State of Florida

Public Service Commission

-M-E-M-O-R-A-N-D-U-M-

DATE: June 29, 2005
TO: Tampa District Office (Rohrbacher)
FROM: Denise N. Vandiver; Division of Regulatory Compliance and Consumer Assistance
RE: Docket No. 050449-WU; Dixie Groves Utility Company; Audit Request: Determine Eligibility for Staff Assistance; Audit Control No. 05-180-2-2

Complete the attached form for determining eligibility for staff assistance (Audit Control No. 05-180-2-2) and mail under a transmittal letter to Marshall Willis, Division of Economic Regulation, with a copy to me no later than July 20, 2005.

By copy of this memorandum, I request that Joe Rohrbacher be added to the CASR distribution list.

Attachment

cc: Office of Public Counsel
Division of Commission Clerk and Administrative Services
Division of Economic Regulation (Willis)

COMPANY NAME _____

DOCKET NO. _____ AUDITOR _____

SHORT FORM RATE CASE (Applicable to WAW Only)

PRELIMINARY AUDIT SCOPE

	YES	NO
(1) Does the utility have annual revenues of $150,000 or less for each service provided or $300,000 or less where the services are combined?		
(2) Were the applicant's books and records organized consistent with Rule 25-30.455, Florida Administrative Code, so as to allow Commission personnel to verify cost and other relevant factors within the 30-day time frame set out in the rule?		
(3) Is the utility current in its filing of annual reports? Date last report filed:		
(4) Is the utility current in its payment of applicable gross receipt tax or assessment fees? Date of last payment? _____ Amount?		
(5) Is the utility a subsidiary to a larger corporation? If yes - Name immediate parent. _____		
(6) Is the utility included in a consolidated Federal Income Tax return? If yes - name immediate parent. _____		
(7) Comments or other financial and accounting matters which came to the attention of the auditor during the review.		

050449-WU

RECEIVED-FPSC

05 JUN 29 AM 11:04

COMMISSION CLERK

FLORIDA PUBLIC SERVICE COMMISSION

APPLICATION FOR A
STAFF ASSISTED RATE CASE

I. General Data

A. Name of utility Dixie Groves Utility Company

B. Address P.O. Box 398, New Port Richey FL 34656-0398

1. Telephone Nos. (727) 848-8292

2. County Pasco Nearest City New Port Richey

3. General area served Holiday, FL

C. Authority:

1. Water Certificate No. 139-W Date Received 5/4/73

2. Wastewater Certificate No. N/A Date Received

3. Date utility started operations: Water 7/1/72 Wastewater N/A

D. How system was acquired Purchased

If utility was purchased, give date 1/01/03 Amount Paid $114,000

1. Name of Seller Dixie Groves Utilities, Inc.

2. Was seller affiliated with present owners? No

3. Did you purchase: Stock _____ or assets only X

E. Type of legal entity: Corporation, Partnership or Sole Proprietorship
Corporation

F. Ownership & Officers: Community Utilities of Florida, Inc. 100% Ownership.

Name	Title	Percent Ownership
1. Gary Deremer	President	
2.		
3.		
4.		

PSC/ECR 2 (Rev. 3/02)

05 JUN 29 AM 10:30

FLORIDA PUBLIC SERVICE COMMISSION

DIVISION OF ECONOMIC REGULATION

DOCUMENT NUMBER-DATE

06156 JUN 29 05

FPSC-COMMISSION CLERK

G. List of Associated Companies and Addresses:

1. Community Utilities of Fla, Inc. 5320 Captains Ct. New Port Richey, FL 34652
2. Virginia City Utility Co. P.O. Box 398 New Port Richey, FL 34652
3. _____

H. If you have retained an attorney and/or a consultant to represent the utility for this application, furnish the name(s) and address(es):

N/A

II. Accounting Data

A. Outside Accountant

1. Name Jack Baille
2. Firm J.S. Baille, C.P.A
3. Address 2153 Grand Blvd., Holiday, FL 34690
4. Telephone (727) 937-6650

B. Individual to contact on accounting matters:

1. Name Joe Gabay
2. Telephone (727) 848-8292 x 212

C. Location of books and records 4939 Cross Bayou Blvd., N.P.R. FL

D. Have you filed an Annual Report with the Commission? Yes

Date Last Filed 4/27/05

E. Has your latest semiannual regulatory assessment fee payment been made (January 30 or July 30 whichever is applicable)? Yes

F. Basic Rate Base Data (Most recent two years)

1. Water	2004	2003
Cost of Plant In Service:	$ 130.551	$ 88.808
Less Accumulated Depreciation:	62.986	58.640
Less Contributed Plant:		
Net Owner's Investment:	$ 67.565	$ 30.168

2. Wastewater

	2004	2003
Cost of Plant In Service:	$ N/A	$ N/A
Less Accumulated Depreciation:		
Less Contributed Plant:		
New Owner's Investment:	$ N/A	$ N/A

G. Basic Income Statement (Most recent two years):

1. Water

	2004	2003
Revenues (By Class):		
a. Residential	$ 50,590	$ 49,495
b. Commercial	597	622
c. Other	1,125	1444
Total Operating Revenues:	$ 52,312	$ 51,561
Less Expenses:		
a. Salaries & Wages - Employees		1,000
b. Salaries & Wages - Officers, Directors, & Majority Stockholders	12,000	12,000
c. Employee Pensions & Benefits		
d. Purchased Water		
e. Purchased Power	1,627	1,685
f. Fuel for Power Production		
g. Chemicals	2,704	1,660
h. Materials & Supplies	1,336	1,666
i. Contractual Services	43,991-	40,440-
j. Rents		
k. Transportation Expenses		
l. Insurance Expense	724	724
m. Regulatory Commission Expense		
n. Bad Debt Expense	108	531
o. Miscellaneous Expense	2,861-	1,331
p. Depreciation Expense	4,346	3,210
q. Property Taxes		
r. Other Taxes	3,980	2,755
s. Income Taxes		
Operating Income (Loss)	$ (21,365)	$ (15,441)

2. Wastewater

	2004	2003
Revenues (By Class):		
a.	N/A	N/A
b.		
c.		
Total Operating Revenues:	$	$
Less Expenses:		
a. Salaries & Wages - Employees	$	$
b. Salaries & Wages - Officers, Directors, & Majority Stockholders		
c. Employee Pensions & Benefits		
d. Purchased Wastewater Treatment		
e. Sludge Removal Expense		
f. Purchased Power		
g. Fuel for Power Production		
h. Chemicals		
i. Materials & Supplies		
j. Contractual Services		
k. Rents		
l. Transportation Expenses		
m. Insurance Expense		
n. Regulatory Commission Expense		
o. Bad Debt Expense		
p. Miscellaneous Expense		
q. Depreciation Expense		
r. Property Taxes		
s. Other Taxes		
t. Income Taxes		
Operating Income (Loss)	$ N/A	$ N/A

H. Outstanding Debt:

	Creditor	Date Borrowed	Balance Due	Interest Rate	Expiration Date
1.	U.S. Water Service		$79,813	Services provided	
2.					
3.					
4.					

I. Indicate Type of Tax Return Filed:

_____ Form 1120 - Corporation

__✓__ Form 1120S - Subchapter S Corporation

_____ Form 1065 - Partnership

_____ Form 1040 - Schedule C - Individual (Proprietorship)

III. Engineering Data

A. Outside Engineering Consultant:

1. Name Mo Kader, P.E.
2. Firm U.S. Water Services Corp.
3. Address 4939 Cross Bayou Blvd. New Port Richey, FL
4. Telephone (727) 848-8292

B. Individual to contact on engineering matters:

1. Name Mo Kader, P.E.
2. Telephone (727) 848-8292

C. Is the utility under citation by the Department of Environmental Protection (DEP) or county health department? If yes, explain.

No

D. List any known service deficiencies and steps taken to remedy problems.

Please Engineers Report Enclosed.

E. Name of plant operator (s) and DEP operator certificate number (s) held. U.S. Water Services Corporation - Contract Operating Company

F. Is the utility serving customers outside of its certificated area? No

If yes, explain

G. Wastewater: N/A

1. Gallons per day capacity of treatment facilities existing _____ under construction _____ proposed _____
2. Type and make of present treatment facilities _____
3. Approximate average daily flow of treatment plant effluent _____
4. Approximate length of wastewater mains:

   Size (diameter) _____ _____ _____ _____ _____
   Linear feet _____ _____ _____ _____ _____
5. Number of manholes _____
6. Number of liftstations _____
7. How do you measure treatment plant effluent? _____

8. Is the treatment plant effluent chlorinated? _____ If yes, what is the normal dosage rate? _____

9. Tap in fees - Wastewater $ _____

10. Service availability fees - Wastewater $ _____

11. Note DEP Treatment Plant Certificate Number and date of expiration: Number _____
Expiration Date _____

12. Total gallons treated during most recent twelve months _____

13. Wastewater treatment purchased during most recent twelve months _____

H. Water

1. Gallons per day capacity of treatment facilities existing 75,000 gpd ~~under~~ currently.
construction _____ proposed _____

2. Type of treatment Chemical Feed

3. Approximate average daily flow of treated water 45,602

4. Source of water supply 2 wells

5. Types of chemicals used and their normal dosage rates Chlorine Chem.

6. Number of wells in service 2 (wells #2, #3) Total capacity in gallons per minute (gpm) _____

	#2	#3		
Diameter/Depth	6" / 65'	4" / 72'	/	
Motor horsepower	10 hp	3 hp		
Pump capacity (gpm)	205	150		

7. Reservoirs and/or hydropneumatic tanks:

Description	Steel	Steel		
Capacity	1,000 gals	1,000 gals		

8. High service pumping: None

Motor horsepower				
Pump capacity (gpm)				

9. How do you measure treatment plant production? Meters at each well prior to hydro tanks.

10. Approximate feet of water mains:

Size (diameter)	2" Galvanized		4"	Asbestos Cement
Linear feet	10,530'		2,880'	

11. Note any fire flow requirements and imposing government agency N/A

12. Number of fire hydrants in service None

13. Do you have a meter change out program? Please see attached Report

14. Meter installation or tap in fees - Water $ Cost

15. Service availability fees - Water $ Cost

16. Has the existing treatment facility been approved by DEP? Yes

17. Total gallons pumped during most recent twelve months 16,644,900 1/1 - 12/31/04

18. Total gallons sold during most recent twelve months 12,773,000 1/1 - 12/31/04

19. Gallons unaccounted for during most recent twelve months 3,871,900 1/1 - 12/31/04

20. Gallons purchased during most recent twelve months Ø

IV. Rate Data

A. Individual to contact on tariff matters:

1. Name Joe Gabay

2. Telephone Number (717) 848-8292

B. Schedule of present rates (Attach additional sheets if more space is needed):

1. Water:

a. Residential Water — 5/8" - 9.24 Base + 1.51 per 1,000 gallons
b. General Service — 3/4" - 13.86 Base + 1.51 per 1,000 gallons.
c. Special Contract
d. Other

2. Wastewater:

a. Residential Wastewater
b. General Service
c. Special Contract
d. Other

C. Number of Customers (Most recent two years):

1. Water Metered	2004	2003
a. Residential	340	337
b. General Service		
c. Special Contract		
d. Other - Specify		

2. Water Unmetered	2004	2003
a. Residential	N/A	N/A
b. General Service		
c. Special Contract		
d. Other - Specify		

3. Wastewater	2004	2003
a. Residential		
b. General Service		
c. Special Contract		
d. Other - Specify	NA	NA

V. Affirmation

I, Gary Deremer the undersigned owner, officer, or partner of the above named public utility, doing business in the State of Florida and subject to the control and jurisdiction of the Florida Public Service Commission, certify that the statements set forth herein are true and correct to the best of my information, knowledge and belief.

Signed

Title President

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

WATER DISTRIBUTION SYSTEM EVALUATION

Engineering Services

DIXIE GROVES UTILITY COMPANY
PASCO COUNTY, FLORIDA

PROJECT I.D. NO. 1004-20.01

Prepared by
U.S. Water Services Corporation
4939 Cross Bayou Boulevard
New Port Richey, Florida 34652

U.S. Water
Services Corporation

For

Dixie Groves Utility Company
4821 U.S. Highway 19, Suite 2
New Port Richey, Florida 34652

(Revised)
March 9, 2005

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Purpose

The purpose of this report is to present an evaluation of the water distribution system at Dixie Groves Utility Company along with recommendations for remedial measures with engineering cost estimates for implementation of two corrective action alternatives.

1.2 Background

Dixie Groves Utility Company is a privately-owned utility located in western Pasco County, Florida. The limits of the service area and the lots that are included within the boundary are depicted on the attached Figures under Appendices A and F. It is located in Section 32 of Township 26 and Range 16 within the boundaries of Northern Tampa Bay Water Use Caution Area (WUCA). The boundaries of the water use caution areas are depicted on the figure under Appendix B.

The potable water service area for Dixie Groves Utility covers an area of approximately 42 acres. A total of 411 lots comprised the original system service area. The present customer service area includes 338 customers. This is due to the fact that several of the smaller residential parcels have been combined under common ownership while other parcels have been combined as light commercial and professional office spaces. A summary of the users, based on land use type, is given below.

Table 1-1

Summary of Water Users

LAND USE	NUMBER OF UNITS
Single Family Residential	219
Single Family Seasonal/Retirement Residential	110
Light Commercial (Strip Centers, Churches, Restaurants, etc.)	6
Professional Offices (Doctors, Dentists, etc.)	3
TOTAL:	338

Most of the existing single family residential and mobile homes are older units dating back to the mid 1950's. The current demographics within the limits of the Dixie Groves' service area include a mixture of retirees, seasonal residents, and younger family groups. A limited number of multi-family structures, professional office spaces and light commercial properties also exist along the south side of Mile Stretch Drive. Based on the past twenty three (23)-month period of record ending January 2005, the average daily water usage is approximately 34,000 gpd. The monthly water demand and withdrawal records are summarized in a tabular format under Appendix C. It is clear from the general trends of the data that the monthly amounts of unaccounted-for water continue to decrease while corrective actions to the water distribution system are implemented.

1.3 Water Use Caution Area

Dixie Groves Utility Company is also located within the boundaries of the Northern Tampa Bay Water Use Caution Area (WUCA) as indicated in the figure under Appendix B. Water Use Caution Areas are defined by State law and Chapter 40D-2, F.A.C., as areas where water resources are, or expected to, become critical within the next twenty years. The Northern Tampa Bay WUCA is one

of several water use caution areas within the jurisdictions of the Southwest Florida Water Management District (SWFWMD). These areas have been declared as necessary to address cumulative water withdrawals which are causing or may cause adverse impacts to water resources, land resources or the public interest.

2.0 EXISTING WATER SUPPLY

2.1 Water Supply

Dixie Groves Utility Company currently has a wellfield with two production wells known as Well #2 and Well #3. The locations of the wells are shown on the attached plans under Appendix G, which also depicts the layout of the existing water distribution system. The SWFWMD regulates the total allotted withdrawal quantity from the wellfield under SWFWMD Water Use Permit No. 20007718. A copy of the permit is attached under Appendix D. The water use permit allows a peak monthly daily withdrawal of 150,000 gallons per day from the wellfield with an annual average daily withdrawal of 75,000 gallons per day.

Special Condition No. 3 of the SWFWMD Water Use Permit requires the permittee to implement the approved water conservation plan in order to reduce the percentage of the unaccounted-for water through the water distribution system to acceptable levels below 12%. The condition also requires submission of progress reports to the SWFWMD concerning the implementation of the plan.

Dixie Groves wellfield is located near the Gulf Coast in western Pasco County. This location is coincident with the thinner portions of the potable zone underlying peninsular Florida. The potable water zone in this area consists of a thin lens of fresh water that is underlain by denser saline water. As fresh water is withdrawn from this zone, the saltwater interface rises at a greater percent than the potable water drawdown due to the density difference between the two aqueous layers. This action may cause degradation of the potable aquifer water quality because of increasing mineral concentrations within the raw water supply.

2.2 Production Wells

The main production well for Dixie Groves Utility Company is Well #2. Well #3 is considered as a standby well. Each well is permitted for a total withdrawal quantities of 75,000 gpd (annual average) and 150,000 gpd (peak monthly). However, the total withdrawal from the wellfield is limited to 75,000 gpd (annual average) and 150,000 gpd (peak monthly) by the SWFWMD Water Use Permit.

Well No. 2

This well has a diameter of 6 inches with a total depth of 65 feet and cased to 47 feet. The SWFWMD water use permit allows a peak monthly and annual average withdrawals of 150,000 gpd and 75,000 gpd, respectively.

Well No. 3 (Standby)

This well has a diameter of 4 inches with a total depth of 72 feet and cased to 42 feet. The SWFWMD water use permit allows a peak monthly and annual average withdrawals of 150,000 gpd and 75,000 gpd, respectively.

3.0 WATER DISTRIBUTION SYSTEM EVALUATION

3.1 Permitting and Compliance Background

A notice of non-compliance was generated by the SWFWMD on February 8, 2001, as a result of apparent discrepancies between the permitted daily average withdrawal amounts and the actual withdrawals reported to the District. As a result, the District requested a complete evaluation of

these discrepancies and the water distribution system followed by remedial measures to reduce pumpage rates to acceptable levels below the maximum allowable permitted limits.

Consequently, an assessment of the water distribution system was performed by the operating company at that time to determine the cause(s) of water losses through the water distribution system and recommend certain corrective actions to remedy the problem. The initial tests of the water distribution system revealed that significant amounts of water had been lost between the meters at the wells and the meters at the individual service connections. Also, pumpage data from the wells as compared to the amounts sold to the customers, indicated that large and variable amounts of water are not accounted for between the well meters and the individual meters.

Following these results, the former operating company assessed the site on March 3, 2001, and determined that numerous small leaks existed at a significant percentage of service connections. A random check of approximately 50 individual service connections was performed. Of the number of meters checked, approximately 30 percent of the meters indicated small to significant leaks between the distribution line and the service connection meter. Most leaks were observed to be at the cutoff valves between the meters and the distribution line and also as a result of minor leaks associated with the fittings and couplings in the meter box.

The original evaluation also revealed that 33 water meters recorded zero usage during a 12-month period indicating that they were not functioning. In addition, 42 meters had recorded greater than 700,000 gallons of total accumulated flow. The useful life of a residential water meter is considered to be 1,000,000 gallons. Following these findings, based on recommendations by the operating company, the following remedial measures were implemented:

- All residential water meters recording zero flow were replaced.
- All residential water meters that had total accumulated readings of 900,000 gallons or greater were replaced.
- A program was initiated to inspect and repair all leaks at water meters on a regular basis.

Following completion of the above system improvements, Dixie Groves requested a modification to the water use permit to increase the annual average withdrawal limit from 39,000 to 75,000 gpd. The request was approved by the SWFWMD and, accordingly, a permit modification was issued on February 14, 2002.

3.2 Current Water Distribution System Conditions

As mentioned above, the water distribution system at Dixie Groves Utility Company was built in the 1950's along with the two water supply wells. The water distribution system consists of a combination of both 4-inch asbestos cement piping and 2-inch galvanized iron piping. Over the past fifty years, this piping has deteriorated significantly and is currently in a poor condition. See attached site plan under Appendix F for more details about the layout of the existing piping.

Asbestos cement piping was commonly used in water distribution systems built before 1980. However, its use in water distribution systems was discontinued following the enactment of legislation by the U.S. Congress in 1984 to control asbestos hazards in building materials, and following the USEPA proposed nationwide standard for asbestos in drinking water.

The condition of the piping at Dixie Groves, based on our most recent inspections, is considered very poor. The 2-inch galvanized iron piping has deteriorated substantially and contains significant number of cracks and leaks throughout the distribution system. The high degree of corrosion in the piping has also resulted in significantly reducing the inside diameter of the piping due to the deposition and accumulation of iron oxides on the inside surfaces of the pipes. Also, the walls of the existing hydropneumaic tanks (pressrue tanks) for Well #2 and Well #3 are highly corroded with obvious water leaks through the external surfaces of the walls.

3.3 Unaccounted-for Water

Historical water quantity withdrawal data from the two wells has shown an increasing trend of water loss through the water distribution system with an average of 40%. See the attached table and graph under Appendix C. However, following the most recent repairs to the system over the past several months, the water losses have dropped to acceptable levels.

Public water supply utilities that are located in Water Use Caution Areas are required by the SWFWMD to perform periodic water audits to ascertain that the total amount of the unaccouted-for water does not exceed 12% of the total withdrawal amounts. Water Auditing is performed in accordance with the guidelines given in the American Water Works Association's (AWWA) Manual #36, entitled Water Audits and Leak Detection.

Based on the most recent well withdrawal flow data and the total amounts of water sold, the average of the total amount of water that is unaccounted-for through the water distribution system over the past six (6) months is about 11%. This amount continues to decrease as shown by the trends on the figure under Appendix C. This percentage is considered acceptable in comparison with the maximum allowable rate of 12%. It is apparent that the remedial measures that have been undertaken in the past, including piping and water meter replacement, have contributed significantly to the reduction of the total amounts of unaccounted-for water. However, due to the age of the water system, water is still leaking through the cracks in the water distribution system piping which has extensively deteriorated.

With that said, it has become strategic and prudent for Dixie Groves Utility Company to pursue and consider an effective and permanent solution to this problem for years to come.

4.0 CURRENT AND PROJECTED WATER DEMAND

Dixie Grove Utility Company provides water services to a total population of approximately 877. As shown above, the current annual average potable water demand is approximately 34,000

gallons per day (equivalent to 39 gpcd) which is significantly lower than the standard average per capita consumption rates between 85-135 gpd. The utility service area is nearly built-out. Little to no growth is anticipated in the future. Also, the water consumption rate is not expected to change.

4.1 Water Conservation Policy

The following water conservation policies are established for Dixie Grove Utility Company:

A. Full compliance with Pasco County Emergency Ordinance No. 01-016 regarding water use in Pasco County. The ordinance limits lawn watering times during the week to only one day per week to conserve water.

B. Conservation Devices - In designing any building for which a building permit is required, the owner, architect or developer shall include the following water conservation devices in any plans submitted for approval and permitting:

- Slope control devices
- Reduced flow showerheads
- Reduced water use appliances, where feasible

In addition, any such owner, developer or architect shall utilize only those heating and cooling systems which are designed to minimize water usage. Ornamental water features such as exterior fountains and reflection pools shall be permitted only if they re-circulate water.

C. Shallow Wells – Private shallow wells for irrigation purposes must be permitted by the utility. No private shallow well shall be approved by the utility which may adversely affect or promote salt water intrusion of utility-owned potable water wells.

D. Catch Basins – The developers of proposed residential, industrial and commercial projects shall design catchment basins for use, where feasible, for the storage of rainwater for later use in irrigation. The design and use of such catchment basins shall conform to all applicable local, state, and federal regulations.

E. Xeriscaping – Any new or re-landscaped utility owner property shall incorporate a landscape plan which utilizes the concept of xeriscaping.

F. Prohibition – Within the Dixie Groves Utility service area, in connection with any new development or substantial redevelopment, the use of high volume irrigation equipment shall be prohibited. The installation of any automatic sprinkling system which is not equipped with moisture sensors or other devices designed to keep the sprinkling system from operating during periods of rain or high water content in the soil, shall be prohibited.

5.0 WATER DISTRIBUTION SYSTEM REPLCEMENT WITH COST ESTIMATES

The following alternatives are recommended for replacement of the water distribution system:

Alternative I (Replacement of the System with Fire Protection Capability):

Under the proposed upgrades, the entire water distribution system will be replaced with 4-inch and 8-inch C-900 DR-18 PVC piping with design considerations to fire protection and storage. The details of the proposed layout of the water distribution system are depicted on the attached site plans under Appendix F. The raw water from Well #2 and Well #3 will be transferred to the proposed 110,000-gallon above-ground storage tank at Well #3 using the well pumps which will be activated through a mercury floating switch in the storage tank. The water in the storage tank will then be pumped to the water distribution system via the new hydropneumatic tank. All piping from the hydropneumatic tank to the proposed fire hydrants will have a minimum diameter of 8 inches. This size is necessary to accommodate flows during fire flow demand of a minimum of 1,000 gallons per minute for two hours.

In addition, two new 15 h.p. high service pumps will be installed to pump the water from the storage tank to the hydropneumatic tank. An additional 40 h.p. high service pump will be installed to supply the additional fire flow demand from the storage tank to the water distribution system. The total pumping capacity of the system, with all of these pumps under operation, will be approximately 1,200 gallons per minute. See the attached plans for more details under Appendix G.

Furnishing and installation of the 110,000-gallon above-ground storage tank would also contribute to compliance with Rule 62-555, F.A.C., which require providing a storage capacity of at least 25% of the system's maximum day water demand.

An itemized list of the proposed modifications along with their respective cost estimates are provided in the spreadsheet under Appendix E. The total estimated cost for the project including road resurfacing is approximately $1,434,407.10.

Alternative II (Replacement of the System without Fire Protection Capability):

Under the proposed upgrades, the entire water distribution system will be replaced with 4-inch C-900 DR-18 PVC piping without design considerations to fire protection and storage. The details of the proposed layout of the water distribution system are depicted on the attached site plans under Appendix F. Also, the hydropneumatic tanks for Well #2 and Well #3 will be replaced with new tanks with all necessary supply piping, bypass valves and air compressors.

An itemized list of the proposed modifications along with their respective cost estimates are provided in the spreadsheet under Appendix E. The total estimated cost for the project including road resurfacing is approximately $1,090,583.84.

6.0 ROAD RESURFACING

The exising roads at Dixie Groves area are in a poor condition and need resurfacing. To accomplish this task, Pasco County, under the Pasco County Paving Assessment Program, initiated a plan to resurface the roads around the middle of October 2003. As part of this plan, Pasco County requested a schedule from U.S. Water Services Corporation regarding the proposed upgareds to the water distribution system. Based on the County's estimates, a one time fee of $1,059.00 will be charged to each homeowner at Dixie Groves Estates to recover the cost of paving, which will consist of a 1-inch Type S-III asphalt leveling course including, filling all the pot holes, and a top 1-inch Type S-III asphalt wearing course.

In response to the County's letter, dated September 19, 2003, U.S. Water Services Corporation requested, in a letter, dated September 25, 2003, that the County put the project on hold until the layout of the water distribution system is complete. U.S. Water indicated that deferral of the road resurfacing project would be in the best interest of the public due to the fact that the roads will be repaired only once with resulting cost savings to the homeowners of more than 50 percent. Consequently, Pasco County responded to the request, in a letter, dated September 30, 2003, with the consent to put the project on hold until the water distibution system design, permitting and constrution are complete. In addition, Pasco County did not have any objections to incorporating the proposed road resurfacing project under the overall water distribution system repalcement project.

Under the proposed road resurfacing project, a total area of aproximately 20,138 square yards will be paved which includes the following roads (see attached plans under Appendix G for more details):

- Lake Ridge Lane
- Briar Hill Lane
- Rosedale Lane
- Knollwood Lane
- Arcadia Drive

- Mary Lane
- Dixie Lane
- Patriot Lane
- Viceroy Lane
- Sparkle Lane

The proposed procedure for the road resufacing plan include the following:

- All open road cuts will be filled with a minimum of 8 inches of limerock base which will be compacted with vibratory plate compactor to a minimum of 98% density.
- Fill all open road cuts with Type S-III Asphalt and compact thoroughly.
- Clean road surfaces to be overlaid from dirt and debris and haul off-site.
- Apply asphalt emulsion tack coat for proper bonding of asphalt.
- Fill and compact all pot holes with Type-III asphalt.
- Overlay with 1-inch leveling course of Type S-III asphalt.
- Compact leveling course.
- Furnish and install a 1-inch finish wearing course of Type S-III asphalt.
- Compact to a smooth finish with a vibratory steel wheel roller.

7.0 SUMMARY AND RECOMMENDATIONS

As mentioned above, the existing water distribution system at Dixie Groves is in a very poor condition and has extensive amounts of deterioration. This deterioration has resulted in substantial losses of water through the water distribution system for many years. Based on the current trends of the total amounts of unaccounted-for water, the water losses are expected to continue to increase in the future with further and more excessive deterioration in the piping.

Based on the foregoing, replacing the existing water distribution system with a new one is the most viable option at this time. Replacing the system is highly recommended and has several advantages including:

- Elimination of potential risks to public health by improving the water quality. The existing piping of the water distribution system was built in the 1950's of a combination of both 4-inch asbestos cement piping and 2-inch galvanized iron piping. These types of pipes are no longer used in the construction of underground utilities, especially in water distribution systems. Most States have banned installation of new asbestos pipes due to health-related issues attributed to cancer. Also, galvanized iron piping is not recommended for underground utilities because it decays very fast as a result of corrosion which consequently causes clogging of the piping and deterioration of water quality.
- Water conservation. Based on current water withdrawal and consumption rates, the percentage of the unaccounted-for water that is lost through the water distribution system is about 11% (based on the past 6 months). This rate is close to the maximum allowable rate of 12% (as given by the guidelines of the Southwest Florida Water Management District). Therefore, replacing the water distribution system would result in conserving more water and elimination of water losses through the water distribution system.
- Achieve the goals of the Southwest Florida Water Management District. Since the facility is located in a Water Use Caution Area as outlined by the permitting rules of the Southwest Florida Water Management District, it would be imperative for the Utility to aggressively tackle these issues and replace the water distribution system to achieve the goals and policies of the SWFWMD Water Management Plan for water conservation in such sensitive areas. According to the recent updates to the 1992 SWFWMD Needs and Sources Water Supply Planning Study, the water demand in the District would increase from 1.5 billion in 1994 to 1.8 billion gallons per day by 2020. In addition, the study concludes that unless greater than anticipated conservation occurs, it is unlikely that all projected demands will be met.

In summary, by pursuing this project, the Utility will be able to contribute positively to addressing the cumulative water withdrawals which are causing or may cause adverse impacts to water resources in the region, land resources or the public interest.