC	EFA–1	
Total Nitrogen	mg/L	Max	10.0	Single Sample	Monthly	24-hour flow proportioned composite	EFA–1	
		Max	5.0	Monthly Average				
Total Phosphorus, as P	mg/L	Max	Report	Single Sample	Monthly	24-hour flow proportioned composite	EFA–1	
Total Dissolved Solids	mg/L	Max	Report	Single Sample	Monthly	Grab	EFA–1	

2. Reclaimed water samples shall be taken at the monitoring site locations listed in Permit Condition I. C.1. and as described below:

Monitoring Site	Description of Monitoring Site
FLW–3	Flow to the RIBs
EFA–1	Effluent point immediately after basic–level disinfection.

3. Hourly measurement of pH and total residual chlorine for disinfection during the period of required operator attendance may be substituted for continuous measurement. *[62-600.660(1)]*

4. Recording flow meters and totalizers shall be utilized to measure flow and calibrated at least annually. *[62-600.200(25)]*

5. The effluent limitation for the monthly geometric mean for fecal coliform is only applicable if 10 or more values are reported. If fewer than 10 values are reported, the monthly geometric mean shall be calculated and reported on the Discharge Monitoring Report. *[62-600.440(4)(c)]*

6. A minimum of 1.2 mg/L total residual chlorine must be maintained for a minimum contact time of 15 minutes based on peak hourly flow at Palm Coast WWTF. *[62-610.510 and 62-600.440(4)(b)]*

D. Other Limitations and Monitoring and Reporting Requirements

1. During the period beginning on the issuance 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.D.6.

			Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/Min**	**Limit**	**Statistical Basis**	**Frequency of Analysis**	**Sample Type**	**Monitoring Site**	**Notes**
Flow *(Through the WWTF)*	MGD	Max	1.0	Annual Average	Continuous	Recording Flow Meter with Totalizer	FLW – 1	See I.C.4
	MGD	Max	Report	3–Moth Rolling Average				
	MGD	Max	Report	Monthly Average				
Percent Capacity, (TMADF/Permitted Capacity) x 100	percent	Max	Report	Monthly Average	Monthly	Calculated	CAL–1	
BOD, Carbonaceous 5-day, 20°C (Influent)	mg/L	Max	Report	Single Sample	Weekly	24-hr FPC	INF–1	
Solids, Total Suspended (Influent)	mg/L	Max	Report	Single Sample	Weekly	24-hr FPC	INF–1	

2. Samples shall be taken at the monitoring site locations listed in Permit Condition I.D.1. and as described below:

Monitoring Site Number	Description of Monitoring Site
FLW-1	Flow thru the WWTF
INF–1	Sample point to the treatment trains prior to any biological, chemical, physical treatments or dilution

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. 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 http://www.dep.state.fl.us/labs/library/index.htm. 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]*

5. The permittee shall provide safe access points for obtaining representative samples which are required by this permit. *[62-600.650(2)]*

6. Monitoring requirements under this permit are effective on the first day of the second month following the effective date of the permit. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements, if any. 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	Mail or Electronically Submit by
Monthly	first day of month - last day of month	28th day of following month
Toxicity	*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
Semi-annual	January 1 - June 30 July 1 - December 31	July 28 January 28
Annual	January 1 - December 31	January 28

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 http://www.fldepportal.com/go/ , unless the permittee has a waiver from the Department in accordance with 40 CFR 127.15. Reports shall be submitted to the Department by the twenty-eighth (28th) of the month following the month of operation.

[62-620.610(18)][62-600.680(1)]

7. 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)]

8. 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)]

9. The permittee shall maintain an inventory of storage systems. The inventory shall be submitted to the Department's Northeast 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)]

10. The permittee of a publicly owned facility shall submit an annual report regarding transactions or allocations of costs and expenditures on pollution mitigation among the utility's permitted wastewater systems, including the prevention of sanitary sewer overflows, collection and transmission system pipe leakages, and inflow and infiltration. This report may be combined with the annual report for the permittee's collection system action plan once Rule 62-600.705, F.A.C., becomes effective. The report shall be electronically submitted to the district office no later than June 30 of each calendar year. *[62-600.700(4)]*

11. 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 FDEP Northeast District Office at the address specified below:

    Florida Department of Environmental Protection
    Northeast District Office
    8800 Baymeadows Way West, Suite 100
    Jacksonville, Florida 32256
    Phone (904) 256-1700; FAX (904) 256-1590
    (All FAX copies and e-mails shall be followed by original copies.)
    [62-620.305]

12. 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 transferred to Buckman Biosolids Treatment Facility or disposed of in a Class I solid waste landfill. Transferring biosolids to an alternative biosolids treatment facility does not require a permit modification. However, use of an alternative biosolids treatment facility requires submittal of a copy of the agreement pursuant to Rule 62-640.880(1)(c), F.A.C., along with a written notification to the Department at least 30 days before transport of the biosolids. *[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.D.6.

			Biosolids Limitation		Monitoring Requirements			
Parameter	Units	Max. /Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Biosolids Quantity (Transferred)	dry tons	Max	Report	Monthly Total	Monthly	Calculated	RMP–1	
Biosolids Quantity (Class I Waste Landfill)	dry tons	Max	Report	Monthly Total	Monthly	Calculated	RMP–2	

[62-640.650(5)(a)1]

4. Biosolids quantities shall be calculated as listed in Permit Condition II.A.3. and as described below:

Monitoring Site Number	Description of Monitoring Site Calculations
RMP–1	Quantity of biosolids hauled to another DEP-permitted wastewater treatment facility or DEP-permitted biosolids management facility for further treatment and final disposal
RMP–2	Quantity of biosolids hauled to Class I waste landfill

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. Transfer

1. The permittee shall not be held responsible for treatment and management violations that occur after its biosolids have been accepted by a permitted biosolids treatment facility with which the source facility has an agreement in accordance with subsection 62-640.880(1)(c), F.A.C., for further treatment, management, or disposal. *[62-640.880(1)(b)]*

2. The permittee shall keep hauling records to track the transport of biosolids between the facilities. The hauling records shall contain the following information:

Source Facility
1. Date and time shipped
2. Amount of biosolids shipped
3. Degree of treatment (if applicable)
4. Name and ID Number of treatment facility
5. Signature of responsible party at source facility
6. Signature of hauler and name of hauling firm

Biosolids Treatment Facility or Treatment Facility
1. Date and time received
2. Amount of biosolids received
3. Name and ID number of source facility
4. Signature of hauler
5. Signature of responsible party at treatment facility

A copy of the source facility hauling records for each shipment shall be provided upon delivery of the biosolids to the biosolids treatment facility or treatment facility. The treatment facility permittee shall report to the Department within 24 hours of discovery any discrepancy in the quantity of biosolids leaving the source facility and arriving at the biosolids treatment facility or treatment facility.

[62-640.880(4)]

D. 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 Northeast 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 Northeast District Office, Wastewater Permitting Section the monitor well completion reports and soil boring/lithologic logs on DEP Form(s) 62-520.900(3), Monitoring Well Completion Report, and a photo of each monitor well showing the permanent well ID number on the outer well vault (i.e.: MWB-1, MWI-2, and MWC-3), in accordance with Permit Condition VI.1.l. *[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)]*

5. Prior to placing Land Application System R-002 in operation, the monitor wells identified in Permit Condition III.B.7 shall be installed, in accordance with Permit Condition VI.1.k. *[62-520.600]*

B. Operational Requirements

1. The model discharge site for ground water monitoring will be Land Application System R-002. For the Part IV Land Application System(s), R-002, 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 for Land Application Site R-002 shall extend horizontally 100 feet from the application site, or to the property line, whichever occurs first, and vertically to the base of the surficial aquifer. *[62-520.200(27)] [62-520.465]*

2. For the Part III Land Application System(s), R-001, it is exempt from ground water monitoring, because the model site for ground water monitoring is Land Application System R-002, but 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 for Land Application Site R-001 shall extend horizontally 100 feet from the application site, or to the property line, whichever occurs first, and vertically to the base of the surficial aquifer. *[62-520.200(27)] [62-520.465]*

3. 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)]*

4. If the concentration for any constituent listed in Permit Condition III.B.7. 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)]*

5. After monitor wells listed in Permit Condition III.B.7 are installed, but before initial discharge to Land Application System R-002, the permittee shall sample each monitor well identified in Permit Condition III.B.7 for the parameters in Permit Condition III.B.8, in accordance with Permit Condition VI.1.m. *[62-520.600(5)(a)]*

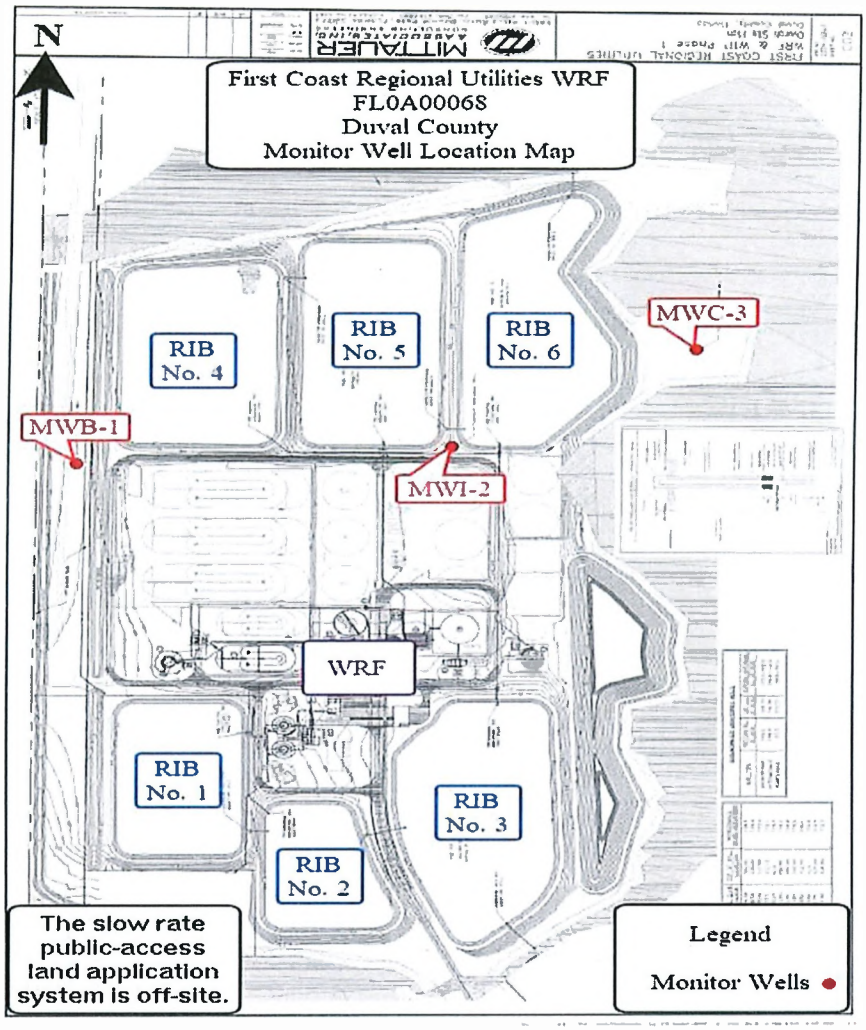
6. Upon placing Land Application System R-002 in operation, the permittee shall begin sampling ground water at the new monitor wells identified in Permit Condition III.B.7., below in accordance with this permit and the approved ground water monitoring plan prepared in accordance with Rule 62-520.600, F.A.C. *[62-520.600] [62-610.510]*

7. The following monitor wells shall be sampled for Land Application (Reuse) System R-002.

Monitor Well ID	Alternate Well Name and/or Description of Monitoring Location	Latitude	Longitude	Depth (Feet)	Aquifer Monitored	Well Type	New or Existing
MWB–1	Off southwest corner of RIB No. 4.	TBD	TBD	TBD	Surficial	Background	New
MWI–2*	Middle of RIBs No. 5 and 6, off southeast corner of RIB No. 5 and off southwest corner of RIB No. 6.	TBD	TBD	TBD	Surficial	Intermediate	New
MWC–3	Off east side and middle of RIB No. 6.	TBD	TBD	TBD	Surficial	Compliance	New

TBD – To Be Determined. See the approved Ground Water Monitoring Plan for proposed well depths.

* See permit condition III.B.9 for additional monitoring requirements on this well.



[62-520.600] [62-610.510]

8. The following parameters shall be analyzed and at the indicated frequency for each monitor well identified in Permit Condition III.B.7.:

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Water Level Relative to NGVD	Report	ft	In Situ	Quarterly
pH	6.5 - 8.5	s.u.	In Situ	Quarterly
Solids, Total Dissolved (TDS)	500	mg/L	Grab	Quarterly
Chloride (as Cl)	250	mg/L	Grab	Quarterly
Sulfate, Total	250	mg/L	Grab	Quarterly
Nitrite plus Nitrate, Total 1 det. (as N)	10	mg/L	Grab	Quarterly
Turbidity	Report	NTU	In Situ	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

[62-520.600(11)(b)] [62-600.670] [62-600.650(3)] [62-520.310(5)]

9. The permittee shall sample monitor well MWI-2 for the primary and secondary drinking water parameters included in Rules 62-550.310 and 62-550.320, F.A.C., Table 1 (except for asbestos), Table 4, Table 5 (except for Di(2-ethylhexyl) adipate and Di(2-ethylhexyl) phthalate), and Table 6, plus Turbidity. Results of this sampling shall be submitted to the Department's Northeast 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)]*

10. 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)] [62-610.510(3)(b)]*

11. Ground water monitoring wells shall be purged prior to sampling to obtain representative samples. *[62-160.210] [62-600.670(3)]*

12. Analyses shall be conducted on unfiltered samples, unless filtered samples have been approved by the Department's Northeast District Office as being more representative of ground water conditions. *[62-520.310(5)]*

13. Ground water monitoring test results shall be submitted on Part D of Form 62-620.910(10) in accordance with Permit Condition I.D.6. *[62-520.600(11)(b)] [62-600.670] [62-600.680(1)] [62-620.610(18)]*

14. 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 Northeast 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 Northeast District Office before installation. *[62-520.600(6)(l)]*

IV. ADDITIONAL REUSE AND LAND APPLICATION REQUIREMENTS

A. Part III Public Access System(s)

1. Use of reclaimed water is authorized within the general service area identified in the attached map. The following uses of reclaimed water are authorized within this general service area:

   Other Landscape Irrigation
   Residential Developments

   [62-620.630(10)(a)]

2. This reuse system includes the following major user(s) of reclaimed water (i.e., using 0.1 MGD or more) and general service area(s):

Site Number	User Name	User Type	Capacity(MGD)	Acreage
PAA-1	First Coast Developments	Residential irrigation	1.0	738.8

Site Number	User Name	User Type	Capacity(MGD)	Acreage
		Total	1.0	738.8

[62-610.800(5)][62-620.630(10)(b)]

3. Cross-connections to the potable water system are prohibited. *[62-610.469(7)]*

4. 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)]*

5. 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)]*

6. 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 Northeast 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 Northeast 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)]

7. 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)]*

8. 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)]*

9. 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)]*

10. Reclaimed water shall not be used to fill swimming pools, hot tubs, or wading pools. *[62-610.469(4)]*

11. 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)]*

12. 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)]*

13. 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)]*

14. All 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. *[62-610.468 & .469]*

15. 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)]*

16. Routine aquatic weed control and regular maintenance of storage pond embankments and access areas are required. *[62-610.414(8)]*

17. 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)]*

18. 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)]*

19. 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)]*

20. If reclaimed water will be used only for toilet flushing, the Department shall approve alternate levels of reliability, operation controls, and operator attendance if the applicant provides an affirmative demonstration in the engineering report that alternative controls will provide controls on reclaimed water production equivalent to the full requirements of Part III of this chapter, and the engineering report presents reasonable assurances that public health will be protected. The engineering report shall document cross-connection control measures and controls on facility operation sufficient to ensure reliable production of reclaimed water of suitable quality. *[62-610.476(1)(a)]*

21. If reclaimed water will be used only for fire protection, the Department shall approve alternative levels of reliability, operation controls, and operator attendance if the applicant provides an affirmative demonstration in the engineering report that alternative controls will provide controls on reclaimed water production equivalent to the full requirements of Part III of this chapter, and the engineering report presents reasonable assurances that public health will be protected. The engineering report shall document cross-connection control measures and controls on facility operation sufficient to ensure reliable production of reclaimed water of suitable quality. *[62-610.476(2)(b)]*

B. Part IV Rapid Infiltration Basins

1. Advisory signs shall be posted around the site boundaries to designate the nature of the project area. *[62-610.518]*

2. The maximum annual average loading rate to the six rapid infiltration basins with total area of 30 acres and total storage volume of 30 MG shall be limited to 2 inches per day (as applied to the entire bottom area). *[62-610.523(3)]*

3. The six rapid infiltration basins with total area of 30 acres and total storage volume of 30 MG normally shall be loaded for 30 days and shall be rested for 7 days. Infiltration ponds, basins, or trenches shall be allowed to dry during the resting portion of the cycle. *[62-610.523(4)]*

4. Rapid infiltration basins shall be routinely maintained to control vegetation growth and to maintain percolation capability by scarification or removal of deposited solids. Basin bottoms shall be maintained to be level. *[62-610.523(6) and (7)]*

5. Routine aquatic weed control and regular maintenance of storage pond embankments and access areas are required. *[62-610.514 and 62-610.414]*

6. Overflows from emergency discharge facilities on storage ponds or on infiltration ponds, basins, or trenches shall be reported as abnormal events in accordance with Permit Condition IX.20. *[62-610.800(9)]*

7. Holding ponds are provided for reclaimed water storage, such ponds are subject to the requirements of Rule 62-610.414, F.A.C. *[62-610.514(2)]*

8. If subsurface drain systems are needed, they shall be designed in accordance with appropriate portions of paragraph 62-610.300(1)(c), F.A.C., concerning Natural Resources Conservation

Services criteria for subsurface drains. The drainage system shall be designed so that the seasonal high-water table is drawn down to a minimum of 36 inches below pond bottoms during resting periods. The requirements of subsection 62-610.850(1), F.A.C., shall apply to discharges to surface waters from the drainage system. *[62-610.517(2)(a)]*

9. A setback distance of 500 feet shall be provided from the edge of the rapid infiltration basin, percolation pond, basin, or trench embankments, or from the edge of an absorption field to potable water supply wells that are existing or have been approved by the Department or by the Department of Health (but not yet constructed); Class I surface waters; or Class II surface waters. The setback distance to Class I and II surface waters shall be reduced to 100 feet if high-level disinfection is provided. Setback distance requirements apply to all Class II waters, regardless of Department classification. *[62-610.521(2)]*

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 24 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)]*

B. Capacity Analysis Report and Operation and Maintenance Performance Report Requirements

1. When the three-month average daily flow for the most recent three consecutive months exceeds 50 percent of the permitted capacity of the treatment plant or reuse and disposal systems, the permittee shall submit to the Department a capacity analysis report. This initial capacity analysis report shall be submitted within 180 days after the last day of the last month of the three-month period referenced above or with the permittee's application for permit renewal, whichever occurs first. The capacity analysis report shall be prepared in accordance with Rule 62-600.405, F.A.C. *[62-600.405(4)]*

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 at the following address: 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 following improvement actions shall be completed according to the following schedule:

Improvement Action	Completion Date

Improvement Action	Completion Date
a. Notify the Department in writing prior to beginning construction	At least 90 days prior to the construction
b. Submit application for Multi-Sector General Permit (MSGP) for stormwater discharges associated with industrial activity.	At least 90 days prior to placing the new AWT facility into operation
c. Submit an Operating Protocol in accordance with requirement of Rule 62-610.463, FAC.	At least 90 days prior to placing the new AWT facility into operation
d. Notify the Department in writing at end of construction using Department DEP Form 62-620.910(12), Notification of Completion of Construction for Wastewater Facilities or Activities.	Within 30 days of completion of construction
e. Submit written certification to the Department on Form 62-620.910(13) that record drawings pursuant to Chapter 62-600, F.A.C.	Within 180 days placing the AWT facility into service
f. Submit the power outage contingency plan that mitigates the impacts of power outages on the collection/transmission system.	Within 180 days placing the AWT facility into service
g. Submit document to show that the revised facility emergency response plan portion of the facility's operation and maintenance manual plan includes cybersecurity.	Within 180 days placing the AWT facility into service
h. Submit an annual report on the collection system action plan	June 1 of each year
i. Electronically submit an annual progress report on the facility's implementation of 403.064(17), F.S. to the Department at NPDESDischargePlan2021@FloridaDEP.gov (62-600.680(3), F.A.C.)	November 1 of each year
j. The monitor wells identified in Permit Condition III.B.7 shall be installed, in accordance with Permit Condition III.A.5. *[62-520.600]*	Prior to placing Land Application System R-002 in operation.
k. The permittee shall submit to the Department's Northeast District Office Wastewater Permitting Section the monitor well completion reports and soil boring/lithologic logs on DEP Form(s) 62-520.900(3), Monitoring Well Completion Report, and a photo of each monitor well showing the permanent well ID number on the outer well vault (i.e.: MWB-1, MWI-2, and MWC-3), in accordance with Permit Condition III.A.3. [62-520.600(6)(j) and .900(3)]	Within 30-days of monitor well installation.
l. The monitor wells identified in Permit Condition III.B.7 shall have an initial sample conducted for the parameters in Permit Condition III.B.8, in accordance with Permit Condition III.B.5. [62-520.600(5)(a)]	Prior to placing Land Application System R-002 in operation.

[62-620.320(6)]

2. Prior to placing the new facilities into operation or any individual unit processes into operation, for any purpose other than testing for leaks and equipment operation, the permittee shall complete and submit to the Department DEP Form 62-620.910(12), Notification of Completion of Construction for Wastewater Facilities or Activities. *[62-620.410(7) and 62-620.630(2)]*

3. The newly constructed Part III reuse system shall not be placed in service for any purpose without written approval from the Department. For projects identified in the permit as being constructed in phases, written permission is only required for the first phase. Application for approval shall be made to the Department on DEP Form 62-610.300(4)(a)3., Application for Permission to Place a Public Access Reuse System in Operation. *[62-610.800(7)]*

4. 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 62-620, 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)]*

5. 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.

   Please note, effluent testing shall be conducted for each outfall in accordance with the instructions provided in Sections 3.A.12., 13., and 14. of the application form. A minimum of three samples shall be taken within four and one-half years prior to the date of the permit application and must be representative of the seasonal variation in the discharge from each outfall. *[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. 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)]*

2. 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)]*

3. 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)]*

4. 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)]*

5. 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)]*

6. 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)]*

7. 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)]*

8. 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)]*

9. Collection/transmission system overflows shall be reported to the Department in accordance with Permit Condition IX. 20. *[62-604.550] [62-620.610(20)]*

10. 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)]

11. The treatment facility, storage ponds for Part II systems, rapid infiltration basins, and/or infiltration trenches shall be enclosed with a fence or otherwise provided with features to discourage the entry of animals and unauthorized persons. *[62-610.518(1) and 62-600.400(2)(b)]*

12. 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)]*

13. 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)]*

14. The permittee shall provide verbal notice to the Department's Northeast 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 Northeast District Office in a written report within 7 days of the sinkhole discovery. *[62-620.320(6)]*

15. 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, 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 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 Jacksonville, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Katie Sula Miller

Katie Sula Miller,
Permitting Program Administrator

KSM/snt/rc/dv

Attachment(s):
Fact Sheet
Discharge Monitoring Report
"Pathogen Monitoring" Form

FACT SHEET
FOR
STATE OF FLORIDA DOMESTIC WASTEWATER FACILITY PERMIT

PERMIT NUMBER:	FL0A00068 (Minor)
PERMIT APPLICATION NUMBER:	FL0A00068 – 001 – DW1P/NP
FACILITY NAME:	First Coast Regional Utilities Water Reclamation Facility
FACILITY LOCATION:	Rattlesnake Road, Baldwin, Florida 32234 Duval County Latitude: 30°14' 53.921" N Longitude: 82° 02' 47.198" W
NAME OF PERMITTEE:	First Coast Regional Utilities, Inc
RESPONSIBLE AUTHORITY:	Robert Kennelly President, First Coast Regional Utilities, Inc Post Office 238 Lake Butler, Florida 32054 Phone: (904) 430-9997 Email: rkennelly@bhkcap.com
PERMIT WRITERS:	D. Anh Vo, P.E. and Robert Martin, P.G.

The Clean Water Act (Federal Water Pollution Control Act Amendments, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable surface waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES permits), which is administered by the Environmental Protection Agency (EPA). The EPA has authorized Florida to administer the NPDES permit program. Chapter 403 of Florida Statutes defines the Florida Department of Environmental Protection's (FDEP) authority and obligations in administering the NPDES program.

The regulations adopted by the state include procedures for issuing permits (Chapter 62-620 FAC), technical criteria for discharges from domestic wastewater treatment facilities (Chapter 62-600 and 62-620 FAC), and water quality criteria for surface and groundwaters (Chapters 62-302, 62-303, 62-304, 62-650, and other applicable rules of the Florida Administrative Code (FAC)). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. This fact sheet is a companion document to the NPDES permit and explains the nature of the proposed discharge, the Department's decisions on effluent limitations and controls on pollutants discharged to surface waters, and the regulatory and technical basis for those decisions included on the facility's NPDES permit.

1. SUMMARY OF APPLICATION

a. Chronology of Application

Application Number:	FL0A00068-001-DW1P
Application Submittal Date:	November 06, 2023
Request For Additional information :	December 05, 2023
Public Notice of Application Date:	March 26, 2024
Received Responses to the RAI	November 14, 2024
Application Deemed to Complete:	November 14, 2024

b. Type of Facility

Domestic Wastewater Treatment Plant

Ownership Type: Private

SIC Code: 4952

c. Facility Capacity

i. Treatment Capacity of the WRF:

	Treatment Capacity of the WRF	
	Design	Permitted
Existing Design Capacity	0.00 MGD AADF	0.00 MGD AADF
Proposed Increase in Design Capacity	1.00 MGD AADF	1.00 MGD AADF
Proposed Total Design Capacity	1.00 MGD AADF	1.00 MGD AADF

ii. Disposal and Reuse Capacities

	Surface Water *(MGD AADF)*		Reuse Capacity *(MGD AADF)*	
	Design	Permitted	Design	Permitted
Existing Permitted Capacity:	0.00	0.00	0.00	0.00
Proposed Increase in Permitted Capacity:	0.30	0.30	1.00	1.00
Proposed Total Permitted Capacity:	0.30	0.30	1.00	1.00

d. Description of Wastewater Treatment

To construct and operate a new 1.0 MGD annual average daily flow (AADF) permitted capacity Class I reliability, advanced wastewater treatment (AWT) facility with an activated sludge treatment process. Construction of the new 1.0-MGD AADF AWT facility will include main treatment components below:

(1) Headworks: The Headwork will consist of an influent channel, screen channels, two (2) 0.100-inch rotary wedge wire cylindrical screens with each sheet having a peak hydraulic capacity of

5.3 MGD (3,681 gpm) with screenings washer/compactor. Design criteria for Screening Facilities is presented in Table below:

Parameter	Design Criteria
Screen Type	Internally-fed Rotary Wedgewire Cylindrical Screen
Quantity	2
Screen Openings	0.100 inch
Hydraulic Capacity (each)	5.3 MGD PFH
Quantity of Screenings	15 cf/day (ADF)

(2) Biological Treatment Unit (BTU): The biological treatment unit consists of a 0.2-MGD 4-stage Bardenpho biological treatment unit and an 1.0-MGD 5-stage Bardenpho biological treatment unit that uses an activated sludge process to remove nitrogen and phosphorus from water.

(a) The 0.2-MGD 4-stage Bardenpho biological treatment unit (BTU) with two anoxic zones and two aerobic zones will be divided into 4 stages: First: Pre-anoxic stage, second: aeration stage, third: post-anoxic stage, and fourth: post-aeration stage. The 0.2-MGD 4-stage BTU is a concentric circle tank of which the center compartment will be for the pre-anoxic volume with the aeration-nitrification, post-anoxic, and re-aeration tankage located in the outer ring of the tank.

- The pre-anoxic compartment, which will have a volume of 0.107 million gallons (Mgal), a side water depth of 12.0 ft, a detention time of 12.9 hrs., will be mixed using submersible mixers. The mixed liquor recycle pumps will consist of two self-priming centrifugal pumps equipped with VFDs and capable of recycling a minimum of 6Q of nitrified mixed liquor from the end of the aeration- nitrification tank to the pre-anoxic tank.
- The aeration-nitrification compartment will have a volume of 0.190 Mgal, a side water depth of 12.0 ft, and a detention time of 22.8 hrs. Aeration will be accomplished using coarse bubble diffusers located along the inner wall of the aeration-nitrification compartment. Two 60 HP positive displacement blowers will be provided with a single blower capable of providing the 1,100 scfm of air with the other blower serving as a standby.
- The post-anoxic compartment, which will have a volume of 0.094 Mgal, a side water depth of 12.0 ft, a detention time of 11.3 hrs., will be mixed by submersible mixers located at either end of the compartment.
- The re-aeration compartment will have a volume of 0.017 Mgal, a side water depth of 12.0 ft, and a detention time of 2.0 hrs. Aeration will be accomplished using coarse bubble diffusers located along the inner wall of re-aeration compartment. Two 60 HP positive displacement blowers will be provided with a single blower capable of providing the 1,100 scfm of air with the other blower serving as a standby.

Design criteria for the 0.2 MGD BTU is summarized in the Table below:

Parameter	Design Criteria
General	
MLSS (mg/l)	4,000
MLVSS (mg/l)	3,000
SRT (days)	15.0
SWD (ft)	12.0
Wastewater Temperature Range (°C)	15 - 30
Sludge Yield (lb TSS/lb BOD_5)	0.87
Waste Sludge Production (lb day^{-1})	435
Pre-Anoxic	
Specific DN Rate (g NO_3-N/g VSS/day)	0.0415
Volume (MG)	0.107
Detention Time (hrs)	12.9
Recycle Rate	6Q
Mixing Method	Submersible Mixers
Aeration-Nitrification	
Aeration Volume (MG)	0.190
Aeration Detention Time (hrs)	22.8
Oxygen Requirement for BOD5 Removal (lb O_2/lb BOD5)	1.23
Oxygen Requirement for NH_3 Oxidation (lb O_2/lb NH_3)	4.60
Alpha	0.80
Beta	0.97
Actual Oxygen Requirement (lbs O_2/day)	958
Standard Oxygen Requirement (lbs O_2/day)	1,828
Required Air (scfm)	1,021
Diffuser Type	Coarse Bubble
Diffuser Oxygen Transfer Efficiency (%)	10
Number of Blowers	2
Horsepower of Blowers	60
Post-Anoxic	
Specific DN Rate (g NO_3-N/g VSS/day)	0.0144
Volume (MG)	0.094
Detention Time (hrs)	11.3
Mixing Method	Submersible Mixers
Re-Aeration	
Detention Time (hrs)	2.0
Volume (MG)	0.017
Air Required (scfm)	70
Diffuser Type	Coarse Bubble

(b) The 1.0-MGD 5-stage Bardenpho biological treatment unit (BTU) that uses five reactors to remove nitrogen and phosphorous from water: anaerobic reactor, first anoxic

or pre-anoxic reactor, first aerobic or aerobic-nitrification reactor, second anoxic or post anoxic reactor, and second aerobic or re-aeration reactor. A Carrousel-oxidation ditch configurated as 5-stage Bardenpho BTU will be constructed:

(a) The anaerobic zone, which will have a volume of 0.063 Mgal, a side water depth of 12.0 ft, a detention time of 1.5 hrs., will be mixed by a BioMIx system, which uses air guns to produce very large bubbles that mix the tank contents as they rise through the liquid but do not transfer significant amounts of oxygen to affect the anaerobic process.

(b) The pre-anoxic zone, which will have a volume of 0.36 million gallons (Mgal), a side water depth of 12.0 ft, a detention time of 8.6 hrs., will be mixed using BioMIx system.

(c) The aerobic-nitrification zone will have a volume of 1.01 Mgal, a side water depth of 12.0 ft, and a detention time of 24 hrs. Aeration will be accomplished by mechanical surface aerators. The Carrousel Process consists of vertically mounted, low speed surface aerators in an aeration basin with partitions used to establish a continuous channel. Two variable speed mechanical surface aerators will be provided in a single aeration basin. These aerators will be 100 HP and will be equipped with VFDs and oxygen/ORP sensors and will speed up and slow down based on maintaining a constant preset DO level at the end of the aeration basin. One of the aerators will be capable of providing sufficient oxygen for the process with the other aerator serving as a standby.

- The post-anoxic zone, which will have a volume of 0.223 Mgal, a side water depth of 12.0 ft, a detention time of 5.4 hrs., will be mixed by BioMIx system.
- The Aeration-nitrification Zone, will have a volume of 0.021 Mgal, a side water depth of 12.0 ft, and a detention time of 0.5 hrs. Aeration will be accomplished by mechanical surface aerators. Aeration will be accomplished using coarse bubble diffusers which will be installed in the re-aeration tankage with two positive displacement blowers providing the necessary air for aeration and mixing. Design criteria for the 5-stage oxidation ditch extended aeration process are presented in the Table below:

Parameter	Design Criteria
General	
MLSS (mg/l)	4,000
MLVSS (mg/l)	3,000
SRT (days)	15.0
SWD (ft)	12.0
Wastewater Temperature Range (°C)	15 - 30
Sludge Yield (lb TSS/lb BOD_5)	0.91
Waste Sludge Production (lb day^{-1})	2,246
Anaerobic	
Detention Time (hrs)	1.5
Volume (MG)	0.063

Parameter	Design Criteria
Mixing Method	BioMix
Pre-Anoxic	
Specific DN Rate (g NO_3-N/g VSS/day)	0.0415
Volume (MG)	0.36
Detention Time (hrs)	8.6
Recycle Rate	7.6Q
Nitrate Reduced (lb day^{-1})	381
Effluent NO_3 Concentration (mg/l)	6.0
Mixing Method	BioMix
Aeration-Nitrification	
Aeration Volume (MG)	1.01
Aeration Detention Time (hrs)	24.0
Oxygen Requirement for BOD_5 Removal (lb O_2/lb BOD_5)	1.23
Oxygen Requirement for NH_3 Oxidation (lb O_2/lb NH_3)	4.60
Alpha	0.92
Beta	0.97
Actual Oxygen Requirement (lbs O_2/day)	5,450
Standard Oxygen Requirement (lbs O_2/day)	8,152
Required HP (excluding denitrification credit)	94
Required HP (including denitrification credit)	68
Aerator Oxygen Transfer Efficiency (lb/HP/hr)	3.60
Number of Aerators	2
Horsepower of Aerators	100
Aerator Type	Mechanical Surface
Post-Anoxic	
Specific DN Rate (g NO_3-N/g VSS/day)	0.0144
Volume (MG)	0.223
Detention Time (hrs)	5.4
Nitrate Reduced (lb/day)	80
Effluent NO_3 Concentration	1.0
Mixing Method	BioMix
Re-Aeration	
Detention Time (hrs)	0.5
Volume (MG)	0.021
Air Required (scfm)	100

Parameter	Design Criteria
Oxygen Requirement for NH_3 Oxidation (lb O_2/lb NH_3)	4.60
Alpha	0.92
Beta	0.97
Actual Oxygen Requirement (lbs O_2/day)	5,450
Standard Oxygen Requirement (lbs O_2/day)	8,152
Required HP (excluding denitrification credit)	94
Required HP (including denitrification credit)	68
Aerator Oxygen Transfer Efficiency (lb/HP/hr)	3.60
Number of Aerators	2
Horsepower of Aerators	100
Aerator Type	Mechanical Surface
Post-Anoxic	
Specific DN Rate (g NO_3-N/g VSS/day)	0.0144
Volume (MG)	0.223
Detention Time (hrs)	5.4
Nitrate Reduced (lb/day)	80
Effluent NO_3 Concentration	1.0
Mixing Method	BioMix
Re-Aeration	
Detention Time (hrs)	0.5
Volume (MG)	0.021
Air Required (scfm)	100

(c) Alum Addition System: Installation of an alum addition system which will consist of two 1,500-gallon cross-linked, high-density polyethylene double- containment storage tanks and two chemical metering pumps with a pumping capacity of 20 gph. These metering pumps will be flow paced based on a 4-20 mA signal from the effluent flowmeter with the dosage set manually. Design criteria for the Alum system are listed in the table below:

Parameter	Design Criteria
Number of Metering Pumps	2
Capacity of Metering Pumps (gph)	20
Design Maximum Dosage (mg/l)	100
Alum Storage (gal)	2 @ 1,500
Alum Storage Provided (days)	30

(3) Secondary Clarification System: The secondary clarification system is composed of two 90-ft diameter center-feed clarifiers (one duty and one standby). Each clarifier will have a side water depth of 15 feet, an operation volume of 0.71Mgal, an overflow rate of 157 gpd ft^{-2} at 1.0 MGD AADF and 465 gpd ft^{-2} at 3.0 MGD FHF, a solids loading at 9.2 lb ft^{-2} day^{-1} at 1.0 MGD AADF and 19.7 lb ft^{-2} day^{-1} at 3.0 MGD PHF, a weir loading rate of 3,745 gpd ft^{-1} at 1.0 MGD AADF and 11,234 gpd ft^{-1} at 3.0 MGD PHF, and a hydraulic detention time or 17.1 hrs. at 1.0 MGD AADF and 5.7 hrs. at 3.0 MGD PHF. Sludge will be collected in a center sump using spiral blade collectors. A peripheral weir and launder will collect the clarified effluent. A full radius scum trough will be provided. Scum will flow by gravity to the Scum Pump Station, where it will be pumped to the Aerobic Digester. Return sludge will be withdrawn from the center sump of each clarifier and returned via the RAS pumps to the anaerobic zone of the Carrousel Process after mixing with the incoming raw sewage. Waste sludge will be withdrawn from the center sump of each clarifier and pumped via the WAS pumps to the Aerobic Digester. The WAS pumps and the scum pumps will be manifolded via an interconnected force main. Design criteria for the disinfection system are presented in Table below:

Parameter	Design Criteria
Number of Disinfection Metering Pumps	2
Capacity of Disinfection Metering Pumps (gph)	18.0
Design Maximum Dosage (mg/l)	8.0
Number of Pre-Filter Metering Pumps	1
Capacity of Pre-Filter Metering Pumps (gph)	18.0
Design Maximum Dosage (mg/l)	8
Minimum Chlorine Residual at End of CCC (mg/l)	2.0
Hypochlorite Storage (gal)	2 @ 1,500
Hypochlorite Storage Provided (days) @ Avg 6 mg/l Dosage	60
CCC Volume (gal)	73,600 Total 36,800 Per Compartment
CCC Detention Time (min)	
@ ADF (1.0 MGD)	105
@ PHF (3.0 MGD)	35
Length:Width Ratio	69:1
Depth:Width Ratio	1.95:1
CCC SWD @ PHF (ft)	6.5
Minimum Freeboard (ft)	1.0

(4) Return/Waste-Activated Sludge (RAS/WAS) Pump Station: The RAS/WAS Pump Station will consist of two (2) self-priming RAS pumps, and two (2) self- priming WAS pumps, with provision for a future third RAS pump in Phase 2.

The RAS pump, which will be powered by 25 hp, will have a pump capacity range from 300 gpm to 1,350 gpm, a pump speed range from 350 rpm to 1250 rpm, a operating head range from 6 ft to 32 ft. The WAS pump, which will be powered by 20 hp, will have a pump capacity range from 100 gpm to 700 gpm, a pump speed range from 650 rpm to 1,650 rpm, a operating head range from 8 ft to 52 ft.

The RAS and WAS pumps will be constructed in a manifolded arrangement, with each pump able to serve each clarifier through manual valve operation. Each pump will be equipped with a VFD. The speed of the RAS pumps can be controlled automatically based on a signal from the effluent flowmeter or it can be set manually by the operator, if desired. The WAS pumps will be controlled manually by the operator. Magnetic flowmeters will be located in the discharge lines from each pump to allow the operator to observe the RAS

(5) In-Plant Pump Station & Scum Pump Station:

(a) In-Plant Pump Station: Installation of an in-plant pump station which will consist of three 20-hp submersible triplex variety pumps. Each pump will be equipped with a VFD to allow it to be able to operate in the 350 to 1,050 gpm range. Design criteria for the In-Plant Pump Station are presented in the Table below:

Parameter	Design Criteria
Number of Pumps	3
Pump Type	Submersible
Single Pump Capacity (gpm)	350 - 1,050
Pump Operating Speed (rpm)	1,380 - 1,760
Pump Operating Pressure Range (ft)	41.7 - 48.0
Pump HP	20
Pump Efficiency Range (%)	35 - 78
Station Firm Pump Capacity (gpm)	2,100

(b) Scum Pump Station: Installation of a scum pump station which will consist of a duplex submersible pump station that will be located between the two clarifiers to receive gravity flow from the scum trough drains of each clarifier. The scum troughs collect scum and floating debris as dual-radius skimmer arms rotate around the clarifiers and direct floating scum into the troughs. Each trough is equipped with an automatic flush valve that is activated by the skimmer arm to flush the scum trough to the Scum Pump Station. Operation of the Scum Pump Station will be float controlled. Design criteria for the Scum Pump Station is presented in the Table below:

(6)

Parameter	Design Criteria
Skimmer Arm Tip Speed (ft/min)	10 (Max)
Scum Flush Frequency (min)	14.1
Scum Trough Flush Volume (gal/flush)	
Avg (2 Clarifiers)	20
Max (2 Clarifiers)	40
Scum Flow to PS (gph)	
Avg (2 Clarifiers)	85
Max (2 Clarifiers)	170
Number of Scum Pumps	2
Scum Pump Type	Submersible
Scum Pump Operating Range (gpm, each)	120-200

Parameter	Design Criteria
Scum Pump Operating Head Range (ft)	30-38
Scum Pump Required HP	3
Scum Pump Efficiency Range (%)	58-62
Scum Pump Solids Handling Capability (in)	3.0

(7) Filtration System: Construction of a new filtration system, which will include two cloth-media disk filter units in separate stainless steel tanks. Each filter unit will contain nine (9) filter disks with a total filtration area of 864 ft2 (96 ft^2 per disk), provided a filtration rate of 2.4 gpm ft^{-2} @ PHF. The filter units will be of the automatic vacuum backwash variety. Excessive headloss through the filter disks at a preset elevation in the tank will trigger the backwash system operation. The backwash system utilizes actuated valves connected to self-priming backwash pumps to vacuum the disks in sequence. The sequence of backwashing leaves the remainder of the disks in operation for continuous filtration. The backwash system also allows for vacuuming of settled solids at the bottom of the tanks below the disks. Backwash water from the filter, which constitutes approximately 2.2% of AADF or 22,000 gal day^{-1} (Phase 1), will be pumped to a nearby manhole for gravity flow to the In-Plant Pump Station, where it will be returned to the head of the plant. Desing criteria of the filtration system are listed in the Table below:

Parameter	Design Criteria
Number of Filter Units	2
Number of Filter Disks per Unit	9
Filtration Area per Disk (ft^2)	96
Total Filtration Area per Filter (ft^2)	864
Filtration Rate per Filter (gpm ft^{-2})	
@ ADF (Phase 1)	0.8
@ PHF (Phase 1)	2.4
Backwash Rate (gpm)	400
Backwash Duration (min)	11
Backwashes per Day @ Phase 1 ADF	5
Backwash Flow (gpd) @ Phase 1 ADF	22,000
Backwash Volume as % of Phase 1 ADF	2.2

(8) Disinfection System: Construction of a new disinfection system which includes a chlorine contact chamber and chlorine storage and feed system.

(a) Chlorine Contact Chamber: the chlorine contact chamber (CCC) will have a total volume of 73,600 gallons that will be divided into two equal-sized isolatable compartments. The CCC will have a side water depth 6.5ft @ PHF, leghth:width ratio of 69:1 and depth:width ratio of 1.95:1. The CCC provides a hydraulic detention time of 105 minutes @ 1.0 MGD AADF and 35 minutes @ 3.0 MHD PHF. A 90° V-notch weir and ultrasonic flowmeter will be located at the end of each CCC compartment to measure.

(b) Chlorine Storage and Feed System: Sodium hypochlorite will be utilized for disinfection.

- Sodium hypochlorite will be stored in two cross-linked, high-density polyethylene double-containment storage tanks, each having a capacity of 1,500 gallons. The tanks

will be located under a metal roof to prevent exposure to direct sunlight. In excess of 30 days of storage of hypochlorite will be provided.

- Two chemical metering pumps will be dedicated to feeding hypochlorite at the 16" filter effluent pipe, one duty and one standby. These metering pumps will be compound loop controlled based on 4-20 mA signals from the effluent flowmeter and the chlorine residual analyzer. The capacity of each metering pump will be 18.0 gph, which will allow for 8.0 mg/L dosage at the 5.3 MGD Phase 2 PHF with a 10% HOCL solution concentration. One additional chemical metering pump will be provided for feeding hypochlorite ahead of the filters.

(9) Aerobic Digestion System: Construction of a new aerobic digestion system, which will consist of a 0.54-Mgal digester tank (62.5 ft diameter and 23.5 ft side water depth), an aeration/mixing system, two blowers powered by 75 hp monitor, and two compressors powered by 15 hp motor. Aeration/mixing of the digester will be accomplished using Enviromix's "Bio-Cycle-D Optimized Aerobic Digestion Process". Mixing is accomplished using large bubbles of compressed air. A diffused aeration system, which operates independently from the mixing system, provides the necessary oxygen for volatile solids reduction. The digester will also be equipped with a telescopic valve to allow for decanting. Supernatant will flow by gravity to the In-Plant Pump Station, where it will be returned to the head of the plant. Design criteria for the Aerobic Digester are presented in the Table below:

Parameter	Design Criteria
Tank Volume (gal)	540,000
Tank Diameter (ft)	62.5
Tank SWD (ft)	23.5
Design Operating Solids Concentration (%)	2.0
WAS Load (lb/day)	2,246
WAS Destroyed (lb/day)	749
SOR (lbs/hr)	320
Aeration Provided (scfm)	873
Number of Blowers	2
Blower HP	75
Number of Compressors	2
Compressor HP	15

(10) Reuse Reclaimed Water System: Construction of a new reuse reclaimed water system which will consist of a reclaimed water storage tank, a high-service reclaimed water pump station, and reclaimed water distribution system.

(a) Reclaimed Water Storage Tank: Construction of a new 2.0-Mgal domed-top prestressed reclaimed water ground storage tank (100 ft diameter with a 34.0 ft SWD). . Design criteria for the Reclaimed Ground Storage Tank are provided in the Table below:

Parameter	Design Criteria
Volume	2.0 MG
Diameter	100 ft

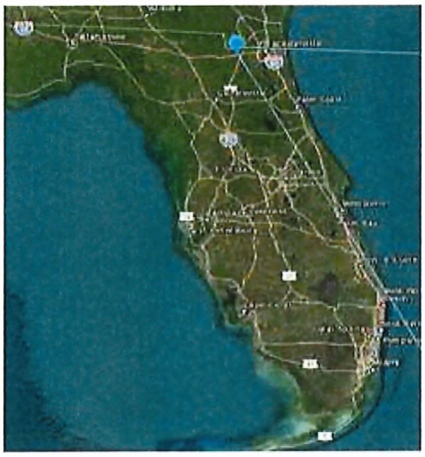
Parameter	Design Criteria
SWD	34.0 ft
Days Storage (Phase 1)	2.0 days

(b) High-service Reclaimed Water Pump Station: Construction a high-service reclaimed water pump station which will consist of a total of four split-case pumps with VFDs and two 6,768-gallon hydropneumatic tanks. Design criteria for the Reuse High Service Pumps are presented in Table below:

Parameter	Design Criteria
Number of Jockey Pumps	2
Jockey Pump Type	Split Case
Jockey Pump Size (in)	4 x 6
Jockey Pump Operating Flow Range (gpm)	200 - 850
Jockey Pump Operating Pressure Range (psi)	65 - 75
Jockey Pump HP	50
Jockey Pump Speed (rpm)	1,800
Number of Jockey Pumps	2
Number of Primary Pumps	2
Primary Pump Type	Split Case
Primary Pump Size (in)	6 x 8
Primary Pump Operating Flow Range (psi)	700 - 2,200
Primary Pump Operating Pressure Range (psi)	63 - 75
Primary Pump HP	125
Primary Pump Speed (rpm)	1,800
Number of Hydropneumatic Tanks	2
Volume of Hydropneumatic Tanks (gal)	6,768

The primary methods of effluent disposal will be slow-rate public access reuse system, with rapid infiltration basins (RIBs) providing a secondary method of effluent disposal and wet weather storage. The surface water discharge, which is combination of APRICOT Act discharge (AAD) and Limited Wet Weather discharge (LWWWD) to two small un-named streams that ultimately flow to Deep Creek will serve as a backup method disposal of the effluent during extreme weather conditions.

Figure 1: Facility Location



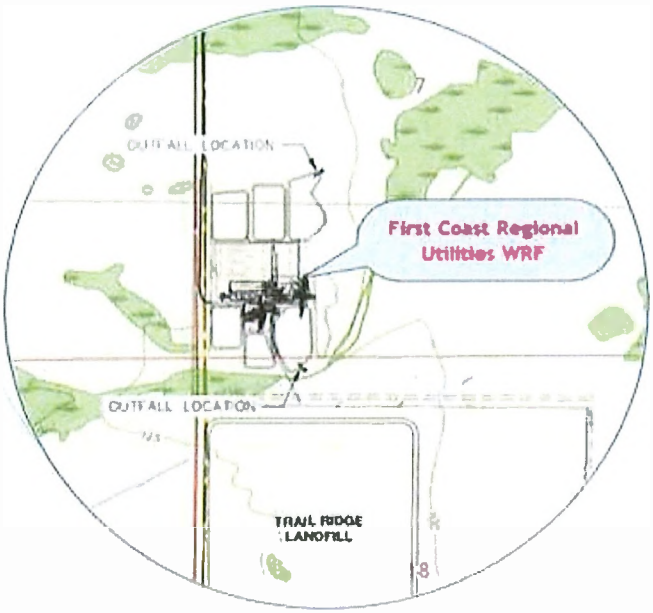
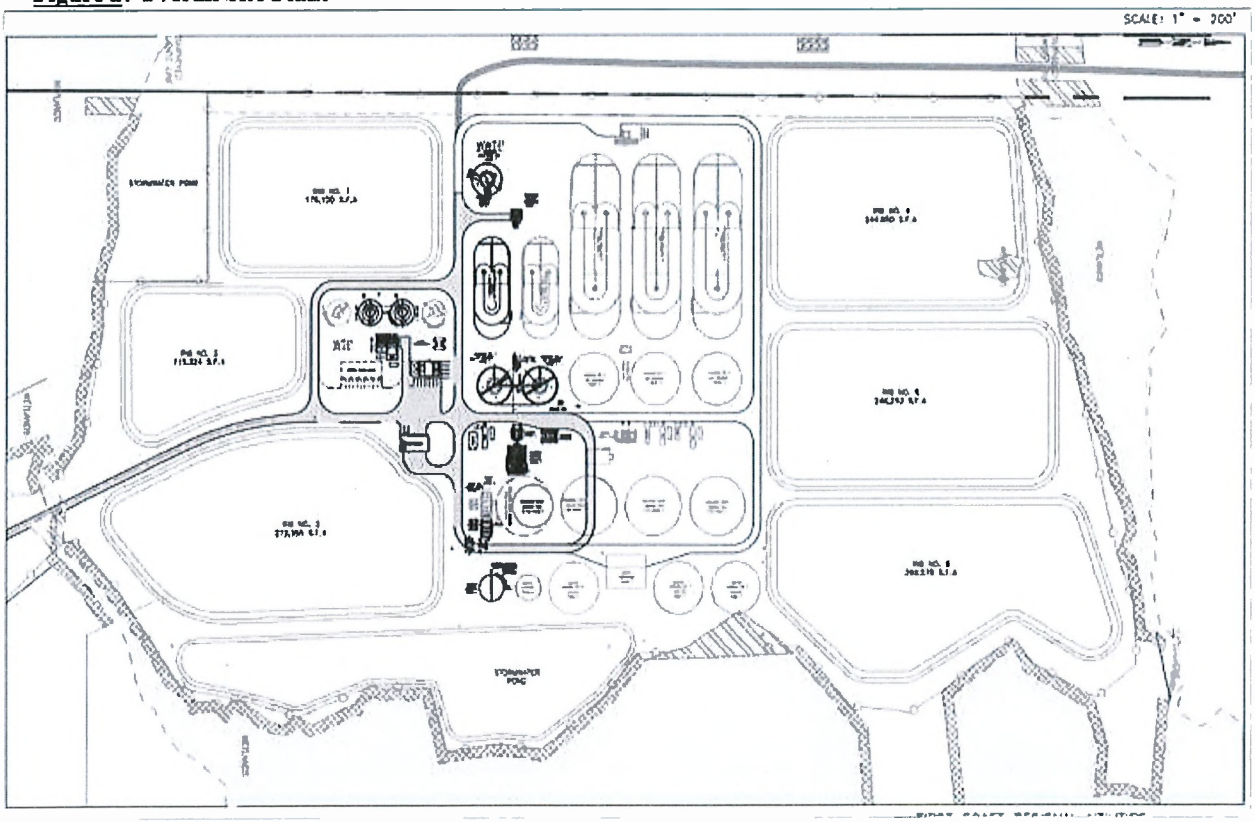


Figure 2: Overall Site Plant



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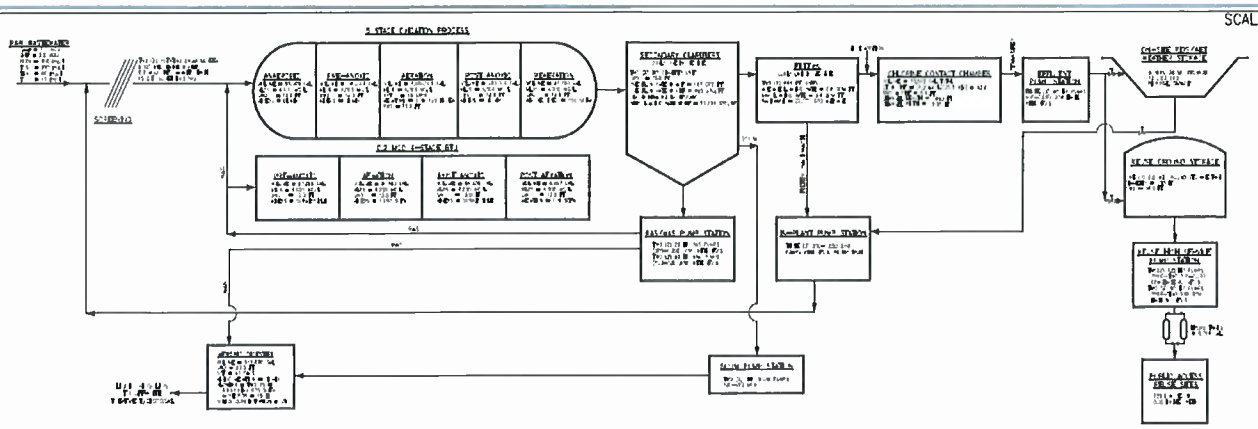
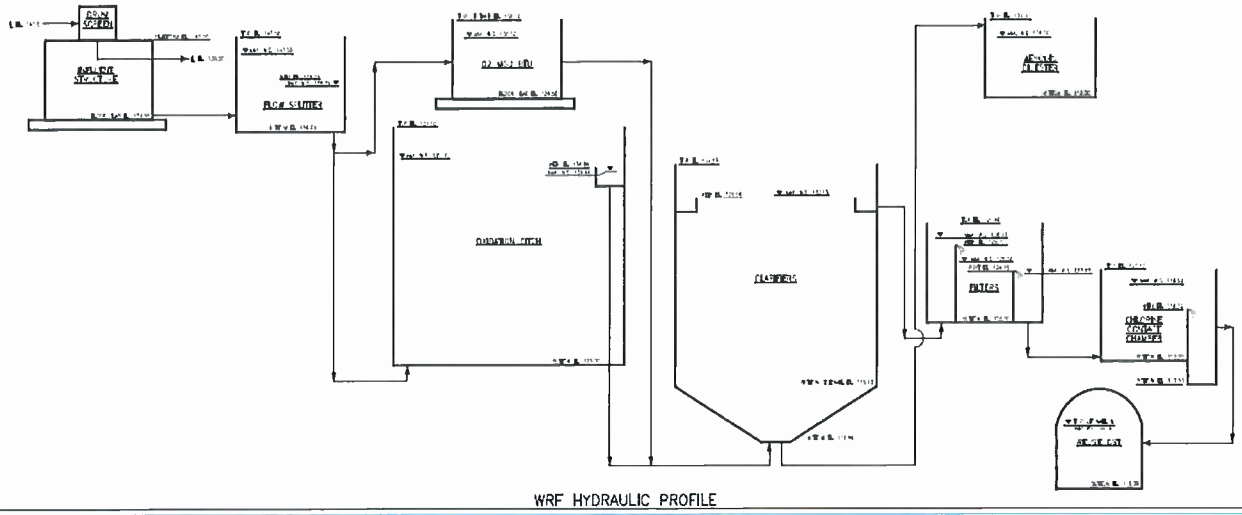


WRF PROCESS FLOW SCHEMATIC



WRF HYDRAULIC PROFILE

e. **Description of Effluent Disposal and Land Application Sites (as reported by applicant)**

i. Surface Water Discharge – Monitoring Group D–001

(1) A new 0.30 MGD annual average daily flow (AADF) or 109.5 million gallons maximum annual volume permitted capacity surface discharge which is only authorized under the APRICOT Act combined with Limited Wet Weather Discharge (LWWD) to two small streams on an unnamed slough, St. Marys' River Basin (Class III fresh waters, WBID# 2325), which then flows to Deep Creek, St. Marys' River Basin (Class III, fresh, WBID 2245A). The point of discharge is located approximately at latitude 30°14' 39" N, longitude 82°2' 43" W.

Figure 4: Outfall Location

(2) Pollutants which are present in significant quantities, or which are subject to effluent limitations or monitoring are as follows:

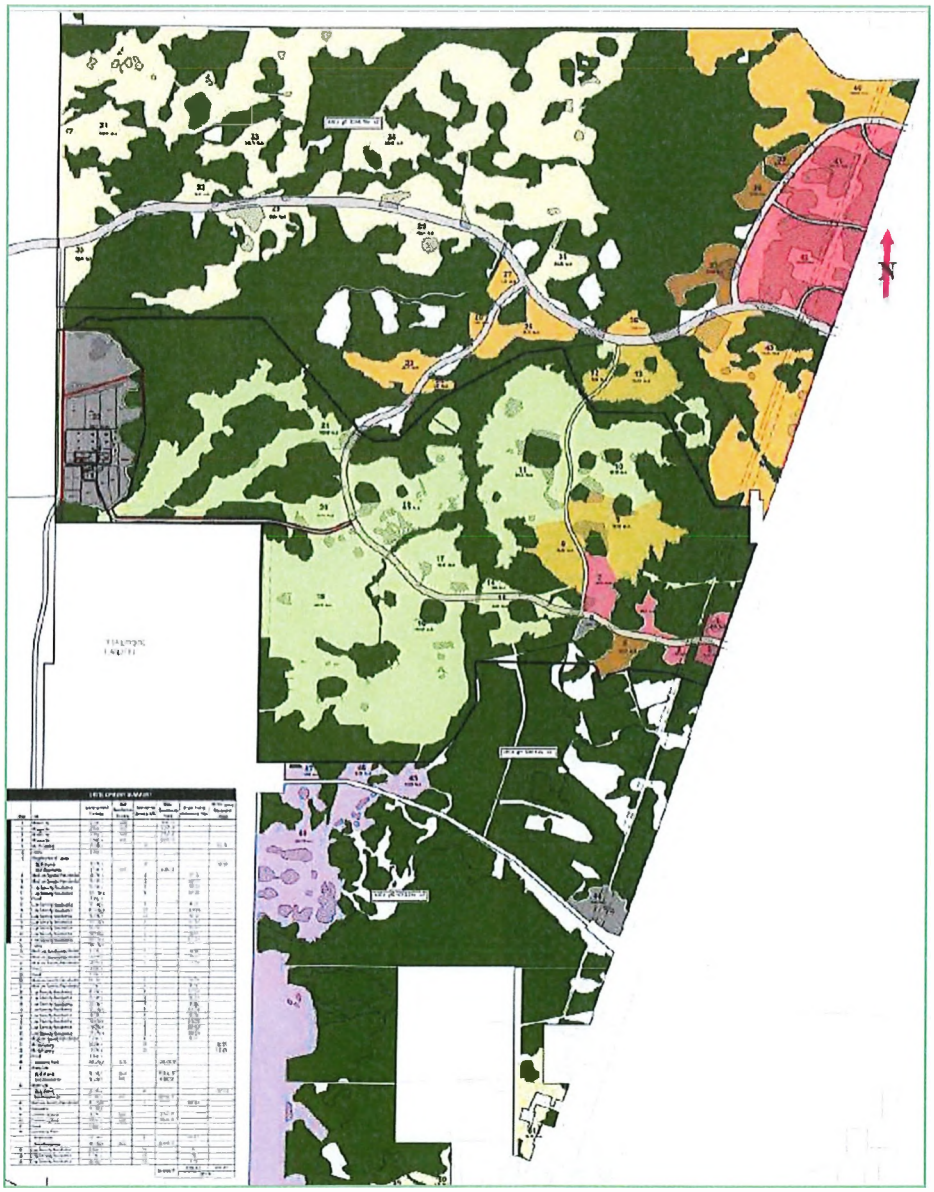
Parameter	Units	Max/Min	Reported Value	Statistical Basis
Flow Rate	MGD	Max	0.3	Annual Average
BOD, Carbonaceous 5 day, 20C	mg/L	Max	5.0	Annual Average
Solids, Total Suspended	mg/L	Max	5.0	Annual Average
Coliform, Fecal	#/100mL	Max	25.0	Daily maximum
E. Coli	#/100mL	Max	410	90th Percentile
Oxygen, Dissolved (DO)	mg/L	Min	5.0	Daily minimum
Temperature (C), Water	Deg C	Max	-	Daily maximum

Parameter	Units	Max/Min	Reported Value	Statistical Basis
Nitrogen, Total	mg/L	Max	3.0	Annual Average
Nitrogen, Ammonia, Total (as N)	mg/L	Max	2.05	Daily maximum
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	3.0	Monthly Average
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max	-	Daily maximum
Nitrogen, Organic, Total (as N)	mg/L	Max	-	Daily maximum
Phosphorus, Total (as P)	mg/L	Max	1.0	Annual Average

ii. Land Application – Monitoring Group R–001

(1) A new 1.0 MGD annual average daily flow permitted capacity slow-rate public access system, R-001, which consists of 738.8 acres of residential developments with 410.5 acres of irrigable area. The reuse system, R-001, is located at multiple locations throughout western Duval County.

Figure 5: Reclaimed Water Resue Service Areas



iii. Land Application – Monitoring Group R–002

(1) A new 0.1275 MGD annual average daily flow permitted capacity rapid-rate infiltration system, R-002, which consists six of rapid infiltration basins (RIBs) with total area of 30 acres and total storage volume of 30.0 MG. Detailed Design of RIBs system is listed in the Table below:

RIB Number	Area		Max Volume	Infiltration Rate
	(Sq ft)	*(Acre)*	*(Mgal)*	*(MGD)*
RIB # 1	175,000	4.01	3.94	0.0167
RIB # 2	115,324	2.65	2.60	0.0110
RIB # 3	272,355	6.25	6.13	0.0260
RIB # 4	248,750	5.71	5.60	0.0238
RIB # 5	249,853	5.74	5.63	0.0239
RIB # 6	271,623	6.24	6.13	0.0260
Total	**1,332,905**	**30.60**	**30.03**	**0.1275**

Figure 6: Rapid-Rate Infiltration System:

2. BACKGROUND INFORMATION – FILE REVIEW

a. Facility Background and Performance Information:

i. Facility Location and Service areas:

First Coast Regional Utilities Water Reclamation Facility (WRF) is a new 1.0-MGD annual average daily flow domestic wastewater treatment facility which is being proposed to be constructed in western Duval County (southwest of I-10 and US Highway 301), near the new, primarily residential development known as 301 Village Development. The First Coast Regional Utilities WRF is planned to be a 16.0-million-gallon-per-day (MGD) annual average daily flow (AADF) plant that will provide high-quality treated effluent for public-access reuse; suitable for residential irrigation.

The First Coast Regional Utilities WRF will serve the proposed 301 Villages Development which will consist of single-family homes multi-family homes, commercial/office space, hotels, and industrial space. Projected population growth is shown in the table below:

Year	Single Family Units	Population per Unit	Multi-Family Units	Population per Unit	Population at End of Year
2025	420	2.5	0	2.1	1,050
2026	840	2.5	0	2.1	2,100
2027	1,265	2.5	200	2.1	3,570
2028	1,680	2.5	400	2.1	5,040
2029	2,100	2.5	600	2.1	6,510
2030	2,919	2.5	800	2.1	8,978
2031	3,737	2.5	1,000	2.1	11,443
2032	4,556	2.5	1,200	2.1	13,910

ii. Characteristics of the Effluent

The effluent will be treated to meet advanced water treatment standards and achieve high-level disinfection prior to land application via public access application sites or rapid-rate infiltration sites or discharge to surface water during wet weather conditions.

- Characteristics of the Effluent/Reclaimed Water

Reclaimed water is treated to meet high-level disinfection standards under subsection 62-600.440(6), F.A.C., that is 75% of the fecal coliform samples collected during a month be below detection limits and that no one sample exceeds 25 fecal coliform values per 100 mL of sample, with a sample frequency daily prior to covey to reclaimed water storage tanks.

b. Surface Water Discharge:

i. Discharge Location

1) A new 0.30 MGD annual average daily flow (AADF) or 27.3 million gallons maximum annual volume permitted capacity surface discharge which is only authorized under the APRICOT Act combined with Limited Wet Weather Discharge (LWWD) to two small streams on an unnamed

slough, St. Marys' River Basin (Class III fresh waters, WBID# 2325), which then flows to Deep Creek, St. Marys' River Basin (Class III, fresh, WBID 2245A). The point of discharge is located approximately at latitude 30°14' 39" N, longitude 82°2' 43" W.

i. Characteristics of Receiving Waterbodies

1) Unnamed Slough: Unnamed slough is a Class III fresh water, WBID# 2325, waterbody size is 3.54 square miles.

2) Deep Creek: Deep Creek is a tributary to St. Marys River (Upper Marys River Basin).

   a) Deep Creek is near Town of Baldwin.

   The segment of the Creek (WBID 2245A, Class III fresh water), which is tributary of St. Marys River, flows along the northeast and drains approximately 4.94 square miles. There are no special designations, such as Aquatic Preserves, Outstanding Florida Waters, Wild and Scenic Rivers (FDEP, 2019), Riparian Habitat Protection Zone, or Essential Fish Habitat (EFH) (NOAA, 2019).

Low-Flow Frequency:

$_{7}Q_{2} = 0.0$ ft^3/sec $_{7}Q_{10} = 0.0$ ft^3/sec

$_{30}Q_{2} = 0.1$ ft^3/sec $_{30}Q_{10} = 0.0$ ft^3/sec

3) Impairment – 303(d) List

Basin / Segment Waterbody	Outfall		Downstream	
WBID	**2325 (Unnamed Slough)**		**2245A & 2245 (Deep Creek)**	
Agency	EPA 303(d)*	FDEP 303(d)**	EPA 303(d)*	FDEP 303(d)**
Parameters of Concern	None	None	Iron and Lead	Iron and Lead

* EPA 303 (d) List (Assessment Information from 2022
** FDEP 303 (d) List (Updated with 2020-2022 Biennial Assessment, adopted on July 11, 2022)

4) Surface Water Improvement Managements:

- ❖ Statewide mercury TMDL has been established and adopted [62-304.900, FAC].
- ❖ The Department adopted numeric nutrient criteria (NNC).

The Unnamed Ditch and Deep Creek are required to meet the narrative water quality criterion for nutrients in Rule 62-302.532(1) cc), F.A.C.

- ➢ Estuary-Specific Numeric Interpretations of the Narrative Nutrient Criterion for the Upper St. Marys River Basin: The annual geometric mean concentrations for TP, TN and chlorophyll a shall not exceed values of 0.093 mg/L, 1.35 mg/L, and 3.0 µg/L, respectively.

3. SUMMARY OF SURFACE WATER DISCHARGE:

This facility has a new discharge to surface waters, which is used as a backup method for disposal of the effluent during extreme wet weather conditions.

The Department does not anticipate adverse impacts on threatened or endangered species as a result of permit issuance.

4. BASIS FOR PERMIT LIMITATIONS AND MONITORING REQUIREMENTS

a. Outfall D-001: Surface Water Discharge to an unnamed slough (WBID 2325), which is connected to Deep Creek (WBID 2245A), a tributary of Marys' River (Upper St. Marys River Basin).

i. This facility is authorized to discharge effluent from Outfall D-001 to Unnamed Slough which is connected to Deep Creek based on the following:

Parameter	Units	Max /Min	Limit	Statistical Basis	Rationale
Flow	MGD	Max	Report	Monthly Average	62-600.700(2)(b) FAC
		Max	0.3	Annual Average	62-600.700(2)(b) FAC

Parameter	Units	Max /Min	Limit	Statistical Basis	Rationale
Flow, Total Volume	Mgal/Mon	Max	Report	Monthly Total	62-600.700(2)(b) FAC
	Mgal/yr	Max	27.3	Annual Total	62-600.700(2)(b) FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	5.0	Annual Average	403.086(4)(a)1.FS & 62-600.740(2)(b)1. FAC
		Max	6.25	Monthly Average	403.086(4)(a)1.FS & 62-600.740(2)(b)2. FAC
		Max	7.5	Weekly Average	403.086(4)(a)1.FS & 62-600.740(2)(b)3. FAC
		Max	10.0	Single Sample	403.086(4)(a)1.FS & 62-600.740(2)(b)4. FAC
Duration of Discharge	day/mth	Max	Report	Annual Total	62-600.700(2)(b) FAC
		Max	Report	Monthly Total	62-600.700(2)(b) FAC
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	62-600.440(6)(a)3. FAC
Coliform, Fecal	#/100mL	Max	25	Single Sample	62-600.440(6)(a)2 FAC
Coliform, Fecal, % less than detection	percent	Max	75	Monthly Total	62-600.440(6)(a)1 FAC
pH	s.u.	Min	6.0	Single Sample	62-600.430, 62-302.530(52) & 62-650 FAC
		Max	8.5	Single Sample	62-600.430, 62-302.530(52) & 62-650 FAC
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	62-600.440(6)(b) FAC
Chlorine, Total Residual (For Dechlorination)	mg/L	Max	0.01	Single Sample	62-600.440(2) & 62-302.530(18) FAC
Nitrogen, Total	mg/L	Max	3.0	Annual Average	403.086(4)(a)3. FS & 62-600.740(2)(b)1. FAC
		Max	3.75	Monthly Average	403.086(4)(a)3. FS & 62-600.740(2)(b)2. FAC
		Max	4.50	Weekly Average	403.086(4)(a)3. FS & 62-600.740(2)(b)3. FAC
		Max	6.0	Single Sample	403.086(4)(a)3. FS & 62-600.740(2)(b)4. FAC
Total Nitrogen, Load	Lbs/Mon	Max	Report	Monthly Total	62-302.350, FAC
Total Nitrogen, Load	Lbs/year	Max	683	Annual Total	62-302.350, FAC
Phosphorus, Total (as P)	mg/L	Max	1.0	Annual Average	403.086(4)(a)4. FS & 62-600.740(2)(b)1. FAC
		Max	1.25	Monthly Average	403.086(4)(a)4. FS & 62-600.740(2)(b)2. FAC

Parameter	Units	Max /Min	Limit	Statistical Basis	Rationale
		Max	1.50	Weekly Average	403.086(4)(a)4. FS & 62-600.740(2)(b)3. FAC
		Max	2.00	Single Sample	403.086(4)(a)4. FS & 62-600.740(2)(b)4. FAC
Total Phosphorus, as P, Load	Lbs/Mon	Max	Report	Monthly Total	62-302.350, FAC
Total Phosphorus, as P, Load	Lbs/year	Max	228	Annual Total	62-302.350, FAC
E.coli	#/100mL	Max	126	Monthly Geometric Mean	62-302.530(6)(b), FAC
		Max	410	90th Percentile	62-302.530(6)(b), FAC
Nitrogen Ammonia, Total (as N) ***(Effluent)***	mg/L	Max	Report	Monthly Total	62-302.530(3), FAC
		Max	Report	Single Sample	
Nitrogen Ammonia, Total (as N) **(Limit)**	mg/L	Max	Report	Monthly Total	62-302.530(3), FAC
		Max	Report	Single Sample	
Nitrogen Ammonia, Total (as N) ***(Compliance = Effluent – Limit)***	mg/L	Max	Report	Monthly Total	62-302.530(3), FAC
		Max	Report	Single Sample	
Chlorophyll a	µg/L	Max	Report	Single Sample	62-302.530, FAC 62-620.320(6), FAC
Iron, Total Recoverable	µg/L	Max	Report	Single Sample	62-302.530, FAC 62-620.320(6), FAC
Lead, Total Recoverable	µg/L	Max	Report	Single Sample	62-302.530, FAC 62-620.320(6), FAC
Hardness, Water	mg/L	Max	Report	Single Sample	62-302.530, FAC
Chronic Whole Effluent Toxicity, 7-Day IC25 (Ceriodaphnia dubia)	percent	Min	100	Single Sample	62-302.530(20) & (62) FAC and 62-4.241(1)(b)
Chronic Whole Effluent Toxicity, 7-Day IC25 (Pimephales promelas)	percent	Min	100	Single Sample	62-302.530(20) & (62) FAC and 62-4.241(1)(b)

Parameter	Units	Max /Min	Limit	Statistical Basis	Rationale
Acute Whole Effluent Toxicity, 96-hr LC_{50} (*Ceriodaphnia dubia*)	percent	Min	100	Single Sample	62-302.530(20) & (62) FAC and 62-4.241(1)(b)
Acute Whole Effluent Toxicity, 96-hr LC_{50} (*Cyprinella leedsi*)	percent	Min	100	Single Sample	62-302.530(20) & (62) FAC and 62-4.241(1)(b)

ii. Discussions

1) General Comments

Federal and State of Florida regulations require that effluent limits in an NPDES permit must be technology-based or/and water quality-based.

- Technology-based effluent limits (TBELs) are based upon the treatment methods available to treat specific pollutants. Technology-based limits are set by the EPA and published as a regulation, or FDEP develops the limit on a case-by-case basis (40 CFR 125.3, and chapter 62-620, FAC).
- Water quality-based effluent limits (WQBELs) are calculated so that the effluent will comply with the Surface Water Quality Standards (Chapter 62-302, FAC), Ground Water Standards (Chapter 62-520, FAC), Water Quality Based Effluent Limitation (Chapter 62-650, FAC, Whole Effluent Toxicity (40 CFR 131.36 and Chapter 62-620, FAC), and other applicable of the Florida Administrative Code.
- Section 301(b)(1)(C) of the Clean Water Act (Act) requires that NPDES permits contain effluent limits more stringent than technology-based limits when necessary to meet water quality standards. Florida water quality standards (WQS) are composed of use classifications, numeric and/or narrative water quality criteria, and an anti-degradation policy. The use classification system designates the beneficial uses (such as water aquatic life, contact recreation, etc.) that each water body is expected to achieve. The numeric and/or narrative water quality criteria are the criteria deemed necessary by the Department to support the beneficial use classification of each water body. The anti-degradation policy represents a three-tiered approach to maintain and protect various levels of water quality and uses.

The limits in this permit are based in part on information received in the application, the wastewater characterization reported in the permit application, and the receiving water body characterization. The effluent constituents in the application were evaluated on a technology-based and water quality-basis. The limits necessary to meet the rules and regulations of the State of Florida were determined and included in this permit. The Department does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent. Some pollutants either are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, or do not have reasonable potential to cause a water quality violation. Effluent limits are not always developed for pollutants that may be in the discharge but not reported as present in the application. In those circumstances the permit does not authorize discharge of the non-reported pollutants. Effluent discharge

conditions may change from the conditions reported in the permit application. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department.

2) Pollutants of Concern: Pollutants of concern are those that either have technology-based limits or may need water quality-based limits. The Department identifies pollutants of concern for the discharge based on those which:

- Have a technology-based effluent limit (TBELs);
- Have an assigned wasteload allocation (WLA) from a TMDL;
- Have Water Quality-based Effluent Limitations (WQBELs)
- Are present in the effluent monitoring. Monitoring data are reported in the application and DMR and any special studies;
- Are expected to be in the discharge based on the nature of the discharge Based on this analysis, pollutants of concern are as follows:

❖ Conventional pollutants *[Defined in CWA Section 307(a)(4) and § 401.16]*

- Oxygen-demanding pollutants (BOD5)/ carbonaceous biochemical oxygen demand (CBOD5)
- Total Suspended Solids/Turbidity
- pH
- Bacteriological Quality (fecal coliform, Escherichia coli Bacteria)
- Temperature
- Oil and Grease
- Nitrogen compounds (TN, Nitrate-Nitrite, TKN, ammonia)
- Phosphorus compounds (total phosphorus, ortho-phosphate)

❖ Priority (Toxic) pollutants *[Defined in CWA Section 07(a)(4) and § 401.15 (Appendix A of Part 423, including 126 metals and manmade organic compounds]*

- Copper, total recoverable
- Mercury, total recoverable
- Iron, total recoverable
- Lead, total recoverable
- None out of the 129 priority pollutants (i.e. believed absent)

❖ Nonconventional pollutants *[Pollutants are those that do not fall under either conventional of priority pollutants]*

- Chlorine
- Cyanide
- COD
- Ammonia, total nitrogen (TAN)
- Nitrogen compounds (TN, TKN, Nitrate plus nitrite)
- Phosphorus (total phosphorus, ortho-phosphate)

- Chemical oxygen demand (COD)
- Whole effluent toxicity (WET)

3) Technology-Based Effluent Limitations (TBELs):

a) General Comments:

Regulations promulgated at 40 CFR §122.44(a) and Chapter 62-600, FAC require technology-based effluent limitations (TBELs) to be placed in NPDES permits based on ELGs where applicable, on BPJ in the absence of guidelines, or on a combination of the two. In the absence of promulgated guidelines for the discharge, permit conditions may be established using BPJ procedures. The Department establishes limitations based on the following technology-based controls: BPT, BCT, and BAT. These levels of treatment are:

- BPT (Best practicable control technology currently available) - The first level of technology-based standards generally based on the average of the best existing performance facilities within a category or subcategory.
- BCT (Best conventional pollutant control technology)- Technology-based standard for the discharge from existing point sources of conventional pollutants, including BOD/CBOD, TSS, Bacteriological Quality (fecal coliform, Escherichia coli Bacteria), pH, and O&G.
- BAT (Best available control technology economically achievable)- The most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limits represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

b) Effluent Limitations Guidelines:

i) Conventional Pollutants

First Coast Regional Utilities WRF, a municipal wastewater treatment facility, is a POTW that has technology-based limits established at 62-600.420, FAC and 40 CFR Part 133.102, Secondary Treatment Regulation. Pollutants with limits established in this Chapter are CBOD5, TSS and pH. CBOD5 limits of 30 mg/l for the 30-day average and 45 mg/L for the 7-day average and 85% percent (minimum) removal are found at 40 CFR §133.102(a). TSS limits; also 30 mg/L for the 30-day average and 45 mg/L for the 7-day average, average and 85% percent (minimum) removal are found at 40 CFR §133.102(b). The limit for pH is 6-9 s.u. based on 40 CFR §133.102(c).

ii) Flow Rate:

The surface water discharge from the First Coast Regional Utility WRF to a unnamed slough which is connected to Deep Creek (WBID 2245A – Class III fresh waters, St. Marys' River Basin) is authorized based on the combination of APRICOT Act discharge (Section 403.086(7), F.S) and Limited Wet Weather discharge (LWWD) (Rule 62-610.860, FAC).

- *The Florida APRICOT Act of 1994 was enacted as a result of Project APRICOT, which stands for **A** **P**rototype **R**ealistic **I**nnovative **C**ommunity **o**f **T**oday. Section 2 of the Act (found in Section 403.086(7), F.S.) allowed for permitting backup discharges for reuse systems when the utility provides advanced wastewater treatment and high-level disinfection.*

- Limited Wet Weather discharge (LWWD) is authorized under Rule 62-610.860, FAC, which allows discharge of excess reclaimed waters during such wet weather periods when the discharge meet the minimum dilution requirements.

(1) Permitted Discharge Capacity Based on the APRICOT Act.

❖ Annual Average Basis: Section 403.086(7) (a), F. S., limits a backup discharge permitted under the Act to a maximum of 30 percent of the permitted reuse capacity on an annual basis.

- *Maximum annual capacity = (0.3) (1.0 MGD) = 0.30 MGD*
- *Maximum annual volume = (0.3) (1.0 MGD) (365 D/Yr) = 109.50 MG*

Under the APRICOT ACT a maximum of 0.30 MGD AADF of the effluent/reclaimed water may be permitted to discharge.

Note: *The Florida APRICOT Act of 1994 was enacted as a result of Project APRICOT, which stands for **A** **P**rototype **R**ealistic **I**nnovative **C**ommunity **o**f **T**oday.*

❖ Maximum Daily Flow:

Since effluent water/reclaim water is conveyed from the RIBs, flow from the overflow structure of outfall could be a limited factor of the permitted capacity of the effluent/reclaimed water.

Estimate Flow Rate of Water Discharging from the outfall structure:

- $Q = CA(2gH)^{0.5}$

Where: Q = the flow rate discharge (cfs)
C = Discharge Coefficient
A = Cross-section area of pipe (ft^2)
g = acceleration due to gravity (32.2 ft/s^2)
H = Elevation head differential (ft)

- Flow rate can be estimated using the Bernoulli and continuity principle:

$$Q = 0.5\ A\frac{(2gH)}{(1+K_m+K_pL)}$$

Where: Q = Discharge (cfs)
A = Cross-section area of the pipe (ft)
H = Elevation head differential (ft)
g = Elevation of gravity (ft)
Km = Coefficient of minor losses
Kp = Pipe friction coefficient = $5087\frac{n^2}{D^{4/3}}$
L = pipe length (ft)

- Based on the RIBs design information, when the water level on the Pond # 3 or Pond # 6 exceeds the elevation of 23.48', the water discharge from the Ponds may occur. For permitted capacity, the maximum effluent discharge is 0.3 MGD AADF and total annual volume shall not exceed 27.3 million gallon .

- ❖ The discharge shall not cause hydraulic flooding in the areas around the unnamed slough of Deep Creek. *(The permittee has demonstrated that the unnamed slough and the Deep Creek can handle the flow from the WWTF plus 24-hrs 100-year stormwater without flooding the around area in the basin.)*

(2) Permitted Capacity Based on the LWWD Rule 62-610.860, FAC

- Minimum Stream Dilution Factor:

  Per Rule 62-610.860(2)(g), FAC, minimum stream dilution factor is calculated based on the percentage of the days of the year that LWWD will occur, monthly maximum limitation for CBOD5 in mg/L, and design monthly maximum limitation for TKN in mg/L. Calculation of the required minimum stream dilution factor as follows:

  SDF = P(0.085 CBOD5 + 0.272 TKN – 0.484)

  Where:

SDF	=	Minimum required stream dilution factor
P	=	% of the days of the year that LWWD will occur a year
CBOD5	=	Monthly maximum limitation for CBOD5 in mg/L,
TKN	=	Monthly maximum limitation for TKN (as N) in mg/L

  With:

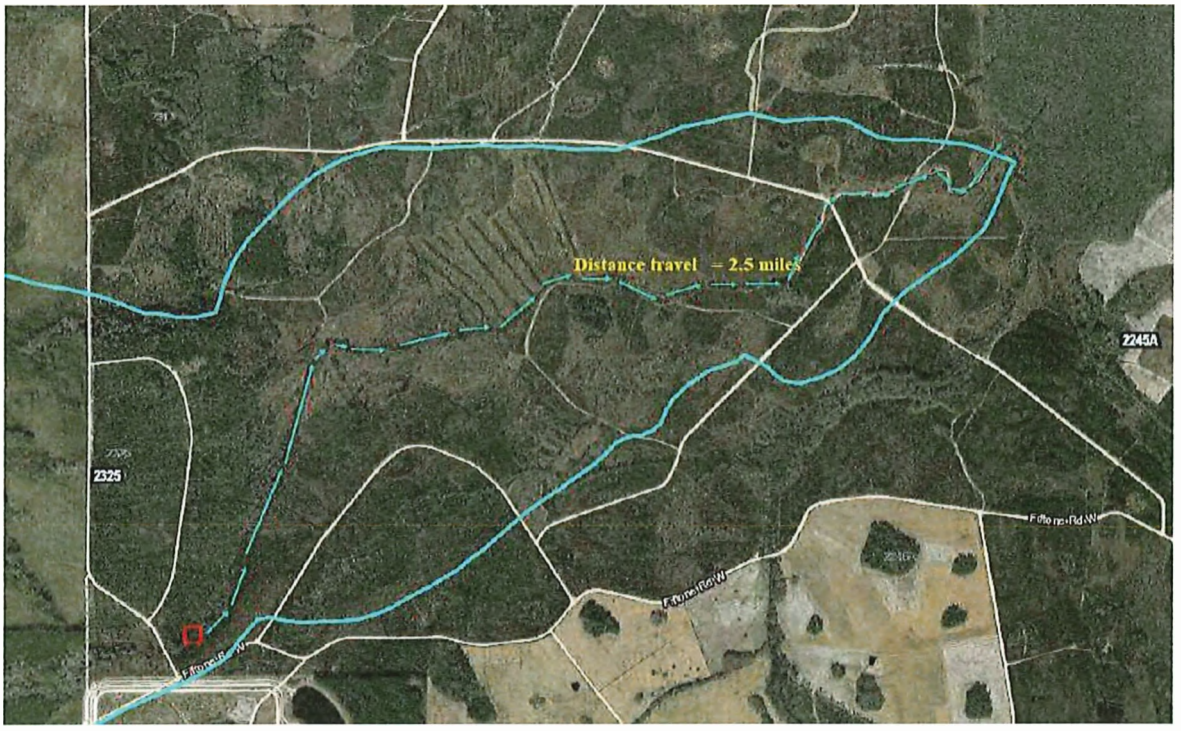
CBOD5	=	6.25 mg/L max monthly average
TKN	=	2.5 mg/L max monthly average
P	=	55 days of the year that limited wet weather discharge will occur during an average rainfall year

  $P = (\frac{55}{365}) \times 100 = 15.068$

  SDF = 15.068(0.085 x 6.25 + 0.272 x 2.5 – 0.484) = 10.96

- Neither the receiving water body at the immediate point of discharge (i.e. unnamed slough, WBID 2325) nor the water body downstream of the POD is a lakes, reservoirs, Outstanding Florida Waters, or Class I waters. However, the travel time of effluent/reclaimed water from the POD to the downstream water body may exceed 24 hours; therefore, the minimum stream dilution factor calculated above may need to be adjusted.

$$\text{Adjusted SDF} = (\frac{24}{Travel\ Time}) \text{ SDF}$$



- Rainfall Average, Estimated Flow in the Unnamed Slough, and Adjusted SDF

  The Limited Wet Weather Discharge should occur only during 50years/24hrs or higher storm events.

  Estimate the water travel time in the unnamed slough from the POD to another waterbody is 15 hours.

$$\text{Adjust SDF} = \frac{24}{15}\,10.96 = 17.5$$

(3) Permitted Capacity Based on Requirements of NNC Criteria.

(a) Rule Basis: The receiving water body at the immediate POD and water body downstream (i.e. Unnamed Slough and Deep Creek) are required to meet the estuary-specific numeric interpretations of the narrative nutrient criterion as described in Rule 62-302.532.(1).(cc).3, F.A.C (i.e. receptivity, annual geometric means of 0.093 mg/L, 1.35 mg/L, and 3.0 µg/L, for TP, TN and chlorophyll a shall not be exceeded more than once in a three year period.).

(b) Calculate Minimum Dilution

- Use mass balance calculation to determine the necessary stream dilution

- $\frac{(Q_e \times C_e + Q_a \times C_a)}{(Q_e + Q_a)} \leq C_m$

Where:

Q_e = Effluent Flow Rate

C_e = Effluent Concentration

Q_a = Ambient Water Flow Rate

C_a = Background/Ambient Water Concentration

C_m = Mix concentration = WQS

- Effluent and Ambient Characteristics
  - Effluent: $C_e = C_{TN}$ =3.0 mg/L; or

    $C_e = C_{TP}$ =1.0 mg/L
  - Ambient Water Quality: At the current time, there are no available nutrient analytical data. However, based on the fact that the water body is considered a healthy waterbody (i.e. at immediate POD or downstream) are not listed impairment, pursuant to Rule 62-4.246, FAC, the background concentrations for nutrients (i.e. TN and TP) is assumed to be one haft of the nutrient thresholds.

    Therefore, based on the above assumption:

    - Dilution calculated based on TN

      $$\frac{(Q_e \times 3\ (\frac{mg}{L}) + Q_a \times 0.675\ (\frac{mg}{L})}{(Q_e + Q_a)} \leq 1.35\ \left(\frac{mg}{L}\right)$$

      $$\frac{Q_a}{Q_e} \geq \mathbf{2.44}$$

    - Dilution calculated based on TP

      $$\frac{(Q_e \times 1\ (\frac{mg}{L}) + Q_a \times 0.0465\ (\frac{mg}{L})}{(Q_e + Q_a)} \leq 0.093\ \left(\frac{mg}{L}\right)$$

      $$\frac{Q_a}{Q_e} \geq \mathbf{10.25}$$

- Based on the current information, the discharge should be allowable when a minimum stream dilution 17.5 (i.e. $\frac{Q_a}{Q_e} \geq 17.5$ is achieved.

c) Pretreatment Regulation:

Currently, this facility's pretreatment program would not be required based on the current information.

4) **Water Quality Based Effluent Limitation (WQBEL)**

a) General Comments:

Water quality-based requirements are necessary where effluent limits are more stringent than technology- based limits are necessary to maintain or achieve federal or State of Florida water quality limits. Under Section 301(b)(1)(C) of the CWA and Rule 62-600.430(1)(b), FAC, discharges are subject to effluent limitations based on Federal or Florida WQS. Effluent limitations and/or conditions established in the draft permit are in compliance with applicable State/Tribe WQS and applicable State/Tribe water quality management plans to assure that surface WQS of the receiving waters are protected and maintained or attained.

b) Implementation:

The NPDES permits contain technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. State narrative and numerical water quality standards are used in conjunction with the Department criterion and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

c) Florida Water Quality Standards

The general and specific stream standards are provided in Chapter 62-302, FAC. The receiving water is Deep Creek (Class III fresh water, WBID 2245A). The stream designated uses are fish consumption, recreation, propagation and maintenance of a healthy, well-balanced population of fish and wildlife.

d) Permit Actions - Water Quality-Based Limits

Regulations promulgated at 40 CFR §122.44(d) and 62-600.430(1)(b), FAC require limits in addition to, or more stringent than effluent limitation guidelines (technology based). Florida Water Quality Standards (WQS) that are more stringent than effluent limitation guidelines are as follows:

(1) Five-day Carbonaceous Biochemical Oxygen Demand and Total Suspended Solid.

- The discharge is authorized under the APRICOT Act as a backup discharge for the reuse system. Section 2 of the Act (found in Section 403.086(7), F.S.) allowed for permitting of the discharge when the utility provides advanced wastewater treatment and high-level disinfection Section.
    - Advanced wastewater treatment is defined in 403.086, F.S., as having annual average limits for CBOD5, total suspended solids (TSS), total nitrogen (as N), and total phosphorus of 5,5,3, and 1 mg/L, respectively.
    - Florida's high-level disinfection criteria are contained in Rule 62-600.440(6), F.A.C

(2) pH

The limit for pH is 6.0 to 8.5 s.u. based on Rule 62-302.530(52)(c), FAC, which is more stringent than the pH limits requirements in 40 CFR §133.102(c).

(3) Bacteriological Quality

(a) Escherichia coli Bacteria (E.coli):

In July 2017, EPA approved Florida's bacteriological water quality standards in Rule 62-302.530, F.A.C., superseding the criteria in 40 CFR 131.41. The E. coli effluent limitation is included in the permit which is the bacteriological water quality standard for the discharge per Rule 62-302.530(6)(b), F.A.C.

(b) Fecal Coliform:

As discussed above, under the Apricot Act, the discharge is requirement to meet high-level disinfection criteria are contained in Rule 62-600.440(6), F.A.C. , which is required that: (1) Over a 30 day period (monthly), 75% of the fecal coliform values shall be below the detection limits; (2) any one sample shall not exceed 25 fecal coliform values per 100 mL of sample; and (3), any one sample shall not exceed 5.0 mg/L of TSS at a point before application of the disinfectant.

(4) Total Residual Chlorine:

For wildlife habitat or aquatic life, the total chlorine residuals concentration in the effluent before discharging to the surface water shall not access 0.01 mg/L. *[62-302.530(18), FAC]*

(5) Dissolved Oxygen:

(a) General Comments:

- Stream health is directly related to dissolve oxygen (DO) level which is an important water quality parameter that influences the living conditions of all aquatic organisms that require oxygen. Sources of dissolved oxygen in the waterbody include reaeration from the atmosphere, photosynthesis by aquatic plants, dissolved oxygen in the effluent and/or in coming tributaries. In the waterbody, dissolved oxygen is consumed due to oxidation of carbonaceous waste, oxidation of nitrogenous waste (nitrification), demand by sediments, and the respiration of aquatic plants. Dissolved oxygen level in the stream is function of many factors; therefore, it's hard to calculate accurately DO concentration downstream of the discharge. Responsibly, the Permittee has monitored DO around the point of discharge (POD) for the last five years of the permit cycle.

(b) Water Quality Criteria for Dissolved Oxygen:

(i) General Comments

- Stream health is directly related to dissolved oxygen (DO) level which is an important water quality parameter that influences the living conditions of all aquatic organisms that require oxygen. Sources of dissolved oxygen in the waterbody include re-aeration from the atmosphere, photosynthesis by aquatic plants, dissolved oxygen in the effluent and/or in coming tributaries. In the waterbody, dissolved oxygen is consumed due to oxidation of carbonaceous waste, oxidation of nitrogenous waste (nitrification), demand by sediments, and the respiration of aquatic plants

- EPA approved the Water Quality Standard for DO which was specified in Rule 62-302.533(1)(a)3, FAC, whereby no more than 10% of the daily average % DO Saturation value in the receiving waters shall be below 38% (applicable to the Peninsula and Everglades bioregions), in order to maintain healthy freshwater aquatic populations and protect the designated use classifications.
- The above data indicates that the segment of waterbody is in-compliance with DO requirements indicated in Chapter 62-302.533, FAC, which is at least 90 percent of the daily average percent dissolved oxygen (DO) saturation values shall not be below the 38 percent.
- The Upper St. Marys Estuary Nutrient Region includes the portion of the Deep Creek where is downstream of the proposed First Coast Utility WWTF outfall is located; while this portion of St. Marys River has yet to be formally assessed under the Impaired Waters Rule (Chapter 62-303, F.A.C.) using the dissolved oxygen criteria (62-302.533, the Department has conducted assessments as part of the NNC development that clearly document the receiving waters are healthy with respect to nutrients.

(i) Examination of whether the discharge from the Outfall D-001 would meet the requirements of Chapter 62-302.533, FAC

- Define whether the discharge from the WWTF would affect DO level of the receiving water (Define whether the existing DO conditions are maintained):
  - Define the worst-case scenario: Because the saturation concentration of DO in water is negatively related to both water temperature and salinity/conductance, the most protective permit limits (expressed as DO concentration in mg/L) could be derived using the lowest temperature observed in the monitoring data summarized in the above table. Based on the available data, the combined lowest temperature and specific conductance observed is 9.50°C and 0.0 µmho/cm, respectively. Assuming the worst case, based on a review of the ambient data from the applicant and the DEP data set, the lowest temperature and specific conductance levels from the Data can be used to determine the maximum DO saturation for the water. This will then be used to calculate the daily average effluent permit limits such that at all times throughout the year (winter to summer) the facility will meet the intent of the DO rule criteria for marine waters (62-302.533(1)(a) FAC).
  - Define Minimum DO Concentrations in the worst-case scenario: By calculating the DO saturation concentration at 9.50°C, 0.0 µmho/cm, and 1 atmosphere pressure in accordance with the methodology specified in Rule 62-303.320(11) using the Departments' DO saturation calculator found at http://www.dep.state.fl.us/water/wqssp/docs/do_saturation_calculator.xlsm, results in a saturation concentration of 11.42 mg/L.

Therefore, the minimum DO concentration considering the worst-case scenario is calculated as: 11.42 mg/L x 38.0% = 4.34 mg/L.

(ii) Modeling Dissolved Oxygen:

- **Modeling DO Sag**: DOSAG2.WK1: EPA Excel Spreadsheet calculates critical sag of DO downstream:
  - Note: The method typically gives conservative results (over-predicts DO depression) because the method used is very conservative and does not account for the replenishment of oxygen in the receiving water as a result of contact with the atmosphere (reaeration) or photosynthesis, and does not provide for vertical diffusion while using a very conservative horizontal diffusion coefficient.

⌖ Input to the Models:

❑ *DOSAG2.WK1: EPA Excel Spreadsheet calculates critical sag of DO downstream:*

❖ *Discharge/Effluent Characteristics:*

Discharge	=	*0.3 MGD = 0.56 cfs*
CBOD5	=	*3.745 mg/L (monthly average limitation)*
NBOD	=	*4.57(total ammonia + Organic Nitrogen) mg/L*
	=	*4.57 x 1(*) mg/L = 4.57 mg/L (Dec. through Mar.)*
Dissolved Oxygen	=	*5.0 mg/L*
Temperature	=	*25 °C*

❖ *Receiving Waterbody Characteristics*

*Upstream Discharge**	=	*1021.0 cfs*
*Upstream CBOD5***	=	*3.0 mg/L*
*Upstream NBOD***	=	*2.30 mg/L*
*Upstream Dissolved Oxygen***	=	*6.0 mg/L*
*Upstream Temperature***	=	*28.0°C*
Elevation	=	*183 ft NGVD*
Downstream Average Channel Slope	=	*0.00025*
Downstream Average Channel Depth	=	*0.8 ft*
Downstream Average Channel Velocity	=	*0.5 ft/s*

- *Reaeration Rate (Base e) at 27.9°C (day^{-1}): 4.50 (O'Connor & Dobbins)*
- *BOD Decay Rate (Base e) at 20°C (day^{-1}): 2.30 day^{-1} (Wright & McDonnell, 1979)*

⌖ *Output of the Model:*

1. Initial Mixed River Condition		
CBOD5 (mg/L):	=	*3.0*
NBOD (mg/L):	=	*2.3*
Dissolved Oxygen (mg/L):	=	*6.0*
Temperature (deg C):	=	*28.0*
2. Temperature Adjusted Rate Constants (Base e)		

Re-aeration (day^-1):	=	*5.44*
BOD Decay (day^-1):	=	*3.32*
3. Calculated Initial Ultimate CBODU and total BODU		
Initial Mixed CBODU (mg/L):	=	*4.4*
Initial Mixed Total BODU (CBODU + NBOD, mg/L):	=	*6.7*
4. Initial Dissolved Oxygen Deficit		
Saturation Dissolved Oxygen (mg/L):	=	*7.792*
Initial Deficit (mg/L):	=	*1.79*
5. Travel Time to Critical DO Concentration (Days):	=	*0.14*
6. Distance To Critical DO Concentration (miles):	=	*4.74*
7. Critical DO Deficit (mg/L):	=	*2.53*
8. Critical DO Concentration (mg/L):	=	*5.26*

❑ ***Streeter-Phelps Equation:***

- *Assumptions of the Model*
  - *Stream is an ideal plug flow reactor;*
  - *Steady-state flow and BOD and DO reaction conditions;*
  - *The only reactions of interest are BOD exertion and transfer of oxygen from air to water across air-water interface;*
  - *Both reoxygenation and deoxygenation are 1st order.*
- *Mathematical Equations:*
  - *Rate of deoxygenation = - $K_d C$*

    (Kd = deoxygenation constant, function of waste type of temperature)

    With the above assumption, the deoxygenation rate is equivalent to BOD (CBOD and NBOD) of waste;

    Then: $-\frac{dD}{dt} = K_d D \quad \Rightarrow \quad \frac{dD}{D} = -K_d dt$

    $\Rightarrow lnD = -K_d t + const. \quad \Rightarrow D = D_u e^{-K_d t}$ *(ii.1)*

    Where:

    K_d = *deoxygenation constant, d*
    D = *Biochemical oxygen demand (BOD), mg/L*
    D_u = *Ultimate BOD immediately downstream of effluent discharge, mg/L*
    t = *Time, d*

    Differential the equation for oxygen demand (ii.1) would yield:

    $$\frac{dD}{dt} = \frac{d}{dt}(D_u e^{-K_d t}) = -K_d D_u e^{-K_d t} \quad (ii.2)$$

- *Rate of reoxygenation = $K_r D$ Where: K_r = reoxygenation constant which is a function of temperature, mixing*

within the stream/river, wind mixing, surface films, and rapids.

$$K_r = \frac{(3.9\sqrt{v}\,1.025^{(T-20)}}{\sqrt{H^3}} \quad \textit{(O'Connor 1958)}$$

Where

T = *Temperature of Water, °C*

H = *Average depth of flow, m*

v = *Mean stream velocity, m/s*

$$\frac{dD}{dt} = \frac{d}{dt}(D_o e^{-K_r t}) = -K_r D_o e^{-K_r t}$$

- *Oxygen Deficit (D) = Saturation DO – DO in the water*

$$D = \frac{K_d}{K_r - K_d} D_u (e^{-K_d t} - e^{-K_r t}) + D_o e^{-K_r t} \textit{equation here.}$$

$$\frac{dD}{dt} = K_d D_u e^{-K_d t} - K_r D = 0$$

DO at the critical condition (Minimum value of DO)

$$D_c = \frac{K_d}{K_r} D_u e^{-K_d t}$$

Time to at which the oxygen deficit is a maximum

$$tc = \frac{1}{K_r - K_d} ln[1 - \frac{D_o(K_r - K_d)}{K_d D_u}]$$

- *Input and output of the Excel Spreadsheet:*

  (Use the worst Case Scenario: Winter Temperature and Sumer Concentrations)

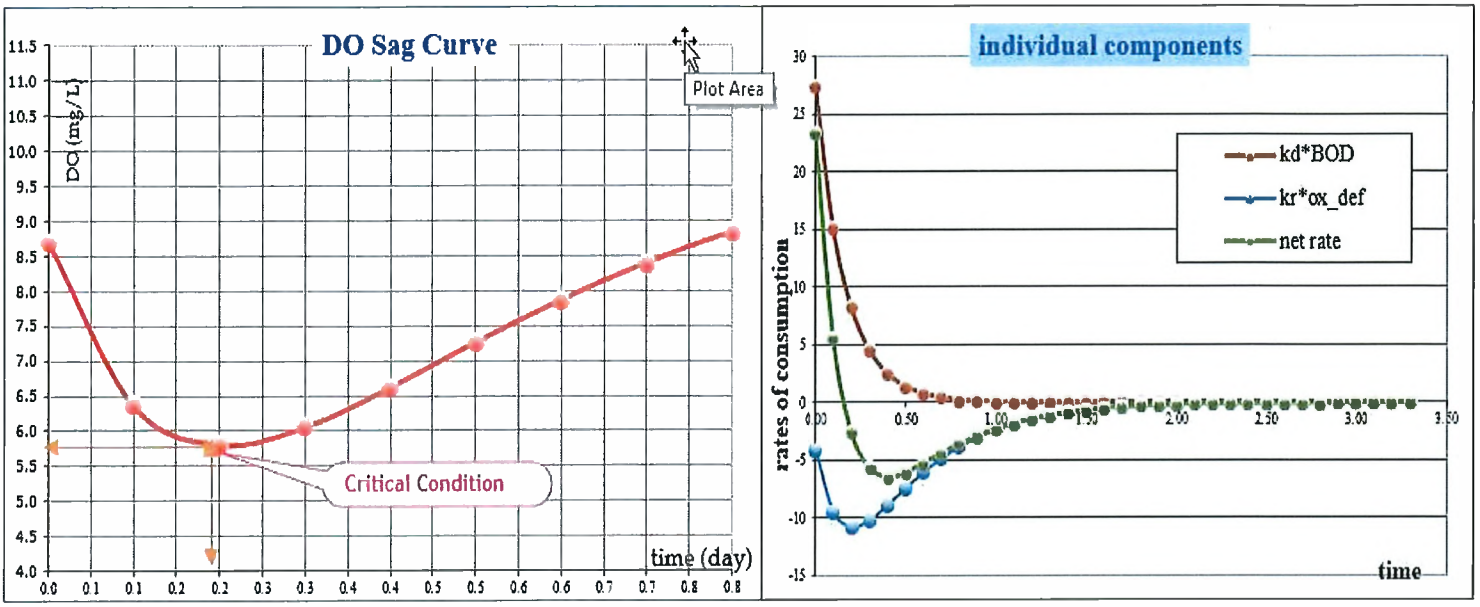
  T = 10.02°C, DO Saturation = 11.28 mg/L

  BOD = CBOD + NBOD = 12.07 mg/L

Steeter-Phelps Model/DO Sag

		initial	initial			
dt	sat DO	ox_def	BOD	kd	kr	
0.1	10.5	1.8	6.1	4.5	2.3	
				all rates as rates of consumption		
time	DO	O2-deficit	BOD	kd*BOD	kr*ox_def	net rate
0.00	8.70	1.80	6.10	27.45	-4.14	23.31
0.10	6.37	4.13	3.36	15.10	-9.50	5.60
0.20	5.81	4.69	1.85	8.30	-10.79	-2.48
0.30	6.06	4.44	1.01	4.57	-10.22	-5.65
0.40	6.62	3.88	0.56	2.51	-8.92	-6.41
0.50	7.26	3.24	0.31	1.38	-7.44	-6.06
0.60	7.87	2.63	0.17	0.76	-6.05	-5.29

		initial	initial			
dt	sat DO	ox def	BOD	kd	kr	
0.1	10.5	1.8	6.1	4.5	2.3	
0.70	8.40	2.10	0.09	0.42	-4.83	-4.42
0.80	8.84	1.66	0.05	0.23	-3.82	-3.59
0.90	9.20	1.30	0.03	0.13	-2.99	-2.87
1.00	9.49	1.01	0.02	0.07	-2.33	-2.26
1.10	9.71	0.79	0.01	0.04	-1.81	-1.77
1.20	9.89	0.61	0.00	0.02	-1.40	-1.38
1.30	10.03	0.47	0.00	0.01	-1.09	-1.07
1.40	10.14	0.36	0.00	0.01	-0.84	-0.83
1.50	10.22	0.28	0.00	0.00	-0.65	-0.64
1.60	10.28	0.22	0.00	0.00	-0.50	-0.50
1.70	10.33	0.17	0.00	0.00	-0.39	-0.38
1.80	10.37	0.13	0.00	0.00	-0.30	-0.30
1.90	10.40	0.10	0.00	0.00	-0.23	-0.23
2.00	10.42	0.08	0.00	0.00	-0.18	-0.18
2.10	10.44	0.06	0.00	0.00	-0.14	-0.14
2.20	10.45	0.05	0.00	0.00	-0.10	-0.10
2.30	10.47	0.03	0.00	0.00	-0.08	-0.08
2.40	10.47	0.03	0.00	0.00	-0.06	-0.06
2.50	10.48	0.02	0.00	0.00	-0.05	-0.05
2.60	10.48	0.02	0.00	0.00	-0.04	-0.04
2.70	10.49	0.01	0.00	0.00	-0.03	-0.03
2.80	10.49	0.01	0.00	0.00	-0.02	-0.02
2.90	10.49	0.01	0.00	0.00	-0.02	-0.02
3.00	10.49	0.01	0.00	0.00	-0.01	-0.01
3.10	10.50	0.00	0.00	0.00	-0.01	-0.01
3.20	10.50	0.00	0.00	0.00	-0.01	-0.01



(c) Conclusion and Future Action:

In establishing the DO effluent limitations and other pollutants (CBOD/NBOD) limitations, the Department has reasonable assurance that the discharge would have minimal impact to DO level of the stream. Also, the permit includes a "Reopener Clause" to reopen the permit to adjust effluent limitations or monitoring requirements if future Water Quality Based Effluent Limitation determinations, water quality studies, DEP approved changes in water quality standards, or other information show a need for a different limitation or monitoring requirement.

(6) Total Ammonia Nitrogen (TAN)

(a) General Comments: The term total ammonia refers to two chemical species of ammonia which are in equilibrium in water (NH_3, un-ionized and NH4+, ionized). Tests for ammonia usually measure total ammonia (NH_3 plus NH_4+).

- As mentioned above, in water, ammonia (NH3) exists in equilibrium with dissolved ammonium ions (NH4+). TAN (total ammonia nitrogen) is the total amount of nitrogen in the forms of NH3 and NH4+ in water. Ammonia exists in two forms: un-ionized NH3, and ionized NH4+. The relative concentration of each of these forms of ammonia in the water column is primarily a function of pH, temperature and salinity. Shifts in pH strongly influence ammonia speciation by modification the equilibrium (⇌) concentration of unionized ammonia (NH_3) and ionized ammonia (NH_4^+).

$$NH_3 + nH_2O \rightleftharpoons NH_3.nH_2O \rightleftharpoons NH_4^+ + OH^- + (n-1)\,H_2O$$

To estimate value of total ammonia nitrogen (NH_3 plus NH_4^+) in various pH and temperature conditions at zero salinity, the above equation can be abbreviated as:

$$NH_4^+ \rightleftharpoons H^+ + NH_3$$

- Total Ammonia Nitrogen (TAN) = Ammonia (NH_3) + Ammonium (NH_4^+)
- The ionization constant (K_a) is

$$K_a = \frac{[H+][NH3]}{[NH4+]}$$

$$-\log K_a = -\log\{\frac{[H^+][NH_3]}{[NH_4^+]}\}$$

$$pK_a = -\log [H+] - \log \frac{[NH3]}{[NH4+]}$$

$$pK_a = pH - \log \frac{[NH3]}{[NH4+]}$$

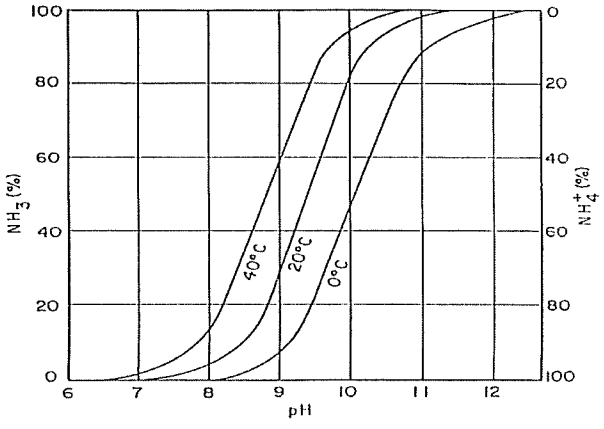
$$\mathbf{pH = pk_a + \log \frac{[NH3]}{[NH4+]}} \qquad (v.1)$$

Where:

pH= pH of the effluent, standard unit (s.u.)
$[NH_3]$ = Concentration unionized ammonia; mg/L
$[NH_4^+]$ = Concentration ionized ammonia; mg/L
Ka= ionization constant which is dependent on the temperature.
t = Temperature water, degree Celsius
= Temperature water, degree Kelvin = t + 273.2

$$pKa = -\log K_a = 0.09018 + \frac{2729.92}{T}$$

$$\mathbf{pH = 0.09018 + \frac{2729.92}{T} + \log \frac{[NH3]}{[NH4+]}} \qquad (v.2)$$



❖ EPA has updated the freshwater ammonia aquatic life ambient water quality criteria in accord with the provisions of Section 304(a) of the Clean Water Act to revise

Ambient Water Quality Criteria (AWQC in order to reflect the latest scientific knowledge. Literature searches for laboratory toxicity tests of ammonia on freshwater aquatic life, published from1985 to 2012, identified new studies containing acute and chronic toxicity data acceptable for criteria derivation. The 2013 freshwater acute and chronic aquatic life criteria for ammonia is more fully protect the aquatic community than previous criteria, and are represented by a single value each for acute and chronic criteria. The criteria magnitude is affected by pH and temperature.

- The EPA – Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater 2013 recommended the acute criterion concentration (CMC) and chronic criterion concentration (CCC):

$$CMC = MIN\{(\frac{0.275}{1+10^{(7.204-pH)}} + \frac{39.0}{1+10^{(pH-7.204)}})\ [0.7249 \times (\frac{0.0114}{1+10^{(7.204-pH)}} + \frac{1.6181}{1+10^{(pH-7.204)}})\ \ (23.12 \times 10^{(0.036\times(20-T))})]\}$$

$$CCC = 0.8876 \times (\frac{0.0278}{1+10^{(7.688-pH)}} + \frac{1.1994}{1+10^{(pH-7.688)}})(2.126 \times 10^{(0.028\times(20-\max(T))})$$

- The Class III freshwater standard of 0.02 mg/L for unionized ammonia has been replaced by the Total Ammonia Nitrogen (TAN). The TAN criteria have been adopted by the Florida Environmental Regulation Commission and became effective for state purposes on 02/17/2016. The new TAN criteria also have been approved by USEPA.

(b) Rule Bais: As required by Rule 62-302.530(11)(c), FAC, the 30-day average TAN value shall not exceed the average of the CCC value, which is calculated from the above equation, with no single value exceeding 2.5 times the value from the equation:

$$TAN\ (Criterion) = 0.8876 \times (\frac{0.0278}{1+10^{(7.688-pH)}} + \frac{1.1994}{1+10^{(pH-7.688)}})(2.126 \times 10^{(0.028\times(20-\max(T,7))})$$

Where:

- T (effluent temperature in degrees Celsius) and effluent pH are paired measurements associated with the effluent total ammonia sample, i.e. monitored at the same time and location as the effluent total ammonia sample.
- MAX (T,7) means that the temperature value included in the equation should be the actual measured temperature ("T") in degrees Celsius (°C), or 7°C, *whichever is greater*.
- pH must be in the range of 6.5 to 9.0. In the TAN criterion calculation, the pH shall be set at 6.5 for effluent pH <6.5 and set at 9.0 for effluent pH >9.0.
- Effluent shall be monitored for pH and temperature at the same time and location as effluent total ammonia.

Excel Spreadsheet calculations of TAN criterion (Total Ammonia Nitrogen Criteria Calculator) is available using the below link: https://floridadep.gov/dear/water-quality-standards-program/documents/total-ammonia-nitrogen-calculator%C2%A0

⊕ Calculate TAN Limits:

- Monthly Average TAN Limit = Arithmetic Average TAN Criterion Values of the Month

$$= \frac{\sum TAN\ Criterion\ Value}{\sum No.\ of\ values}$$

- Single Sample TAN limit = 2.5 x Calculated TAN Criterion Value

⊕ Determine TAN Compliances with the Limits:

- Monthly Avg TAN Compliance = Mon Avg. TAN Effl. – Mon Avg. TAN Limit ≤ 0.0
- Single Sample TAN Compliance = Single Sample TAN Effl. – Single Sample TAN Limit ≤ 0.0

⊕ The 30-day Average value is equivalent with the chronic criterion, which are shown on the Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater 2013, published by U.S. Environmental Protection Agency, Office of Water. The document can be downloaded using the below link:

https://www.epa.gov/sites/production/files/2015-08/documents/aquatic-life-ambient-water-quality-criteria-for-ammonia-freshwater-2013.pdf

(7) Nutrients - Narrative Nutrient Criterion of Numeric Nutrient Standard

(a) Background Information:

- Excessive nutrients (especially, total nitrogen in marine water) constitute one of the most severe water quality problems facing the State of Florida. Therefore, the Department's policy is to limit or at least minimize the man-induced nutrients (total nitrogen and total phosphorus) into waters of the State; particular consideration shall be given to the protection from further nutrient enrichment.
- The Department adopted numeric nutrient criteria (NNC). The NNC in paragraph 62-302.530(47)(b), F.A.C., states that "in no case shall nutrient concentrations of a body of water be altered so as to cause an imbalance in natural populations of aquatic flora or fauna."
- The effluent discharges from Outfall D-001 to an unnamed Slough (Class III fresh waters, WBID# 2325), which then flows to Deep Creek (Class III, fresh, WBIDs 2245A & 2245), which is Upper St. Marys River Basin.

(b) NNC Requirements:

- Regarding the unnamed Slough (Class III fresh waters, WBID# 2325), and Deep Creek (Class III, fresh, WBIDs 2245A): The NNC are applicable to the waterbodies, which are required to meet the narrative water quality criteria for nutrients in Rule 62-302.532(1) (cc).3, F.A.C. that are annual geometric means concentrations for TN, TP, and chlorophyll a shall not exceed values of 0.093 mg/L, 1.35 mg/L, and 3.0 µg/L, respectively, more than once in a three year period.
- Regarding St. Marys River (WBID 2097): The river is required to meet the estuary-specific numeric interpretations of the narrative nutrient criterion as described in Rule 62-302.532.(1).(cc)., F.A.C.

(c) Nutrients Requirements for the Discharge:

- At the current time, there is no available biological data (such as flora and founa/SCI, etc.) or nutrients data, but these waterbodies are not listed as impaired for nutrients. The waterbodies would be deemed healthy and meet the narrative water quality criterion for nutrients in Rule 62-302.532(1) (cc), F.A.C.
- Since the waterbodies Since the segment of the unnamed slough (WBID #2325) and Deep Creek, (WBID #2245A, Class III fresh waters) are considered a healthy waterbody, the First Coast Utility WWTF discharge may be allowable if it would not cause or contribute to exceed the nutrient limits.

(d) Nutrients Loading Limits:

(i) Under the APRICOT Act *(Section 403.086(8), Florida Statutes (F.S.)*

- Flow Rate: The discharge shall be limited to 30% of the permitted reuse capacity and shall authorize when the adjusted minimum stream dilution factor is achieved.

  Flow Rate = 1.0 MGD × 30% = 0.3 MGD annual average daily flow

- Concentration Limits for Nutrients (TN and TP):
  - Section 2 of the APRICOT Act (found in Section 403.086(7), F.S.) allowed for permitting of backup discharges for reuse systems when the utility provides advanced wastewater treatment (403.086, F.S.), and high-level disinfection (Rule 62-600.440(5), Florida Administrative Code, (F.A.C)).

    Annual Average Concentration limit for TN ≤ 3.0 mg/L

    Annual Average Concentration limit for TP ≤ 1.0 mg/L

(ii) Under Limited Wet Weather Discharge (LWWD) (Rule 62-610.860, FAC)

- Minimum Stream Dilution Factor:

  As discussed above, Per Rule 62-610.860(2)(g), FAC, minimum stream dilution factor is calculated based on the percent of the days of the year that LWWD will occur, monthly maximum limitation for CBOD5 in mg/L, and design monthly maximum limitation for TKN in mg/L. Calculation of the required minimum stream dilution factor as follows:

  SDF = P(0.085 CBOD5 + 0.272 TKN – 0.484)

  Where:

SDF	=	Minimum required stream dilution factor
P	=	% of the days of the year that LWWD will occur a year
CBOD5	=	Monthly maximum limitation for CBOD5 in mg/L,
TKN	=	Monthly maximum limitation for TKN (as N) in mg/L

  With:

  CBOD5 = 6.25 mg/L max monthly average

TKN	=	2.5 mg/L max monthly average
P	=	55 days and shall not exceed 25 percent which is equivalent to 91 days during the year.

$P = (\frac{55}{365}) \times 100 = 15.068$

SDF = 15.068(0.085 x 6.25 + 0.272 x 2.5 – 0.484) = 10.96

- Neither the receiving water body at the immediate point of discharge (i.e. unnamed dough, WBID 2325) nor the water body downstream of the POD is a lakes, reservoirs, Outstanding Florida Waters, or Class I waters. However, the travel time of effluent/reclaimed water from the POD to the downstream water body may exceed 24 hours; therefore, the minimum stream dilution factor calculated above may need to be adjusted.

$$\text{Adjusted SDF} = (\frac{24}{Travel\ Time}) \text{ SDF}$$

Estimate the water travel time in the unnamed slough from the POD to another waterbody is 15 hours; therefore, adjusted minimum stream dilution factor is:

$$\text{Adjusted SDF} = (\frac{24}{15})\ 10.96 = 17.5$$

(iii) Under the Estuary-Specific Numeric Interpretations of the Narrative Nutrient Criterion (Rule 62-302.532.(1).(cc).3, FAC)

- Per Rule 62-302.532.(1).(cc).3, FAC, the receiving water body at the immediate POD and water body downstream (i.e. Unnamed Slough and Deep Creek) are required to meet the estuary-specific numeric interpretations of the narrative nutrient criterion as described in Rule 62-302.532.(1).(cc).3, F.A.C (i.e. receptivity, annual geometric means of 0.093 mg/L, 1.35 mg/L, and 3.0 µg/L, for TP, TN and chlorophyll a shall not be exceeded more than once in a three year period.).
- Calculate Minimum Dilution
  - Use mass balance calculation to determine the necessary stream dilution
    - $\frac{(Q_e \times C_e + Q_a \times C_a)}{(Q_e + Q_a)} \leq C_m$

Where:

Q_e	=	Effluent Flow Rate
C_e	=	Effluent Concentration
Q_a	=	Ambient Water Flow Rate
C_a	=	Background/Ambient Water Concentration

C_m = Mix concentration = WQS

- Effluent and Ambient Characteristics
  - Effluent: $C_e = C_{TN}$ =3.0 mg/L; or

    $C_e = C_{TP}$ =1.0 mg/L
  - Ambient Water Quality: At the current time, there is no available nutrient analytical data. However, based on the fact that the water body is considered a healthy waterbody (i.e. at immediate POD or downstream) are not listed impairment, pursuant to Rule 62-4.246, FAC, the background concentrations for nutrients (i.e. TN and TP) is assumed to be one haft of the nutrient thresholds.

    Therefore, based on the above assumption:

    - Dilution calculated based on TN

$$\frac{(Q_e \times 3\ (\frac{mg}{L}) + Q_a \times 0.675\ (\frac{mg}{L})}{(Q_e + Q_a)} \leq 1.35\ \left(\frac{mg}{L}\right)$$

$$\frac{Q_a}{Q_e} \geq \mathbf{2.44}$$

    - Dilution calculated based on TP

$$\frac{(Q_e \times 1\ (\frac{mg}{L}) + Q_a \times 0.0465\ (\frac{mg}{L})}{(Q_e + Q_a)} \leq 0.093\ \left(\frac{mg}{L}\right)$$

$$\frac{Q_a}{Q_e} \geq \mathbf{10.25}$$

- Based on the current information, the discharge should be allowable when a minimum stream dilution 17.5 (i.e. $\frac{Q_a}{Q_e} \geq \frac{17.50}{1}$) is achieved.

(iv) Overall Requirements:

To comply with the Apricot Act, LWWD and NNC, the discharging of the final treated effluent from the Outfall D-001 may be allowable, when all the below conditions are met:

- Flow Rate = 0.30 MGD AADF
- Adjusted SDF = 17.5 or the rainfall event ≥ 24 hours/50-year storm event
- Number of discharge days = 55 days/year but not greater than 91 days.
- Concentrations concerned pollutants:

  The effluent will have annual average limits for CBOD5, total suspended solids, total nitrogen (as N), and total phosphorus of 5,5,3, and 1 mg/L, respectively and has received high level disinfection.

❖ Mass Loading Limits

Mass Load (lbs/day) = Flow *(MGD)*x Nutrient Conc. *(mg/L)* x 8.34 $(\frac{lbs}{gal})$

Mass Load TN = 0.3 MGD x 3.0 mg/L x 8.34 $(\frac{lbs}{gal})$ = 7.506 lbs/day = 683 lbs/year

Mass Load TP = 0.3 MGD x 1.0 mg/L x 8.34$(\frac{lbs}{gal})$ = 2.502 lbs/day = 227 lbs/year

(8) Measurement to protect 303(d) List impaired waters

Outfall D-001 is located at WBID 2325, which is not in the current DEP 303 (d) List (*FDEP Comprehensive Verified List, Updated with 2020-2022 Biennial Assessment, adopted on July 11, 2022.) or EPA 303(3) List*. However, the downstream waterbody (WBIDs 2245A and 2245) are listed as impaired for iron and lead in both DEP 303(3) List and EPA 303 (d) List. Mercury (in fish tissue) was delisted since a TMDL for mercury was developed and adopted.

(i) Mercury: Florida has a statewide mercury TMDL. Section 8.3 of the statewide mercury TMDL provides wasteload allocation for NPDES wastewater discharges. This section states "In cases where there are sufficient data to determine whether the NPDES discharger has quantifiable concentrations of mercury, NPDES permits except domestic facilities discharging less than 1 MGD will include a set of additional conditions for implementation of a mercury minimization program to ensure that point sources are discharging the minimum amount of mercury practicable." The facility has a permitted capacity of 1.0 MGD and receives only approximate 100% domestic wastewater from the residentials. Therefore, it is reasonable to assume that the discharge does not impact on the mercury level of the receiving waterbody. Upon completion and placing into service of the WWTF, the permittee shall monitor for mercury in the effluent discharging from the Outfall D-001.

(ii) Iron: Iron is listed as impaired parameters of segment waterbodies downstream of the point of discharge. At the current time, there is no data to determine whether the discharge will cause or contribute to a further exceedance of iron level in the receiving waterbodies. The new permit will require monitoring for iron, total recoverable for maintaining data on the impact of the discharge to the iron level of the surface water bodies.

(iii) Lead: Lead is listed as impaired parameters of segment waterbodies downstream of the point of discharge. At the current time, there is no data to determine whether the discharge will cause or contribute to a further exceedance of lead level in the receiving waterbodies. The new permit will require monitoring for lead, total recoverable for maintaining data on the impact of the discharge to the lead level of the surface water body

(9) **Whole Effluent Toxicity**: In order to provide reasonable assurance that the discharge will not adversely affect the designated use of the receiving water, whole effluent toxicity (WET) testing is required. Acute and chronic WET tests are proposed for the facility based on the following reasons:

- The *intended* discharge frequency to D-001 may not accomplish the sampling regime required for chronic testing. Per 62-620.620(3)(f) FAC, facilities with intermittent discharges at frequencies and durations that do not enable sampling according to Section 8.3., in Methods EPA-821-R-02-013 and EPA-821-R-02-014, shall be required to conduct ***acute*** definitive tests starting with 100% effluent and using a minimum of five dilution concentrations in accordance with paragraph 62-620.620(3)(h), F.A.C.
- The permit will require reporting the number days of discharge from Outfall D – 001 per month.
- Grab samples of final effluent are allowed for both chronic and acute WET tests for First Coast Regional Utilities WRF due to the extreme variability in the duration of discharge on a given day, if any.

5) **Ambient Water Monitoring Program**:

The Permittee shall conduct regular monitoring of the segment of the unnamed slough near the outfall D-001 for maintaining data on the impact of the discharge to the water quality of the surface water body.

6) **Downstream Waterbodies Protections:** The effluent discharging from the Outfall D-001 includes limitations that protect the downstream waterbodies. The discharge should not adversely affect the designated use of the downstream waterbodies.

7) **Senate Bill 64:**

Firth Coast Regional Utility WWTF is an advanced treatment facility with high-level disinfection and meet Class I reliability. One hundred percent of the effluent generated from the facility will be reused via slow-rate public access reuse sites. Surface water discharge to the unnamed slough will be used as a backup method disposal of the effluent during extreme wet weather conditions.

The Senate Bill authorizes the permitted wet weather discharge or APRICOT Act discharge or combined the two.

8) **Antidegradation Analysis:**

The new First Coast Regional Utility WRF surface waters discharge must meet the antidegradation provisions of the Clean Water Act. Also, Florida Administrative Code, Chapter 62-4.242 and 62-302.300 contain the requirements for determining if proposed projects will degrade the quality of surface waters. In summary, when reviewing a permit application for a surface water discharge, the following criteria must be addressed:

- Whether water quality standards will be violated
- Whether existing uses are being maintained including consideration of recreational and commercial uses, as well as biological communities and protected species
- Whether the proposed discharge is necessary or desirable under state and federal standards and under circumstances that are clearly in the public interest. This requires considerations of
  - a balancing test,
  - an options review

The following conclusions were drawn from an analysis of the water quality effects for the antidegradation study:

(1) Maintain Water Quality:

- The analysis demonstrates that 0.3MGD of highly treated effluent discharged to the unnamed slough, which flows into Deep Creek (Upper St. Mayer River Basin) will not measurably change the average background levels of most conventional pollutants, including:
  - Biochemical oxygen demand
  - Total suspended solids
  - Total Ammonia
  - Nitrate plus Nitrite
  - Total nitrogen
  - Total phosphorus
  - Dissolved oxygen
- The WRF will have a minimal effect on flows and water quality in the unnamed slough/Deep Creek, and the increase in nutrient concentrations will not be significant, because the new First Coast Regional Utility WRF will be 100% reuse of reclaimed water/effluent. The highly treated effluent is conveyed to the reclaimed water reuse system.
- The discharge will also have a minimal effect on other constituents, such as conductivity, and pH. Fecal coliform is expected to meet Class III water quality criterion.

(1) Maintenance of Existing Uses:

The Apricot Act discharge/LWWD is a backup disposal of reuse of reclaimed water during extreme wet weather condition. In addition, the treated effluent meets Advanced Wastewater Treatment (AWT) and high-level disinfection. Therefore, the discharge is not expected to change the existing uses of the unnamed slough, Deep Creek and estuaries in the Upper St. Marys River.

(a) Existing Uses Review:

- Recreational Use: The lower reaches of Deep Creek may occasionally be used as a natural greenway, but it is not navigable. The creek upstream is not easily accessible to the general public. The addition of highly quality treated effluent to the unnamed slough and Deep Creek watershed near First Coast Regional Utility WRF should not alter these uses.
- Commercial: There is no direct commercial use of the unnamed slough and Upper Stream of the Deep Creek. The addition of highly quality treated effluent to of the unnamed slough and Upper Stream of the Deep Creek watershed should not alter this use.
- Biological Communities: No changes to the biological communities are expected as a result of a temporary backup discharge. The WRF outfall to the creek will be located at the edge of the floodplain and will not physically alter the unnamed slough. The

available data demonstrate that the historical stream's water quality supports a healthy Stream Condition Index score. The Apricot Act/LWWD backup discharge should not alter the biological communities of the creeks.

- Vegetation: The outfall (D-001), which is also stormwater outfall will be located at the edge of the floodplain and will not physically alter the creek. The discharge should not alter the vegetation adjacent to Big Davis Creek

- Fish: No significant fish communities have been observed near the proposed outfall. Downstream, Big Davis Creek is small and does not support significant habitat until at least 2.5 miles downstream of the WRF (straight line). Julington Creek is further downstream, about 3 miles, straight line. Big Davis Creek is subject to substantial flows and the WRF discharge is relatively small. The temporary use by the WRF as a backup discharge will not affect the fish communities.

- Habitat for Benthic Organisms: Big Davis Creek is normally shallow to conduct significant sampling of organisms in the water column. The bottom of the main channel that is constantly flowing has a sandy bottom and is shallow. The water column may not always stretch across the entire bottom of the creek bed. The Apricot Act/LWWD discharge should not alter the habitat for benthic organisms in Big Davis Creek.

(b) Protected Species and Historical Review:

No protected species have been documented to use Big Davis Creek near the WRF. Consultant Engineers, Jacobs, have consulted with the Florida Fish and Wildlife Conservation Commission (FWC) about potential Black Creek crayfish (state-designated as threatened) and determined that there was not suitable habitat for the species. The discharge should not alter the habitat for the crayfish in any event. The floodplain on the overbanks is large to convey hundreds of mgd of stormwater flow, and the WRF is relatively small.

(2) Demonstration of Public Interest:

Construction of the First Coast Regional Utilities WRF to meet demands from a growing population is a primary public health concern. The treated effluent is 100% reused via slow-rate public access irrigation sites. Section 2 of the Apricot Act (found in Section 403.086(7), F.S.) allowed for permitting of backup discharges for reuse systems when the utility provides advanced wastewater treatment and high-level disinfection

(a) Demonstration of Public Interest

Construction of domestic wastewater treatment facility is a necessary and essential public health service; therefore, it is in the public interest.

Paragraph 62-4.242(1)(c), F.A.C., requires a permit applicant to demonstrate that reuse of domestic reclaimed water and/or the use of other discharge locations, land application, or reuse are not economically and technologically reasonable alternatives that could minimize or eliminate the need for the discharge to surface water. All reclaimed water will be reused via slow-rate public access reuse system. First Coast Regional Utilities WRF also includes a RIBs/Ponds system, which have

30 days storage capacity. Although the reclaimed water is 100% reuse and with a big storage system, a surface water backup discharge may be needed during wet weather condition.

(b) Public Interest Balancing Test

- Benefit to Public Health, Safety, and Welfare

  Construction of domestic wastewater treatment facility is a necessary and essential public health service. Regional sanitary collection, treatment, and disposal allows for better reliability and regulatory oversight in providing this service. The construction of first Coast Regional Utility WRF will benefit public health, safety, and welfare by removing existing plant expansion from residential development and effluent disposal out of the Upper St. Marys River basin surface waters' service area and increasing reuse water supply for the region.

- Conservation of Fish and Wildlife:

  The discharge should be not anticipated to affect fish, wildlife, protected species, or their habitat in any permanent manner.

- Surface Water Improvement and Management Plan Consistency

  No SWIM plan exists specifically for Upper St. Marys River Basin. The St. Johns River Water Management District has adopted a SWIM plan for the LSJR that includes the following six goals (SJRWMD et al., 2008):

  - Restore and protect the basin's surface water quality to meet state-designated use classifications.
  - Restore and protect natural systems associated with the basin's surface waters.
  - Increase public awareness of the water resource problems in the basin to generate public support for restoration and protection efforts.
  - Enhance interagency coordination and management of water resources throughout the basin.
  - Implement erosion and sediment management to protect and improve living resources and water quality in the LSJR basin.
  - Protect living resources in the LSJR basin from toxic pollution to ensure protection and propagation of healthy and well-balanced communities.

  Construction of First Coast Regional Utility WRF should be not anticipated to affect water quality conditions or natural systems in the Upper St. Marys River basin. First Coast Regional Utility WRF with a full reclaimed water reuse supplier fully supports the SWIM plan.

9) **Reasonable Potential Analysis**

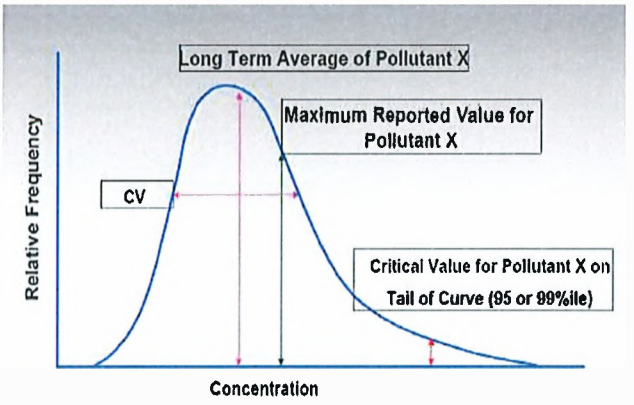
(a) Introduction:

The Department performed a reasonable potential (RP) analysis for the parameters of concern using the Technical Support Document for Water Quality-based Toxics Control (TSD) approach. For pollutants for which the RP analysis shows the potential to exceed in-stream water quality values, WQBELs must be calculated as required at 40 C.F.R. § 122.44(d).

The data that the Department used for the RP analyses were obtained from the 2023 application and historical DMR data. However, not all of these data were used to evaluate RP.

(b) Procedure to Conduct Reasonable Potential Analysis:

- Determine the total number of effluent data values for the pollutant of interest (n) and identify the Highest Effluent Concentration (HEC), which is the highest value of the dataset for that parameter.
- Determine the coefficient of variation (CV) of the dataset. The CV is equal to the standard of deviation divided by the long-term average, rounded to one decimal place. The default CV for fewer than 10 data values is 0.6, as specified in Box 3-2 of the TSD.



- Determine the appropriate confidence level for the RP analysis (for this permit, the Department used the 99th confidence level, recommended by the TSD in section 5.5.4) and determine the Reasonable Potential Multiplier (RPM), using Table 3-1 of the TSD. If n is greater than 20, the TSD states to use the multiplier assigned to 20 samples as identified on Table 3-1 of the TSD.
- Calculate the Adjusted Effluent Concentration (AEC): AEC = HEC x RPM.
- Determine if the AEC is greater than the Water Quality Criterion (WQC). For those parameters where the AEC > WQC, continue with the RP analysis.
- Calculate the Dilution Factor.
- Calculate the Maximum Receiving Water Concentration (MRWC), using the AEC, the Instream Background Concentration, and the Dilution Factor.
- Compare the MRWC to the WQC. If MRWC > WQC, then RP is found.

(c) Data: At the current time, there is no available data to conduct reasonable potential analysis. However, the permittee provided a reasonable assurance that the discharge will not cause or distribute to the exceedance of WQS of receiving waterbodies.

10) **Endangered Species Conservation**

According to the most recent county listing available at US Fish and Wildlife Service (USFWS), Information for Planning and Consultation (IPaC), https://ipac.ecosphere.fws.gov/, Duval/Clay County, Florida has seven candidate, threatened, or endangered species listed. The Eastern Black Rail (Laterallus jamaicensis ssp. jamaicensis), Rufa Red Knot (Calidris canutus rufa), Wood Stork (Mycteria americana) and Piping Plover (Charadrius melodus) are listed as threatened species for this county; Red-cockaded Woodpecker (Picoides borealis) is listed as endangered species. Hawksbill Sea Turtle (Eretmochelys imbricata) and Leatherback Sea Turtle (Dermochelys coriacea) are listed as endangered species; Red-cockaded Woodpecker (Picoides borealis) is listed as endangered species in Brandford County. Eastern Indigo Snake (Drymarchon couperi), Green Sea Turtle (Chelonia mydas), and Loggerhead Sea Turtle (Caretta caretta) are species listed as threatened species for this county. The Monarch Butterfly (Danaus plexippus) is a species under consideration for official listing for which there is sufficient information to support listing for this county. In accordance with requirements under section 7(a)(2) of the Endangered Species Act, DEP has reviewed this permit for its effect on listed threatened and endangered species and designated critical habitat. After review, DEP has determined that the reissuance of this permit will have "no effect" on listed threatened and endangered species nor will adversely modify designated critical habitat. DEP makes this determination based on the following:

(a) The Eastern Black Rail inhabits hardwood and coniferous forest habitats, nesting in trees and bushes and feeding with aquatic beetles, spiders, snails, small crustaceans. The permitted discharge is not anticipated to affect its critical habitat.

(b) Wood Storks nest in mixed hardwood swamps, sloughs, mangroves, and cypress domes/strands in Florida. They forage in a variety of wetlands including both freshwater and estuarine marshes. The permitted discharge is not anticipated to affect its critical habitat.

(c) Rufa Red Knot typically prefers sheltered coastal habitats, with large intertidal mudflats or sandflats. This includes inlets, bays, harbours, estuaries and lagoons. Rufa red knots eat small bivalves, especially mussels and their larvae, clams, and cockles. They also consume amphipods, gastropods, marine worms, chitons, shrimp, and tiny crabs. The permitted discharge is not anticipated to affect its critical habitat.

(d) Piping Plovers inhabit sandy beaches with little vegetation and access to mudflats and tidal creeks for feeding. Their diet consists of marine worms, fly larvae, beetles, crustaceans, mollusks, and other small marine animals and their eggs. The permitted discharge is not anticipated to affect its critical habitat.

(e) Hawksbill Sea Turtles and Loggerhead Sea Turtle inhabit in coral reefs, rocky areas, lagoons, and shallow coastal areas. Hawksbill turtles are feeding on both plants and other animals, but their preferred food in many areas is sea sponges. They will also eat marine algae, corals, mollusks, tunicates, crustaceans, sea urchins, small fish, and jellyfish. The permitted discharge is not anticipated to affect its critical habitat.

(f) Leatherback Sea Turtles can be found in marine waters throughout the Atlantic, Pacific, and Indian Oceans. They also nest on sandy beaches in the same range. Nesting in the United States usually occurs in Florida. Leatherbacks feed mainly on pelagic (open ocean) soft-bodied invertebrates such as jellyfish and tunicates. Their diet may also

include squid, fish, crustaceans, algae, and floating seaweed. The permitted discharge is not anticipated to affect its critical habitat.

(g) The Everglades Snail Kite inhabits shallow freshwater marshes and shallow grassy shorelines of lakes. Everglades snail kite feeds almost exclusively on apple snails (Pomacea), which are captured at or near the water's surface. The permitted discharge is not anticipated to affect its critical habitat. Effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

(h) The Red-cockaded Woodpecker inhabits in riparian systems, or areas located near rivers and streams, and associated pine woods in northern Florida; in the Big Cypress swamp; and in swamp forests associated with rivers/waterways. Red-cockaded woodpecker feeds mainly on insects and other arthropods, especially ants and beetles, also termites, roaches, centipedes, and others such as wild fruits and pine seeds. The permitted discharge is not anticipated to affect its critical habitat.

(i) Eastern Indigo Snake inhabits pine flatwoods, hardwood forests, moist hammocks, and areas that surround cypress swamps. They can be found throughout Peninsular Florida and southeastern Georgia. The Eastern indigo snake's diet primarily consists of a variety of species, including small mammals, birds, toads, frogs, turtles and their eggs, lizards, and small alligators. The permitted discharge is not anticipated to affect its critical habitat.

(j) Monarch Butterfly habitats prairies, meadows, grasslands and along roadsides and feeds on the nectar from flowers. The permitted discharge is not anticipated to affect its critical habitat.

11) **Future Actions:**

➢ Permit includes a "re-opener clause" which is:

The permit shall be revised, or alternatively, revoked and reissued in accordance with the provisions contained in Rules 62-620.325 and 62-620.345, F.A.C., if applicable, or to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act (the Act), as amended, if the effluent standards, limitations, or water quality standards so issued or approved:

- Contains different conditions or is otherwise more stringent than any condition in the permit/or;
- Controls any pollutant not addressed in the permit;
- The permit as revised or reissued under this paragraph shall also contain any other requirements of the Act then applicable.
- The permit may be reopened to adjust effluent limitations or monitoring requirements should future Water Quality Based Effluent Limitation determinations, water quality studies, DEP approved changes in water quality standards, or other information show a need for a different limitation or monitoring requirement;
- The Department or the EPA may develop a Total Maximum Daily Load (TMDL) during the life of the permit. Once a TMDL or new water quality standards have been established

and adopted by rule, the Department shall revise this permit to incorporate the final findings of the TMDL or water quality standards. Changes may include proposed or promulgated EPA Nutrient Numeric and would include an opportunity for an administrative notice process.

- Modify the Outfall D-001 which maximizes the sheet flow and minimizes channel flow through Big Davis Creek.
- Increase monitoring for Big Davis Creek and Julington Creek which is downstream to manage the impact of the discharge to the waterbody.

12) **Historical and Archeological Preservation Considerations:**

Copy of the proposed permit has sent to the Florida Division of Historical Resources – Florida Department of State for review and comments on historical and/or archeological sites of the new construction.

iii. **Conclusion:** The facility has provided reasonable assurance that the discharge will not adversely affect the designated use of the receiving water. Ambient data, as well as other available data, have been evaluated in accordance with the Department's reasonable assurance procedure to ensure that no limits other than those included in this permit are needed to maintain Florida water quality standards.

b. Land Application Reuse of Reclaimed Water

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	1.0	Annual Average	62-600.700(2)(b) & 62-610.810(5) FAC
Flow	MGD	Max	Report	Monthly Average	62-600.700(2)(b) & 62-610.810(5) FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	20.0	Annual Average	62-610.460 & 62-600.420(3)(a)1. FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	30.0	Monthly Average	62-610.460 & 62-600.420(3)(a)2. FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	45.0	Weekly Average	62-610.460 & 62-600.420(3)(a)3. FAC
BOD, Carbonaceous 5 day, 20C	mg/L	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

Parameter	Units	Max/ Min	Limit	Statistical Basis	Rationale
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
pH	s.u.	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
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

c. This facility is authorized to direct reclaimed water to Reuse System R-002, a rapid infiltration basin system, based on the following:

Parameter	Units	Max /Min	Limit	Statistical Basis	Rationale
Flow	MGD	Max	0.1275	Annual Average	62-600.700(2)(b) & 62-610.810(5) FAC
		Max	Report	Monthly Average	62-600.700(2)(b) & 62-610.810(5) FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	20.0	Annual Average	62-610.510 & 62-600.420(3)(a)1. FAC
		Max	30.0	Monthly Average	62-610.510 & 62-600.420(3)(a)2. FAC
		Max	45.0	Weekly Average	62-610.510 & 62-600.420(3)(a)3. FAC
		Max	60.0	Single Sample	62-610.510 & 62-600.420(3)(a)4. FAC
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	62-600.440(6)(a)3. FAC
Coliform, Fecal	#/100mL	Max	25	Single Sample	62-600.440(6)(a)2. FAC
Coliform, Fecal, % less than detection	percent	Min	75	Minimum Total	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) FAC
Nitrogen, Nitrate, Total (as N)	mg/L	Max	12.0	Single Sample	62-610.510(1) FAC

d. Other Limitations and Monitoring Requirements:

Parameter	Units	Max /Min	Limit	Statistical Basis	Rationale
Flow	MGD	Max	30.600	Monthly Average	62-600.700(2)(b) FAC
		Max	Report	Monthly Average	62-600.700(2)(b) FAC
		Max	Report	3-Month Rolling Average	62-600.700(2)(b) FAC
Percent Capacity, (TMADF/Permitted Capacity) x 100	percent	Max	Report	-	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

Under Section 303(d) of the Clean Water Act, the Department is required to submit lists of impaired waters to EPA. The direct and downstream receiving water bodies for this facility's discharge to surface waters are not listed on the 303(d) list.

5. DISCUSSION OF CHANGES TO PERMIT LIMITATIONS

The wastewater permit for this facility is a new permit.

6. BIOSOLIDS MANAGEMENT REQUIREMENTS

Biosolids generated by this facility may be transferred to Buckman Biosolids Treatment Facility or 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 (Transferred)	dry tons	Max	Report	Monthly Total	
Monitoring Frequency		All Parameters			62-640.650(5)(a) FAC

7. GROUND WATER MONITORING REQUIREMENTS

Ground water monitoring requirements are established for Land Application System R-002 six RIB System, in accordance with Chapters 62-520, 532, 600, 610, and 620, F.A.C. Part III of the permit requires quarterly ground water monitoring for eleven domestic wastewater parameters at three new monitor wells around the six RIB System.

Although Land Application System R-001 is a slow rate public-access land application system and will be the main discharge site, the ground water monitoring wells were placed at the Part IV R-002 Rapid Infiltration Rate-RIB system, because it is a Rapid Rate discharge site.

Based on the land topography of the R-002 site provided in the initial application, the ground water flow direction of the surficial aquifer is due east. The land application site is considered a new site with a horizontal 100-foot zone of discharge extending from the edge of the application site, or to the property line, whichever comes first, and vertically to the base of the surficial aquifer.

8. PERMIT SCHEDULES

A. The following improvement actions shall be completed according to the following schedule:

Improvement Action	Completion Date
a. Notify the Department in writing prior to beginning construction	At least 90 days prior to the construction
b. Submit application for Multi-Sector General Permit (MSGP) for stormwater discharges associated with industrial activity.	At least 90 days prior to placing the new AWT facility into operation
c. Submit an Operating Protocol in accordance with requirement of Rule 62-610.463, FAC.	At least 90 days prior to placing the new AWT facility into operation
d. Notify the Department in writing at end of construction using Department DEP Form 62-620.910(12), Notification of Completion of Construction for Wastewater Facilities or Activities.	Within 30 days of completion of construction
e. Submit written certification to the Department on Form 62-620.910(13) that record drawings pursuant to Chapter 62-600, F.A.C.	Within 180 days placing the AWT facility into service
f. Submit the power outage contingency plan that mitigates the impacts of power outages on the collection/transmission system.	Within 180 days placing the AWT facility into service

Improvement Action	Completion Date
g. Submit document to show that the revised facility emergency response plan portion of the facility's operation and maintenance manual plan includes cybersecurity.	Within 180 days placing the AWT facility into service
h. Submit an annual report on the collection system action plan	June 1 of each year
i. Electronically submit an annual progress report on the facility's implementation of 403.064(17), F.S. to the Department at NPDESDischargePlan2021@FloridaDEP.gov (62-600.680(3), F.A.C.)	November 1 of each year
j. The monitor wells identified in Permit Condition III.B.7 shall be installed, in accordance with Permit Condition III.A.5. *[62-520.600]*	Prior to placing Land Application System R-002 in operation.
k. The permittee shall submit to the Department's Northeast District Office Wastewater Permitting Section the monitor well completion reports and soil boring/lithologic logs on DEP Form(s) 62-520.900(3), Monitoring Well Completion Report, and a photo of each monitor well showing the permanent well ID number on the outer well vault (i.e.: MWB-1, MWI-2, and MWC-3), in accordance with Permit Condition III.A.3. [62-520.600(6)(j) and .900(3)]	Within 30-days of monitor well installation.
l. The monitor wells identified in Permit Condition III.B.7 shall have an initial sample conducted for the parameters in Permit Condition III.B.8, in accordance with Permit Condition III.B.5. [62-520.600(5)(a)]	Prior to placing Land Application System R-002 in operation.

[62-620.320(6)]

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 not accompanied by an AO, and the permittee has not entered into a CO with the Department that affects this permit.

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 during normal business hours at the location specified in item 14. Copies will be provided at a minimal charge per page.

13. PROPOSED SCHEDULE FOR PERMIT ISSUANCE

Draft Permit and Public Notice to Applicant and EPA:	November 15, 2024
Public Comment Period	Beginning: November 15, 2024 Ending: December 14, 2024
Proposed Permit to EPA	December 20, 2024
Notice of Intent to Issue	December 27, 2024
Notice of Permit Issuance	January 18, 2025

14. DEP CONTACT

Additional information concerning the permit and proposed schedule for permit issuance may be obtained during normal business hours from:

D. Anh Vo, P.E.
Professional Engineer III
Permitting Program
FDEP – NED
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256-7577

Telephone No.: (904) 256-1700

15. PROCEDURES FOR THE FORMULATION OF FINAL DECISION ON PERMIT ISSUANCE

a. Public Comment Period

The Department of Environmental Protection proposes to issue a wastewater facility permit to this applicant subject to the aforementioned reclaimed water or effluent limitations and conditions. This decision is tentative and open to comment from the public.

Interested persons are invited to submit written comments regarding permit issuance on the draft permit limitations and conditions to the following address:

Department of Environmental Protection, Northeast District Office
8800 Baymeadows Way West, Suite 100
Jacksonville, FL 32256 - 7590
Attn: D. Anh Vo

All comments received within 30 days following the date of public notice, pursuant to Rule 62-620.550, F.A.C., will be considered in the formulation of the final decision with regard to permit issuance.

Any interested person may submit written comments on the Department's proposed permitting decision or may submit a written request for a public meeting to the address specified above, in accordance with Rule 62-620.555, F.A.C. The comments or request for a public meeting must contain the information set forth below and must be received in the above named District office of the Department within 30 days of receipt or publication of the public notice. Failure to submit

comments or request a public meeting within this time period will constitute a waiver of any right such person may have to submit comments or request a public meeting under Rule 62-620.555, F.A.C.

The comments or request for a public meeting shall contain the following information:

1) The commenter's name, address and telephone number, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
2) A statement of how and when notice of the draft permit was received;
3) A description of any changes the commenter proposes for the draft permit;
4) A full explanation of the factual and legal reasons for each proposed change to the draft permit; and

A request that a public meeting be scheduled (if applicable) including a statement of the nature of the issues proposed to be raised at the meeting.

b. Public Meeting

The Department will hold a public meeting if there is a significant degree of public interest in the draft permit or if it determines that useful information and data may be obtained thereby. Public notice of such a meeting shall be published by the applicant at least 30 days prior to the meeting.

If a public meeting is scheduled the public comment period is extended until the close of the public meeting. If a public meeting is held any person may submit oral or written statements and data at the meeting on the Department's proposed action.

c. Issuance of the Permit

The Department will make its decision regarding permit issuance after consideration of all written comments, including comments from the United States Environmental Protection Agency on surface water discharge aspects of the draft or a proposed permit; the requirements of Chapter 403, F.S. and appropriate rules; and, if a public meeting is held, after consideration of all comments, statements and data presented at the public meeting. The Department will respond to all significant comments in writing. The Department's response to significant comments will be included in the administrative record of the permit and will be available for public inspection at the above named District office of the Department.

Unless a request for an administrative hearing, or an extension of time to file a petition for an administrative hearing, as indicated in d. below, is granted, the Department will take final agency action by issuing the permit or denying the permit application. If an administrative hearing is convened, final agency action will be based on the outcome of the hearing.

d. Administrative Hearing

A person whose substantial interests are affected by the Department's proposed permitting decision has the opportunity to petition for an administrative proceeding (hearing) to challenge the Department's decision in accordance with Section 120.57, F.S.

An administrative hearing is an evidentiary proceeding in which evidence is presented by testimony and exhibits before an independent hearing officer. The result of an administrative hearing is the issuance of the hearing officer's recommended order to the Department, including the hearing

officers findings of fact, based on the evidence presented at the hearing. The Department will issue a final order, granting or denying the permit, based on the hearing officer's recommended order.

The petition for an administrative hearing must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of publication of notice of agency action or within 14 days of personal receipt of notice of agency action, whichever occurs first. The petitioner is to mail a copy of the petition to the applicant at the time of filing. Failure to file a petition within this time period will constitute a waiver of any right such person may have to request an administrative determination (hearing) under section 120.57, F.S. The petition is to contain the following information:

1) The name, address and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
2) A statement of how and when each petitioner received notice of the Department's action or proposed action;
3) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
4) A statement of the material facts which the petitioner contends warrant reversal or modification of the Department's action or proposed action;
5) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
6) A statement of the relief sought by the petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in the notice of agency action. Persons whose substantial interests will be affected by any decision of the Department on the application have the right to petition to become a party to the proceeding, regardless of their agreement or disagreement with the Department's proposed action indicated in the notice of agency action.

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When completed submit this report to: https://www.fldepportal.com/go/

PERMITTEE NAME: First Coast Regional Utilities, Inc
MAILING ADDRESS: Post Office 238
Lake Butler, Florida 32054-

FACILITY: First Coast Regional Utilities WRF
LOCATION: Rattlesnake Road
Baldwin, FL 32234-

COUNTY: Duval
OFFICE: Northeast District

PERMIT NUMBER: FL0A00068-001-DW1P

LIMIT: Final
CLASS SIZE: MI
MONITORING GROUP NUMBER: D-001
MONITORING GROUP DESCRIPTION: RIB #3 Overflow Structure for APRICOT emergency discharge, with 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 (Discharge from Pond # 3)	Sample Measurement										
PARM Code 50050 Y Mon. Site No. FLW-4	Permit Requirement		Report (An.Avg.)	MGD					0	Continuous	Flow Totalizer
Flow (Discharge from Pond # 3)	Sample Measurement										
PARM Code 50050 1 Mon. Site No. FLW-4	Permit Requirement		Report (Mo.Avg.)	MGD					0	Continuous	Flow Totalizer
Flow (Discharge from Pond # 6)	Sample Measurement										
PARM Code 50050 P Mon. Site No. FLW-5	Permit Requirement		Report (An.Avg.)	MGD					0	Continuous	Flow Totalizer
Flow (Discharge from Pond # 6)	Sample Measurement										
PARM Code 50050 Q Mon. Site No. FLW-5	Permit Requirement		Report (Mo.Avg.)	MGD					0	Continuous	Flow Totalizer
Flow (Surface Water Discharge)	Sample Measurement										
PARM Code 50050 R Mon. Site No. CAL-SUM	Permit Requirement		0.3 (An.Avg.)	MGD						Daily; 24 hours	Calculated
Flow (Surface Water Discharge)	Sample Measurement										
PARM Code 50050 S Mon. Site No. CAL-SUM	Permit Requirement		Report (Mo.Avg.)	MGD					0	Daily; 24 hours	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):

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: D-001 PERMIT NUMBER: FL0A00068-001-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow, Total Volume	Sample Measurement										
PARM Code 82220 P Mon. Site No. CAL-1	Permit Requirement		Report (Mo.Total)	Mgal/mth					0	Monthly	Calculated
Flow, Total Volume	Sample Measurement										
PARM Code 82220 Q Mon. Site No. CAL-1	Permit Requirement		27.3 (An.Total)	Mgal/yr						Monthly	Calculated
Duration of Discharge	Sample Measurement										
PARM Code 81381 P Mon. Site No. CAL-1	Permit Requirement	Report (An.Total)	Report (Mo.Total)	day					0	Daily; 24 hours	Calculated
Stream Flow	Sample Measurement										
PARM Code 00060 5 Mon. Site No. SWB-1	Permit Requirement		Report (Day.Min.)	cfs					0	Daily, when discharging	Meter
	Sample Measurement										
PARM Code Mon. Site No.	Permit Requirement										
Dilution Factor	Sample Measurement										
PARM Code 80093 P Mon. Site No. CAL-1	Permit Requirement		17.5 (Day.Min.)	ratio						Daily, when discharging	Calculated
	Sample Measurement										
PARM Code Mon. Site No.	Permit Requirement										
Rainfall	Sample Measurement										
PARM Code 46529 Y Mon. Site No. OTH-1	Permit Requirement	Report (Min.An.Avg.)		in					0	Daily, when discharging	Meter
Rainfall	Sample Measurement										
PARM Code 46529 P Mon. Site No. OTH-1	Permit Requirement		Report (Day.Avg.)	in					0	Daily, when discharging	Meter
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 Y Mon. Site No. EFA-1	Permit Requirement					5.0 (An.Avg.)		mg/L		Weekly, when discharging	16-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF

MONITORING GROUP NUMBER: D-001

PERMIT NUMBER: FL0A00068-001-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 A Mon. Site No. EFA-1	Permit Requirement				7.5 (Max.Wk.Avg.)	10.0 (Max.)	6.25 (Mo.Avg.)	mg/L		Weekly, when discharging	16-hr FPC
Solids, Total Suspended	Sample Measurement										
PARM Code 00530 B Mon. Site No. EFB-1	Permit Requirement						5.0 (Max.)	mg/L		Daily, when discharging	Grab
Coliform, Fecal	Sample Measurement										
PARM Code 74055 1 Mon. Site No. EFD-1	Permit Requirement						25 (Max.)	#/100mL		Daily, when discharging	Grab
Coliform, Fecal, % less than detection	Sample Measurement										
PARM Code 51005 P Mon. Site No. CAL-1	Permit Requirement						75 (Mo.Total)	percent		Monthly	Calculated
E.coli	Sample Measurement										
PARM Code 51040 A Mon. Site No. EFA-1	Permit Requirement					126 (Mo.Geo.Mn.)	410 (90th %)	#/100mL		Weekly	Grab
pH	Sample Measurement										
PARM Code 00400 A Mon. Site No. EFA-1	Permit Requirement				6.0 (Min.)		8.5 (Max.)	s.u.		Continuous	Meter
Chlorine, Total Residual (For Disinfection)	Sample Measurement										
PARM Code 50060 A Mon. Site No. EFA-1	Permit Requirement				1.0 (Min.)			mg/L		Continuous	Meter
Chlorine, Total Residual (For Dechlorination)	Sample Measurement										
PARM Code 50060 P Mon. Site No. EFA-1	Permit Requirement						0.01 (Max.)	mg/L		Daily; 24 hours	Grab
Nitrogen, Kjeldahl, Total (as N) (For Dechlorination)	Sample Measurement										
PARM Code 00625 A Mon. Site No. EFA-1	Permit Requirement					Report (Max.)	2.50 (Mo.Avg.)	mg/L		Weekly, when discharging	24-hr TPC
Oxygen, Dissolved (DO) (For Dechlorination)	Sample Measurement										
PARM Code 00300 1 Mon. Site No. EFD-1	Permit Requirement				5.0 (Min.)			mg/L		Daily, when discharging	Meter

ISSUANCE/REISSUANCE DATE: April 11, 2025
DMR EFFECTIVE DATE: Upon Completion and Placing Into Service of the WRF - Permit expiration

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: D-001 PERMIT NUMBER: FL0A00068-001-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Temperature (C), Water (For Dechlorination)	Sample Measurement										
PARM Code 00010 A Mon. Site No. EFA-1	Permit Requirement				Report (Min.)			Deg C	0	Weekly, when discharging	Meter
Nitrogen, Ammonia, Total (as N) (Effleunt)	Sample Measurement										
PARM Code 00610 1 Mon. Site No. EFD-1	Permit Requirement				Report (Min.)		Report (Mo.Avg.)	mg/L	0	Weekly, when discharging	Grab
Nitrogen, Ammonia, Total (as N) (Limit)	Sample Measurement										
PARM Code 00610 P Mon. Site No. CAL-1	Permit Requirement				Report (Min.)		Report (Mo.Avg.)	mg/L	0	Weekly, when discharging	Calculated
Nitrogen, Ammonia, Total (as N) (Compliance = Eff - limit)	Sample Measurement										
PARM Code 00610 Q Mon. Site No. CAL-1	Permit Requirement				0.0 (Min.)		0.0 (Mo.Avg.)	mg/L		Weekly, when discharging	Calculated
Nitrogen, Total	Sample Measurement										
PARM Code 00600 Y Mon. Site No. EFD-1	Permit Requirement					3.0 (An.Avg.)		mg/L		Weekly	24-hr FPC
Nitrogen, Total	Sample Measurement										
PARM Code 00600 1 Mon. Site No. EFD-1	Permit Requirement				6.0 (Max.)	4.50 (Max.Wk.Avg.)	3.75 (Mo.Avg.)	mg/L		Weekly	24-hr FPC
Nitrogen, Total	Sample Measurement										
PARM Code 00600 P Mon. Site No. CAL-1	Permit Requirement		Report (Mo.Total)	lb/mth					0	Monthly	Calculated
Nitrogen, Total	Sample Measurement										
PARM Code 00600 Q Mon. Site No. CAL-1	Permit Requirement		683 (An.Total)	lb/yr						Monthly	Calculated
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 Y Mon. Site No. EFD-1	Permit Requirement					1.0 (An.Avg.)		mg/L		Weekly	16-hr FPC
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 1 Mon. Site No. EFD-1	Permit Requirement				1.50 (Max.Wk.Avg.)	2.00 (Max.)	1.25 (Mo.Avg.)	mg/L		Weekly	16-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: D-001 PERMIT NUMBER: FL0A00068-001-DW1P

MONITORING PERIOD From: _____ To: __ . .

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 P Mon. Site No. CAL-1	Permit Requirement		Report (Mo.Total)	lb/mth					0	Monthly	Calculated
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 Q Mon. Site No. CAL-1	Permit Requirement		228 (An.Total)	lb/yr						Monthly	Calculated
Chlorophyll a	Sample Measurement										
PARM Code 32230 1 Mon. Site No. EFD-1	Permit Requirement						Report (Max.)	ug/L	0	Monthly, when discharging	Grab
7-DAY CHRONIC STATRE Ceriodaphnia dubia (Routine)	Sample Measurement										
PARM Code TRP3B P Mon. Site No. EFD-1	Permit Requirement				100 (Min.)			percent		Quarterly	Grab
7-DAY CHRONIC STATRE Ceriodaphnia dubia (Additional)	Sample Measurement										
PARM Code TRP3B Q Mon. Site No. EFD-1	Permit Requirement				100 (Min.)			percent		As needed	As required by the permit
7-DAY CHRONIC STATRE Ceriodaphnia dubia (Additional)	Sample Measurement										
PARM Code TRP3B R Mon. Site No. EFD-1	Permit Requirement				100 (Min.)			percent		As needed	As required by the permit
7-DAY CHRONIC STATRE Pimephales promelas (Routine)	Sample Measurement										
PARM Code T6P6C P Mon. Site No. EFD-1	Permit Requirement				100 (Min.)			percent		Quarterly	Grab
7-DAY CHRONIC STATRE Pimephales promelas (Additional)	Sample Measurement										
PARM Code T6P6C Q Mon. Site No. EFD-1	Permit Requirement				100 (Min.)			percent		As needed	As required by the permit
7-DAY CHRONIC STATRE Pimephales promelas (Additional)	Sample Measurement										
PARM Code T6P6C R Mon. Site No. EFD-1	Permit Requirement				100 (Min.)			percent		As needed	As required by the permit
Flow	Sample Measurement										
PARM Code 50050 T Mon. Site No. FLW-1	Permit Requirement		1.0 (An.Avg.)	MGD						Continuous	Flow Totalizer

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF

MONITORING GROUP NUMBER: D-001

PERMIT NUMBER: FL0A00068-001-DW1P

MONITORING PERIOD From: _____ To _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Flow	Sample Measurement										
PARM Code 50050 U Mon. Site No. FLW-1	Permit Requirement	Report (3Mo.Avg.)	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-1	Permit Requirement						Report (Mo.Avg.)	percent	0	Monthly	Calculated
BOD, Carbonaceous 5 day, 20C (Influent)	Sample Measurement										
PARM Code 80082 G Mon. Site No. INF-1	Permit Requirement						Report (Max.)	mg/L	0	Weekly	16-hr FPC
Solids, Total Suspended (Influent)	Sample Measurement										
PARM Code 00530 G Mon. Site No. INF-1	Permit Requirement						Report (Max.)	mg/L	0	Weekly	16-hr FPC

ISSUANCE/REISSUANCE DATE: April 11, 2025
DMR EFFECTIVE DATE: Upon Completion and Placing Into Service of the WRF - Permit expiration

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When completed submit this report to: https://www.fldepportal.com/go/

PERMITTEE NAME: First Coast Regional Utilities, Inc
MAILING ADDRESS: Post Office 238
Lake Butler, Florida 32054-

FACILITY: First Coast Regional Utilities WRF
LOCATION: Rattlesnake Road
Baldwin, FL 32234-

COUNTY: Duval
OFFICE: Northeast District

PERMIT NUMBER: FL0A00068-001-DW1P

LIMIT: Final
CLASS SIZE: MI
MONITORING GROUP NUMBER: D-001
MONITORING GROUP DESCRIPTION: RIB #3 Overflow Structure for APRICOT emergency discharge, with Influent
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Quarterly
PROGRAM: Domestic

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Iron, Total Recoverable	Sample Measurement										
PARM Code 00980 1 Mon. Site No. EFD-1	Permit Requirement						Report (Max.)	ug/L	0	Quarterly, when discharging	Grab
Lead, Total Recoverable (effluent)	Sample Measurement										
PARM Code 01114 1 Mon. Site No. EFD-1	Permit Requirement						Report (Max.)	ug/L	0	Quarterly, when discharging	Grab
Lead, Total Recoverable (calculated limit)	Sample Measurement										
PARM Code 01114 P Mon. Site No. EFD-1	Permit Requirement						Report (Max.)	ug/L	0	Quarterly, when discharging	Calculated
Lead, Total Recoverable (effluent minus calculated limit)	Sample Measurement										
PARM Code 01114 Q Mon. Site No. EFD-1	Permit Requirement						0.0 (Max.)	ug/L		Quarterly, when discharging	Calculated
Hardness, Total (as CaCO3)	Sample Measurement										
PARM Code 00900 1 Mon. Site No. EFD-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab
Temperature (C), Water	Sample Measurement										
PARM Code 00010 5 Mon. Site No. SWB-1	Permit Requirement						Report (Max.)	Deg C	0	Quarterly, when discharging	Meter

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):

ISSUANCE/REISSUANCE DATE:
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: D-001 PERMIT NUMBER: FL0A00068-001-DW1P

MONITORING PERIOD From __ __ __ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Temperature (C), Water	Sample Measurement										
PARM Code 00010 6 Mon. Site No. SWD-1	Permit Requirement						Report (Max.)	Deg C	0	Quarterly, when discharging	Meter
pH	Sample Measurement										
PARM Code 00400 5 Mon. Site No. SWB-1	Permit Requirement						Report (Max.)	s.u.	0	Quarterly, when discharging	Meter
pH	Sample Measurement										
PARM Code 00400 6 Mon. Site No. SWD-1	Permit Requirement						Report (Max.)	s.u.	0	Quarterly, when discharging	Meter
Specific Conductance	Sample Measurement										
PARM Code 00095 5 Mon. Site No. SWB-1	Permit Requirement						Report (Max.)	umhos/cm	0	Quarterly, when discharging	Meter
Specific Conductance	Sample Measurement										
PARM Code 00095 6 Mon. Site No. SWD-1	Permit Requirement						Report (Max.)	umhos/cm	0	Quarterly, when discharging	Meter
Oxygen, Dissolved (DO)	Sample Measurement										
PARM Code 00300 5 Mon. Site No. SWB-1	Permit Requirement				Report (Min.)			mg/L	0	Quarterly, when discharging	Meter
Oxygen, Dissolved (DO)	Sample Measurement										
PARM Code 00300 6 Mon. Site No. SWD-1	Permit Requirement				Report (Min.)			mg/L	0	Quarterly, when discharging	Meter
Oxygen, Dissolved Percent Saturation	Sample Measurement										
PARM Code 00301 5 Mon. Site No. SWB-1	Permit Requirement				Report (Min.)			percent	0	Quarterly, when discharging	Meter
Oxygen, Dissolved Percent Saturation	Sample Measurement										
PARM Code 00301 6 Mon. Site No. SWD-1	Permit Requirement				Report (Min.)			percent	0	Quarterly, when discharging	Meter
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 5 Mon. Site No. SWB-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab

ISSUANCE/REISSUANCE DATE:
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: D-001 PERMIT NUMBER: FL0A00068-001-DW1P

MONITORING PERIOD From: _ _ _ _____ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 6 Mon. Site No. SWD-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab
Solids, Total Suspended	Sample Measurement										
PARM Code 00530 5 Mon. Site No. SWB-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab
Solids, Total Suspended	Sample Measurement										
PARM Code 00530 6 Mon. Site No. SWD-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab
E.coli	Sample Measurement										
PARM Code 51040 5 Mon. Site No. SWB-1	Permit Requirement						Report (Max.)	#/100mL	0	Quarterly, when discharging	Grab
E.coli	Sample Measurement										
PARM Code 51040 6 Mon. Site No. SWD-1	Permit Requirement						Report (Max.)	#/100mL	0	Quarterly, when discharging	Grab
Chlorophyll a	Sample Measurement										
PARM Code 32230 5 Mon. Site No. SWB-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab
Chlorophyll a	Sample Measurement										
PARM Code 32230 6 Mon. Site No. SWD-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab
Nitrogen, Kjeldahl, Total (as N)	Sample Measurement										
PARM Code 00625 5 Mon. Site No. SWB-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab
Nitrogen, Kjeldahl, Total (as N)	Sample Measurement										
PARM Code 00625 6 Mon. Site No. SWD-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab
Nitrogen, Ammonia, Total (as N)	Sample Measurement										
PARM Code 00610 5 Mon. Site No. SWB-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab

ISSUANCE/REISSUANCE DATE:
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: D-001 PERMIT NUMBER: FL0A00068-001-DW1P

MONITORING PERIOD From: _ _ . _ _ . _ _ _ _ To: _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Nitrogen, Ammonia, Total (as N)	Sample Measurement										
PARM Code 00610 6 Mon. Site No. SWD-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab
Nitrite plus Nitrate, Total 1 det. (as N)	Sample Measurement										
PARM Code 00630 5 Mon. Site No. SWB-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab
Nitrite plus Nitrate, Total 1 det. (as N)	Sample Measurement										
PARM Code 00630 6 Mon. Site No. SWD-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab
Nitrogen, Total	Sample Measurement										
PARM Code 00600 5 Mon. Site No. SWB-1	Permit Requirement					Report (Max.)	Report (An.Geo.Mn.)	mg/L	0	Quarterly, when discharging	Grab
Nitrogen, Total	Sample Measurement										
PARM Code 00600 6 Mon. Site No. SWD-1	Permit Requirement					Report (Max.)	Report (An.Geo.Mn.)	mg/L	0	Quarterly, when discharging	Grab
Phosphate, Ortho (as P)	Sample Measurement										
PARM Code 70507 5 Mon. Site No. SWB-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab
Phosphate, Ortho (as P)	Sample Measurement										
PARM Code 70507 6 Mon. Site No. SWD-1	Permit Requirement						Report (Max.)	mg/L	0	Quarterly, when discharging	Grab
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 5 Mon. Site No. SWB-1	Permit Requirement					Report (Max.)	Report (An.Geo.Mn.)	mg/L	0	Quarterly, when discharging	Grab
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 6 Mon. Site No. SWD-1	Permit Requirement					Report (Max.)	Report (An.Geo.Mn.)	mg/L	0	Quarterly, when discharging	Grab

ISSUANCE/REISSUANCE DATE:
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: https://www.fldepportal.com/go/

PERMITTEE NAME: First Coast Regional Utilities, Inc
MAILING ADDRESS: Post Office 238
Lake Butler, Florida 32054-

FACILITY: First Coast Regional Utilities WRF
LOCATION: Rattlesnake Road
Baldwin, FL 32234-

COUNTY: Duval
OFFICE: Northeast District

PERMIT NUMBER: FL0A00068-001-DW1P

LIMIT: Final
CLASS SIZE: M1
MONITORING GROUP NUMBER: D-001
MONITORING GROUP DESCRIPTION: RIB #3 Overflow Structure for APRICOT emergency discharge, with Influent
RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Every Two Years
PROGRAM: Domestic

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Mercury, Total Recoverable	Sample Measurement										
PARM Code 71901 1 Mon. Site No. EFD-1	Permit Requirement						Report (Max.)	ug/L	0	Biennially; Every 2 years	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):

ISSUANCE/REISSUANCE DATE:
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: https://www.fldepportal.com/go/

PERMITTEE NAME: First Coast Regional Utilities, Inc
MAILING ADDRESS: Post Office 238
Lake Butler, Florida 32054-

FACILITY: First Coast Regional Utilities WRF
LOCATION: Rattlesnake Road

Baldwin, FL 32234-

COUNTY: Duval
OFFICE: Northeast District

PERMIT NUMBER: FL0A00068-001-DW1P

LIMIT: Final
CLASS SIZE: MI
REPORT FREQUENCY: Monthly
PROGRAM: Domestic
MONITORING GROUP NUMBER: R-001
MONITORING GROUP DESCRIPTION: A new 1.0 MGD annual average daily flow permitted capacity slow-rate public access system (R-001) consisting of a reclaimed water effluent pump station capable of pumping to a 2.0 MG capacity reclaimed ground storage tank, four reuse high service pumps, and an irrigation system which consists of 738.8 acres.

RE-SUBMITTED DMR: ☐
NO DISCHARGE FROM SITE: ☐
MONITORING PERIOD From: _____ To: _____

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-2	Permit Requirement		1.0 (An.Avg.)	MGD						Continuous	Flow Totalizer
Flow	Sample Measurement										
PARM Code 50050 1 Mon. Site No. FLW-2	Permit Requirement		Report (Mo.Avg.)	MGD					0	Continuous	Flow Totalizer
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 Y Mon. Site No. EFA-1	Permit Requirement					20.0 (An.Avg.)		mg/L		Weekly	24-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 A Mon. Site No. EFA-1	Permit Requirement				60.0 (Max.)	45.0 (Max.Wk.Avg.)	30.0 (Mo.Avg.)	mg/L		Weekly	24-hr FPC
Solids, Total Suspended	Sample Measurement										
PARM Code 00530 B Mon. Site No. EFB-1	Permit Requirement						5.0 (Max.)	mg/L		Daily; 24 hours	Grab
Turbidity	Sample Measurement										
PARM Code 00070 B Mon. Site No. EFB-1	Permit Requirement						Report (Max.)	NTU	0	Continuous	Meter

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):

ISSUANCE/REISSUANCE DATE:
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: R-001 PERMIT NUMBER: FL0A00068-001-DW1P

MONITORING PERIOD From . To . . _ _ _ _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Coliform, Fecal	Sample Measurement										
PARM Code 74055 A Mon. Site No. EFA-1	Permit Requirement						25 (Max.)	#/100mL		Daily; 24 hours	Grab
Coliform, Fecal, % less than detection	Sample Measurement										
PARM Code 51005 P Mon. Site No. CAL-1	Permit Requirement				75 (Min.Mo.Total)			percent		Daily; 24 hours	Calculated
pH	Sample Measurement										
PARM Code 00400 A Mon. Site No. EFA-1	Permit Requirement				6.0 (Min.)		8.5 (Max.)	s.u.		Continuous	Meter
Nitrogen, Total	Sample Measurement										
PARM Code 00600 A Mon. Site No. EFA-1	Permit Requirement					10.0 (Max.)	5.0 (Mo.Avg.)	mg/L		Continuous	24-hr FPC
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 A Mon. Site No. EFA-1	Permit Requirement						Report (Max.)	mg/L	0	Continuous	24-hr FPC
Chlorine, Total Residual (For Disinfection)	Sample Measurement										
PARM Code 50060 A Mon. Site No. EFA-1	Permit Requirement				1.2 (Min.)			mg/L		Continuous	Meter

ISSUANCE/REISSUANCE DATE:
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: https://www.fldepportal.com/go/

PERMITTEE NAME: First Coast Regional Utilities, Inc
MAILING ADDRESS: Post Office 238
Lake Butler, Florida 32054-

FACILITY: First Coast Regional Utilities WRF
LOCATION: Rattlesnake Road

Baldwin, FL 32234-

COUNTY: Duval
OFFICE: Northeast District

PERMIT NUMBER: FL0A00068-001-DW1P

LIMIT: Final
CLASS SIZE: M1
MONITORING GROUP NUMBER: R-002
MONITORING GROUP DESCRIPTION: A 0.1275 MGD annual average daily flow permitted capacity rapid-rate infiltration system consisting of six (6) rapid infiltration basins (RIBs) totaling 30.6 acres and total storage volume of 30.0 MG

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-3	Permit Requirement		0.1275 (An.Avg.)	MGD						Continuous	Flow Totalizer
Flow	Sample Measurement										
PARM Code 50050 1 Mon. Site No. FLW-3	Permit Requirement		Report (Mo.Avg.)	MGD					0	Continuous	Flow Totalizer
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 Y Mon. Site No. EFA-1	Permit Requirement					5.0 (An.Avg.)		mg/L		Weekly	16-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement										
PARM Code 80082 A Mon. Site No. EFA-1	Permit Requirement				7.50 (Max.Wk.Avg.)	10.0 (Max.)	6.25 (Mo.Avg.)	mg/L		Weekly	16-hr FPC
Solids, Total Suspended	Sample Measurement										
PARM Code 00530 B Mon. Site No. EFB-1	Permit Requirement						5.0 (Max.)	mg/L		Daily; 24 hours	Grab
Coliform, Fecal	Sample Measurement										
PARM Code 74055 A Mon. Site No. EFA-1	Permit Requirement						25 (Max.)	#/100mL		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):

ISSUANCE/REISSUANCE DATE:
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: R-002 PERMIT NUMBER: FL0A00068-001-DW1P

MONITORING PERIOD From: _____ To _____

Parameter		Quantity or Loading		Units	Quality or Concentration			Units	No. Ex.	Frequency of Analysis	Sample Type
Coliform, Fecal, % less than detection	Sample Measurement										
PARM Code 51005 P Mon. Site No. CAL-1	Permit Requirement				75 (Min.Mo.Total)			percent		Monthly	Calculated
pH	Sample Measurement										
PARM Code 00400 A Mon. Site No. EFA-1	Permit Requirement				6.0 (Min.)		8.5 (Max.)	s.u.		Continuous	Meter
Chlorine, Total Residual (For Disinfection)	Sample Measurement										
PARM Code 50060 A Mon. Site No. EFA-1	Permit Requirement				1.2 (Min.)			mg/L		Continuous	Meter
Nitrogen, Nitrate, Total (as N)	Sample Measurement										
PARM Code 00620 A Mon. Site No. EFA-1	Permit Requirement						12.0 (Max.)	mg/L		Monthly	24-hr FPC
Nitrogen, Total	Sample Measurement										
PARM Code 00600 A Mon. Site No. EFA-1	Permit Requirement					10.0 (Max.)	5.0 (Mo.Avg.)	mg/L		Monthly	24-hr FPC
Phosphorus, Total (as P)	Sample Measurement										
PARM Code 00665 A Mon. Site No. EFA-1	Permit Requirement						Report (Mo.Avg.)	mg/L	0	Monthly	24-hr FPC
Solids, Total Dissolved (TDS)	Sample Measurement										
PARM Code 70295 A Mon. Site No. EFA-1	Permit Requirement						Report (Mo.Avg.)	mg/L	0	Monthly	Grab

ISSUANCE/REISSUANCE DATE:
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: https://www.fldepportal.com/go/

PERMITTEE NAME: First Coast Regional Utilities, Inc
MAILING ADDRESS: Post Office 238
Lake Butler, Florida 32054-

FACILITY: First Coast Regional Utilities WRF
LOCATION: Rattlesnake Road
Baldwin, FL 32234-

COUNTY: Duval
OFFICE: Northeast District

PERMIT NUMBER: FL0A00068-001-DW1P

LIMIT: Final
CLASS SIZE: MI
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 (Transferred)	Sample Measurement										
PARM Code B0007 + 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):

ISSUANCE/REISSUANCE DATE:
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: https://www.fldepportal.com/go/

PERMITTEE NAME: First Coast Regional Utilities, Inc
MAILING ADDRESS: Post Office 238
Lake Butler, Florida 32054-

FACILITY: First Coast Regional Utilities WRF
LOCATION: Rattlesnake Road
Baldwin, FL 32234-

COUNTY: Duval
OFFICE: Northeast District

PERMIT NUMBER: FL0A00068-001-DW1P

LIMIT: Final
CLASS SIZE: MI
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:

ISSUANCE/REISSUANCE DATE:
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FL0A00068-001-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

ISSUANCE/REISSUANCE DATE:
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FL0A00068-001-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

ISSUANCE/REISSUANCE DATE:
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FL0A00068-001-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

ISSUANCE/REISSUANCE DATE:
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FL0A00068-001-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

ISSUANCE/REISSUANCE DATE:
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FL0A00068-001-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

ISSUANCE/REISSUANCE DATE:
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FL0A00068-001-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

ISSUANCE/REISSUANCE DATE:
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FL0A00068-001-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

ISSUANCE/REISSUANCE DATE:
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: First Coast Regional Utilities WRF MONITORING GROUP NUMBER: RWS-A PERMIT NUMBER: FL0A00068-001-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

ISSUANCE/REISSUANCE DATE:
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DAILY SAMPLE RESULTS - PART B

Permit Number: FL0A00068-001-DW1P Facility: First Coast Regional Utilities WRF
Monitoring Period From: _____ To: _____

	BOD, Carbonaceous 5 day, 20C mg/L	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 Dechlorination) mg/L	Chlorine, Total Residual (For Disinfection) mg/L	Chlorine, Total Residual (For Disinfection) mg/L	Chlorine, Total Residual (For Disinfection) mg/L	Chlorophyll a ug/L	Coliform, Fecal #/100mL	Coliform, Fecal #/100mL
Code	80082	80082	80082	80082	50060	50060	50060	50060	32230	74055	74055
Mon. Site	EFA-1	EFA-1	EFA-1	INF-1	EFA-1	EFA-1	EFA-1	EFA-1	EFD-1	EFA-1	EFA-1
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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: FL0A00068-001-DW1P Facility: First Coast Regional Utilities WRF
Monitoring Period From: _____ To: _____

	Coliform, Fecal #/100mL	Coliform, Fecal, % less than detection percent	Coliform, Fecal, % less than detection percent	Coliform, Fecal, % less than detection percent	Dilution Factor ratio	Duration of Discharge day	E.coli #/100mL	Flow (Surface Water Discharge) MGD	Flow MGD	Flow MGD	Flow MGD
Code	74055	51005	51005	51005	80093	81381	51040	50050	50050	50050	50050
Mon. Site	EFD-1	CAL-1	CAL-1	CAL-1	CAL-1	CAL-1	EFA-1	CAL-SUM	FLW-1	FLW-2	FLW-3
1											
2											
3											
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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: FL0A00068-001-DW1P Facility: First Coast Regional Utilities WRF
Monitoring Period From: _____ To: _____

	Flow (Discharge from Pond # 3) MGD	Flow (Discharge from Pond # 6) MGD	Flow, Total Volume Mgal/mth	Flow, Total Volume Mgal/yr	Nitrogen, Ammonia, Total (as N) (Compliance = Eff - limit) mg/L	Nitrogen, Ammonia, Total (as N) (Limit) mg/L	Nitrogen, Ammonia, Total (as N) (Effleunt) mg/L	Nitrogen, Kjeldahl, Total (as N) (For Dechlorination)	Nitrogen, Nitrate, Total (as N) mg/L	Nitrogen, Total lb/mth	Nitrogen, Total lb/yr
Code	50050	50050	82220	82220	00610	00610	00610	00625	00620	00600	00600
Mon. Site	FLW-4	FLW-5	CAL-1	CAL-1	CAL-1	CAL-1	EFA-1	EFA-1	EFA-1	CAL-1	CAL-1
1											
2											
3											
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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: _____

ISSUANCE/REISSUANCE DATE:

DAILY SAMPLE RESULTS - PART B

Permit Number: FL0A00068-001-DW1P Facility: First Coast Regional Utilities WRF
Monitoring Period From: _____ To: _____

	Nitrogen, Total mg/L	Nitrogen, Total mg/L	Nitrogen, Total mg/L	Oxygen, Dissolved (DO) (For Dechlorination) mg/L	Percent Capacity, (TMADF/Permitted Capacity) x 100	Phosphorus, Total (as P) lb/mth	Phosphorus, Total (as P) lb/yr	Phosphorus, Total (as P) mg/L	Phosphorus, Total (as P) mg/L	Phosphorus, Total (as P) mg/L	Rainfall in
Code	00600	00600	00600	00300	00180	00665	00665	00665	00665	00665	46529
Mon. Site	EFA-1	EFA-1	EFD-1	EFD-1	CAL-1	CAL-1	CAL-1	EFA-1	EFA-1	EFD-1	OTH-1
1											
2											
3											
4											
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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: FL0A00068-001-DW1P Facility: First Coast Regional Utilities WRF
Monitoring Period From: _____ To: _____

	Solids, Total Dissolved (TDS) mg/L	Solids, Total Suspended mg/L	Solids, Total Suspended mg/L	Solids, Total Suspended mg/L	Solids, Total Suspended (Influent) mg/L	Stream Flow cfs	Temperature (C), Water (For Dechlorination) Deg C	Turbidity NTU	pH (Min) s.u.	pH (Max) s.u.	pH (Min) s.u.
Code	70295	00530	00530	00530	00530	00060	00010	00070	00400	00400	00400
Mon. Site	EFA-1	EFB-1	EFB-1	EFB-1	INF-1	SWB-1	EFA-1	EFB-1	EFA-1	EFA-1	EFA-1
1											
2											
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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: FL0A00068-001-DW1P Facility: First Coast Regional Utilities WRF
Monitoring Period From: _____ To: _____

	pH (Max) s.u.	pH (Min) s.u.	pH (Max) s.u.								
Code	00400	00400	00400								
Mon. Site	EFA-1	EFA-1	EFA-1								
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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: First Coast Regional Utilities WRF
Permit Number: FL0A00068-001-DW1P
County: Duval
Office: Northeast District
Monitoring Period From: _____ To: _____

Monitoring Well ID: MWB-1
Well Type: Background
Description: Off southwest corner of RIB No. 4.
Re-submitted DMR: ☐
Date Sample Obtained: _____
Time Sample Obtained: _____

Report Frequency: Quarterly
Program: Domestic

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				
pH	00400		Report	s.u.	In Situ	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	mg/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	mg/L	Grab	Quarterly				
Sulfate, Total	00945		Report	mg/L	Grab	Quarterly				
Nitrite plus Nitrate, Total 1 det. (as N)	00630		Report	mg/L	Grab	Quarterly				
Turbidity	00070		Report	NTU	In Situ	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				

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):

ISSUANCE/REISSUANCE DATE:

GROUNDWATER MONITORING REPORT - PART D

Facility Name: First Coast Regional Utilities WRF
Permit Number: FL0A00068-001-DW1P
County: Duval

Office: Northeast District

Monitoring Period From: _____ To: _____

Monitoring Well ID: MWC-3
Well Type: Compliance
Description: Off east side and middle of RIB No. 6.

Report Frequency: Quarterly
Program: Domestic

Re-submitted DMR: ☐

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				
pH	00400		6.5 - 8.5	s.u.	In Situ	Quarterly				
Solids, Total Dissolved (TDS)	70295		500	mg/L	Grab	Quarterly				
Chloride (as Cl)	00940		250	mg/L	Grab	Quarterly				
Sulfate, Total	00945		250	mg/L	Grab	Quarterly				
Nitrite plus Nitrate, Total 1 det. (as N)	00630		10	mg/L	Grab	Quarterly				
Turbidity	00070		Report	NTU	In Situ	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				

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):

ISSUANCE/REISSUANCE DATE:

GROUNDWATER MONITORING REPORT - PART D

Facility Name: First Coast Regional Utilities WRF
Permit Number: FL0A00068-001-DW1P
County: Duval

Monitoring Well ID: MWI-2
Well Type: Intermediate
Description: Middle of RIBs No. 5 and 6, off southeast corner of RIB No. 5 and off southwest corner of RIB No. 6.

Report Frequency: Quarterly
Program: Domestic

Office: Northeast 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				
pH	00400		Report	s.u.	In Situ	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	mg/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	mg/L	Grab	Quarterly				
Sulfate, Total	00945		Report	mg/L	Grab	Quarterly				
Nitrite plus Nitrate, Total 1 det. (as N)	00630		Report	mg/L	Grab	Quarterly				
Turbidity	00070		Report	NTU	In Situ	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				

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):

ISSUANCE/REISSUANCE DATE:

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.