FLORIDA RURAL WATER ASSOCIATION

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April 5, 2024

Mr. Matthew Perry
City of Bonifay
611 E Bay Ave
Bonifay, FL 32425
Phone: (850) 790-5970
Email: Matthew.Perry@cityofbonifay.com

RE: Water and Wastewater Draft Capacity Fee Study
City of Bonifay, Holmes Co., PWS: 1300083, Fac. No. FL0027731

Dear Mr. Perry:

Florida Rural Water Association is pleased to provide this Capacity Fee Study to the City of Bonifay as a membership benefit. FRWA is dedicated to assisting water and wastewater systems provide Floridians with an ample affordable supply of high-quality water and wastewater disposal services, while protecting natural systems.

You should be congratulated on your water and wastewater system and operations staff. With unfunded mandates continuing to roll down from state and federal governments along with the aging of pipes, pumps, and plants, you have risen to the challenge and continue to provide quality services. To make a very difficult job more difficult, revenues have lagged behind expenses. Utility operators have done more with less each year, as measured in real dollars. They have shouldered the responsibility of running the system in a responsible manner and in compliance with state rules and regulations.

Capacity Fees. Capacity Fees (Connection Charges) are one-time charges assessed to the new commercial and residential connections to reimburse utility systems for infrastructure required to supply water and collect, treat, and dispose of wastewater from these new commercial and residential connections. Capacity Fees are proportional to the capacity set aside for the new customer. In some systems these charges are called Capacity Fees while others may be called Benefit Assessments, User Fees, Contributions In Aid of Construction (CIAC), Impact Fees or System Development Charges. [1]

The goals and objectives considered in the study include the following:

- ✓ Proposed Capacity Fees should be equitable among customer classes;
- ✓ Proposed Capacity Fees should minimize “shock” to customers if possible;

[1] AWWA, *Manual M1 - Principles of Water Rates, Fees and Charges*, 7th Edition, American Water Works Association, Denver CO., 2017, pp. 321-347

- ✓ Proposed Capacity Fees should reimburse the City for infrastructure required to supply water and collect treat, and disposal of wastewater from new commercial and residential connections; and
- ✓ Proposed Capacity Fees should provide for capital improvement needs and not operation and maintenance costs

Executive Summary

Findings & Recommendations

The City of Bonifay has two options for setting Capacity Fees:

Option A – Use the **Remaining Useful Life Basis** to capture the existing cost of running the City of Bonifay Water and Wastewater Utility.

Option B – Use the **Replacement Value Basis** to capture the true and sustainable cost of running the City of Bonifay Water and Wastewater Utility.

> **Remaining Useful Life (RUL)** is the length of time the utility infrastructure, piping, pumps, tanks, and equipment is likely to be functional before it requires replacement. A piece of equipment may last longer than its estimated useful life, but it will need more and more maintenance as it reaches that point. It may become obsolete or require major repairs. An especially old asset, while technically functional, may be more of a liability than a benefit if it requires frequent repair work.
>
> The Remaining Useful Life basis for computing Capacity Fees provides a value to existing utility assets based on their depreciated condition, estimated based on the years it is expected to continue to function. This can also be called Replacement Cost New Less Depreciation. This basis does not provide for the cost of replacing the pipe or equipment when it reaches the end of its useful life, the cost that the utility will have to bear to serve the development being added to the utility.
>
> As an example of the implication of Remaining Use Life Basis, Bonifay's Elevated Storage Tank #1 at the school was constructed around 1952, over 70 years ago. The AWWA useful life an elevated storage tank is 44 years. The elevated storage tank at the school would have no value when computing Capacity Fees based on Remaining Useful Life Basis. For this portion of the Capacity Fee, the new user will have almost no Capacity Fee to pay. However, the true, sustainable value to the utility is the replacement cost for the elevated storage tank, this is the cost the utility will have to bear to keep treated water available for new users as they are added to the system.
>
> **Replacement Value** is the original cost escalated to current-day dollars. That is, the cost to the utility to install new infrastructure to replace existing piping, pumps, tanks, and equipment in today's dollars. The Replacement Value recognizes the expense the utility must incur to purchase new piping and equipment as the existing piping and equipment have become unusable due to age and wear. This is the cost the existing users have been incurring for all the previous years in keeping sufficient and usable piping and equipment available for the users now coming onto the system.
>
> Replacement Value reasonably reflects the cost of providing new expansion capacity to users as if the capacity was added at the time the new user connected to the water system. The utility is fairly compensated for the carrying costs of the excess capacity that needed to be built into the system in advance of the new users connecting to the system so it would be available at the time the connection was needed. With pipelines and treatment plants it is impossible to put in increments of capacity at exactly the time a new development needs to have it available. Capacity-related

infrastructure must be planned, designed, and constructed in large increments and the new users the capacity is intended to serve will typically connect to the system over many years. Utilities must make investments in capacity-related infrastructure that will provide service to new development well in advance of the time when the new development occurs. Meanwhile, the utility is incurring the cost of keeping the capacity-related infrastructure in proper working condition so it will be fully available when needed by the new development.

With Capacity Fees based on Replacement Value, the new users are paying for the true, sustainable value of the capacity that the utility has purchased and kept available for them until now to us. While Replacement Value capacity fees represent a higher cost per Equivalent Residential Connection (ERC) than Remaining Useful Life, FRWA recommends Replacement Value because it represents a more equitable compensation to the utility for the cost of constructing and keeping necessary, effective capacity available for new users when it is needed.

1. Water Capacity Fee Finding

The current Water Capacity Fees for Bonifay are $948 per ERC. For the Water Capacity Fee, the City has the option of using the evaluated Fee of **$880 per ERC** using the Remaining Useful Life Basis –or- **$3,360 per ERC** using the Replacement Value Basis to capture the true and sustainable cost of running its Water Utility. FRWA recommends using the Replacement Value.

2. Wastewater Capacity Fee Findings

The current Wastewater Capacity Fees for Bonifay are $2,266 per ERC. For the Wastewater Capacity Fee, the City has the option of using the evaluated Fee of **$4,970 per ERC** using the Remaining Useful Life Basis –or- **$12,570 per ERC** using the Replacement Value Basis to capture the true and sustainable cost of running its Wastewater Utility. FRWA recommends using the Replacement Value.

Capacity Fees per ERC are proportional to the existing Average Day Flow per connection. Bonifay has an average day flow per connection of 433 gpd. According to the Water Research Foundation, average water use per household is 138 gpd (Water Research Foundation, *Residential End Uses of Water, Version 2*, 2016) Wastewater discharge would be even less than 138 gpd/household because not all water used is returned to the wastewater system. That means the wastewater flows for Bonifay are more than 3 times average use expected. These high wastewater flows are likely due to high infiltration/inflow in the system. Since the Bonifay average wastewater flows are higher than the Bonifay average water flows, there must be additional water entering the wastewater transmission system. The high average wastewater flows per ERC also increase costs for infrastructure needs and, therefore, result in higher than average Wastewater Capacity Fees.

3. Water & Wastewater Capacity Fee Findings

In combination both the Water and Wastewater Capacity Fees are:

Equivalent Residential Water & Wastewater Connection (ERC) Calculation Comparison

Category	Current Impact Fees	Option A Remaining Useful Life Value	Option B Replacement Value
Water	$948/ERC	$880/ERC	$3,360/ ERC
Wastewater	$2,266/ERC	$4,970/ ERC	$12,570/ ERC
Totals	**$3,214/ERC**	**$5,850/ ERC**	**$15,930/ ERC**

4. Water and Wastewater Capacity Fee Recommendations

FRWA recommends that the City use the evaluated fees to capture the true and sustainable cost of running its Water and Wastewater Utility and to maintain and protect the City's vital infrastructure. We recommend and can assist with continuing to establish a 5 and 10-year Capital Improvement Program to keep the City's utility financially sound.

5. Other Utility Fee Recommendations

- Fees for turn-ons, turn-offs, and late fees might need to be increased for inflation. Fees should be reviewed / updated at least annually by staff based on actual time and material costs for meters, fittings, boxes, equipment costs, fuel costs, and salaries.
- The Utility's policies on payments, late charge fees, illegal turn on penalty, or returned check penalty should also be reviewed / updated at least annually by staff.
- FRWA recommends implementing annual adjustments in accordance with the Florida Public Service Commission. The Public Service Commission price index is established annually to allow franchised water and wastewater utilities to adjust rates and charges as a reflection of the determined increase in operation and maintenance expenses. The following table shows the Public Service Commission annual Approved Index for water and wastewater utilities.

Year	Commission Approved Index	Year	Commission Approved Index
2012	2.41%	2018	1.76%
2013	1.63%	2019	2.36%
2014	1.41%	2020	1.79%
2015	1.57%	2021	1.17%
2016	1.29%	2022	4.53%
2017	1.51%	2023	7.07%

- It is recommended that you revisit this Capacity Fee study every 3 to 5 years or as needed. Indicators of need include changes to revenue or CIP expenses predictions, current financial position and other indicators that become evident during the annual budget approval process.

Capacity Fee Evaluation

Capacity Fee Calculations.

Capacity Fee Calculations are performed in accordance with the American Water Works Association *Manual M1 - Principles of Water Rates, Fees and Charges* guidelines for calculating and allocating Capacity Fees to new customers.[2] FRWA uses a rational and conservative approach when performing these evaluations. This approach is transparent, defendable, and complies with statute and case law. Since there is a rational nexus of allocating Capacity Fees to customer groups it also follows the intent of the Florida Statutes that set the basis for rates and Capacity Fees by counties and municipalities. Such fees shall be just and equitable. [3]

Capacity Fees are set using the following criteria:

- The water / wastewater system has the legal authority to charge Capacity Fees.
- Costs are allocated to specific customer classes based on use of the water / wastewater system infrastructure.
- New customers add incremental capital costs to the utility and the fees are set to recapture their impacts to the system.
- The evaluation of system data is sufficient to reasonably estimate the value of water / wastewater system infrastructure and support charges to new customers. The evaluation includes water / wastewater consumption, historical flow trends, growth, and inventories of water lines, wells, treatment, collection, manholes, lift stations, etc.
- Justification of capital costs are clearly provided in the calculation of fees.
- The costs of grant-funded and contributed assets are not included in the Capacity Fee calculations.
- Outstanding principal on debt that has been incurred for infrastructure is not included in asset value for Capacity Fee calculations.
- The capital costs / fee requirements for new customers are consistent, predictable, and uniform.
- Each customer class equitably pays its own way. No undue burden is placed on one class over another customer class.

Compliance with the Dual Rational Nexus Test

The City is responsible for compliance with Florida statutes for all aspects of Capacity Fees – establishment, collection, and expenditures. The dual rational nexus test is a basis for the validity of impact fees. The test has two prongs, each of which are a rational nexus that must be found:

> The local government must demonstrate a reasonable connection, or rational nexus, between the need for additional capital facilities and the growth in population generated by the subdivision. In addition, the government must show a reasonable connection, or rational nexus, between the expenditures of the funds collected and the benefits accruing to the subdivision.[4]

To understand the first prong of the dual rational nexus test, a rational nexus between the need for additional capital facilities and the growth in population generated by a new development, it is first important to understand what is considered rational. To be rational, the nexus must be substantial, demonstrably clear, and present. The Capacity Fee Study attempts to define (monetarily) the benefit new customers receive from hooking up to the

[2] AWWA, *Manual M1 - Principles of Water Rates, Fees and Charges*, 7th Edition, American Water Works Association, Denver CO., 2017, pp. 321-347

[3] See Florida Statutes Chapter 153 for County Water & Sewer Systems and Chapter 180 - Municipal Public Works.

[4] *St. Johns County v. Northeast Florida Builders Ass'n, Inc.* 583 So.2d 635, 637 (Fla. 1991),; *Hollywood, Inc. v. Broward County,* 431 So.2d 606, 611-612 (Fla. 4th DCA 1983)

utility in demonstrating the value of infrastructure capacity made available to the new customer. The Capacity Fee Study specifically focuses on the pro-rate share new customers should pay for the infrastructure required to meet the new demand. The goals of the Capacity Fee Study are rational and consistent with the first prong of the dual rational nexus test.

The second prong of the dual rational nexus test is that there must be a rational nexus between the expenditures of the funds collected and the benefits accruing to the payor of the impact fee. This can be satisfied by specifically earmarking the funds collected for use in acquiring capital facilities to benefit the new residents. How the City handles the fees collected is the responsibility of the City and is not addressed in this Capacity Fee Study.

Cost Savings and Benefits.

Capacity Fees provide a revenue source for replacement and upgrade of existing infrastructure as new customers are added to the system and the funds collected must benefit the new customers paying the fee. This revenue is intended to be used for funding major expansions as well as minimizing future debt or reducing the need for future debt. Capacity Fees also provide for the utility to maintain an appropriate level of retained earnings and cash reserves to meet capital improvement needs. Utilities that are committed to regular renewal and replacement of aging infrastructure regularly see cost savings in their O&M budget, avoid unnecessary costly emergency repairs and minimize community health and safety concerns due to critical water and wastewater equipment failures.

Accuracy of Revenue Predictions.

We have performed our analyses using the data and information obtained; we have relied upon such information to be accurate. Projected Capacity Fee revenue precision is limited by the accuracy of the financial information provided – good information "in" equals good information "out", and *vice versa*. Should our capacity fees not meet your expectations, we will work with you to carefully review and update financial records, revisit our calculations, valuation parameters, assumptions, etc. We are always happy to return, revisit your Capacity Fees, and adjust the analyses as necessary, consistent with Florida law.

Growth should pay for Growth.

Growth causes the need for expansion and should therefore pay its fair share for the costs incurred. These new connections use existing capacity or require expanded capacity in the form of plant expansions and water / sewer line extensions -- requiring significant capital expenditures. Existing ratepayers have supported and maintained the existing facilities, and new customers should support any new, additional, or expanded facilities plus pipelines that are required for the use of these new customers.

Some officials and new customers have argued incorrectly that the utility should allow new customers on the system without charge or at original plant costs (not adjusted for inflation). It's not fair to existing ratepayers and it is not a prudent utility practice. Nor would it be good business practice. Public officials may be tempted at times to trim budgets; lower utility rates below operational costs; and keep Capacity Fees below actual capital investment needs -- but this seriously reduces utilities' ability to perform its central mission, shortchanges ratepayers by delaying costs, sets up unrealistic expectations, and undermines the future vitality of the community.

Dealing with Growth & Infrastructure Decay.

Communities must maintain adequate levels of service for public facilities and anticipate and prepare for growth. Some older or aging infrastructure may need to be upgraded which requires adequate funding.

As new customers come online more and more of the treatment capacity is used up until the plant is at capacity and must be expanded. Further, the Florida Department of Environmental Protection requires that when a water plant reaches 75% of capacity that the supplier of water must submit source/treatment/storage capacity analysis reports by a professional engineer documenting projected flows. If the operating capacity of the water treatment plant or finished water storage is exceeded in less than 5 years, documentation of timely design, permitting, and

construction must be submitted with the report (Rule 62-555.348 F.A.C.). Similarly, for wastewater treatment plants, FAC 62-600.405 requires timely planning, design, and construction of needed wastewater treatment facility expansion. This requirement includes a statement signed and sealed by a professional engineer that planning and preliminary design of the necessary expansion has been initiated if the Capacity Analysis Report documents that the permitted capacity of the facility will be exceeded within the next five years.

Existing Water System Demand.

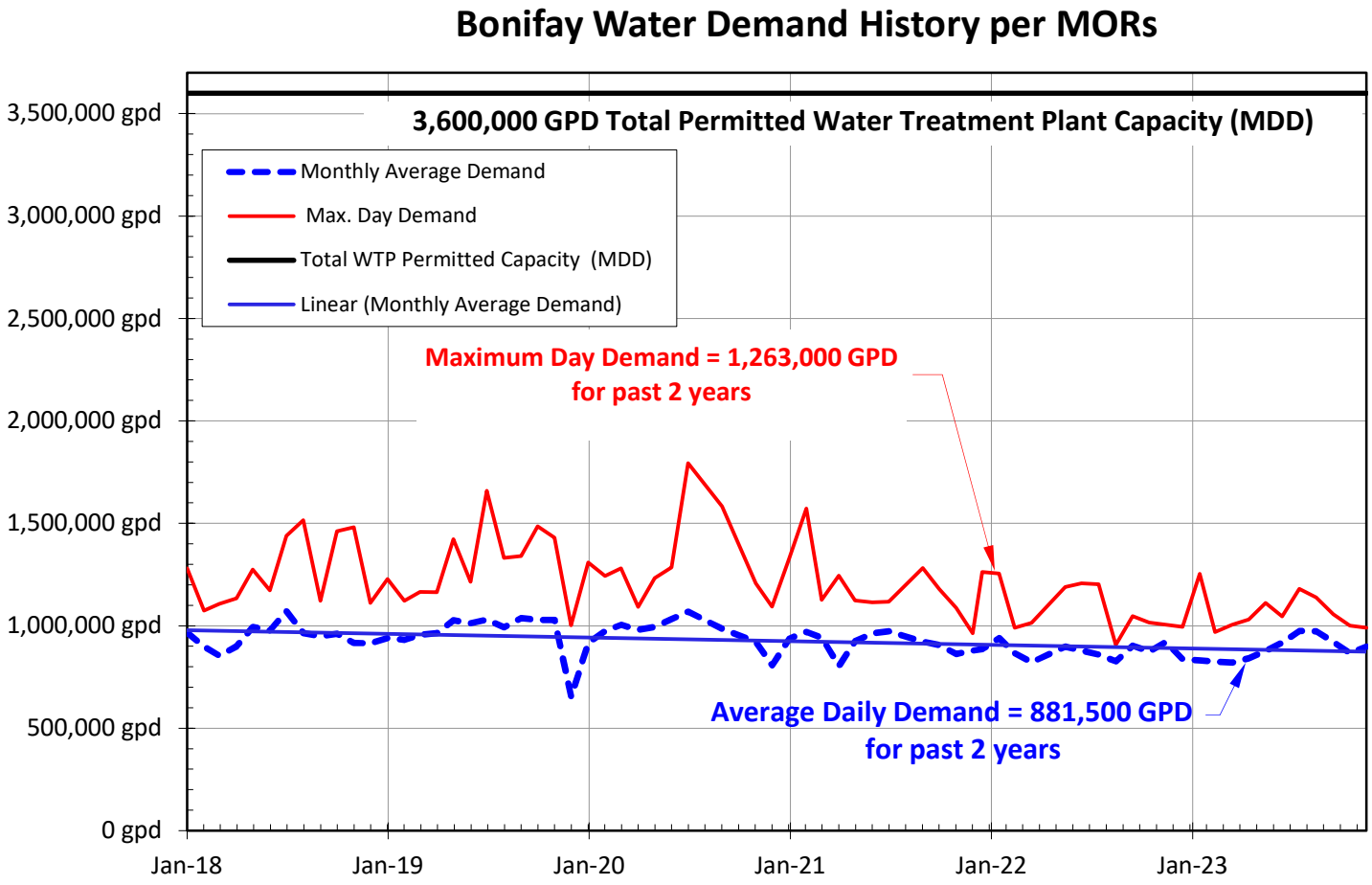

Figure 1 ~ Historic Water Demands

(GPD denotes Gallons per Day)

The amount of water used by the customers on the system is provided below, see Figure 1 for flow records:

City Population.....2,759
(based on data.census.gov)

Equivalent Residential Connections (ERC).....2,286

Average Daily Demand (ADD) for past 2 years ..... 881,513 gpd (610 gpm)

Maximum Daily Demand (MDD) for past 2 years ..... 1,263,000 gpd (880 gpm)
(December 2022 was not included because it was an unrepresentative value)

Total Permitted Plant Capacity (MDD)..... 3,600,000 gpd (2,500 gpm)

Percentage of total water treatment plant capacity used 35%

Water used per Equivalent Residential Connection (ADD / ERC) ..... 386 gpd

The City has 4 operational water treatment plants with raw water provided from a groundwater well at each plant, two 12-inch diameter wells at WTP #1 and #3 and a 10-inch diameter well at WTP #5. WTP #4 is permanently offline. Treatment is provided by gas chlorination for disinfection. A minimum of 0.2 parts per million minimum chlorine residual is maintained throughout the distribution system to ensure water quality. The City has three elevated storage tanks to provide for storage and pressure. The maximum day water treatment demand has stayed well below the total capacity of 3,600,000 gpd for the past 2 years, utilizing only 35% of the total plant capacity.

Existing Wastewater System Demand.

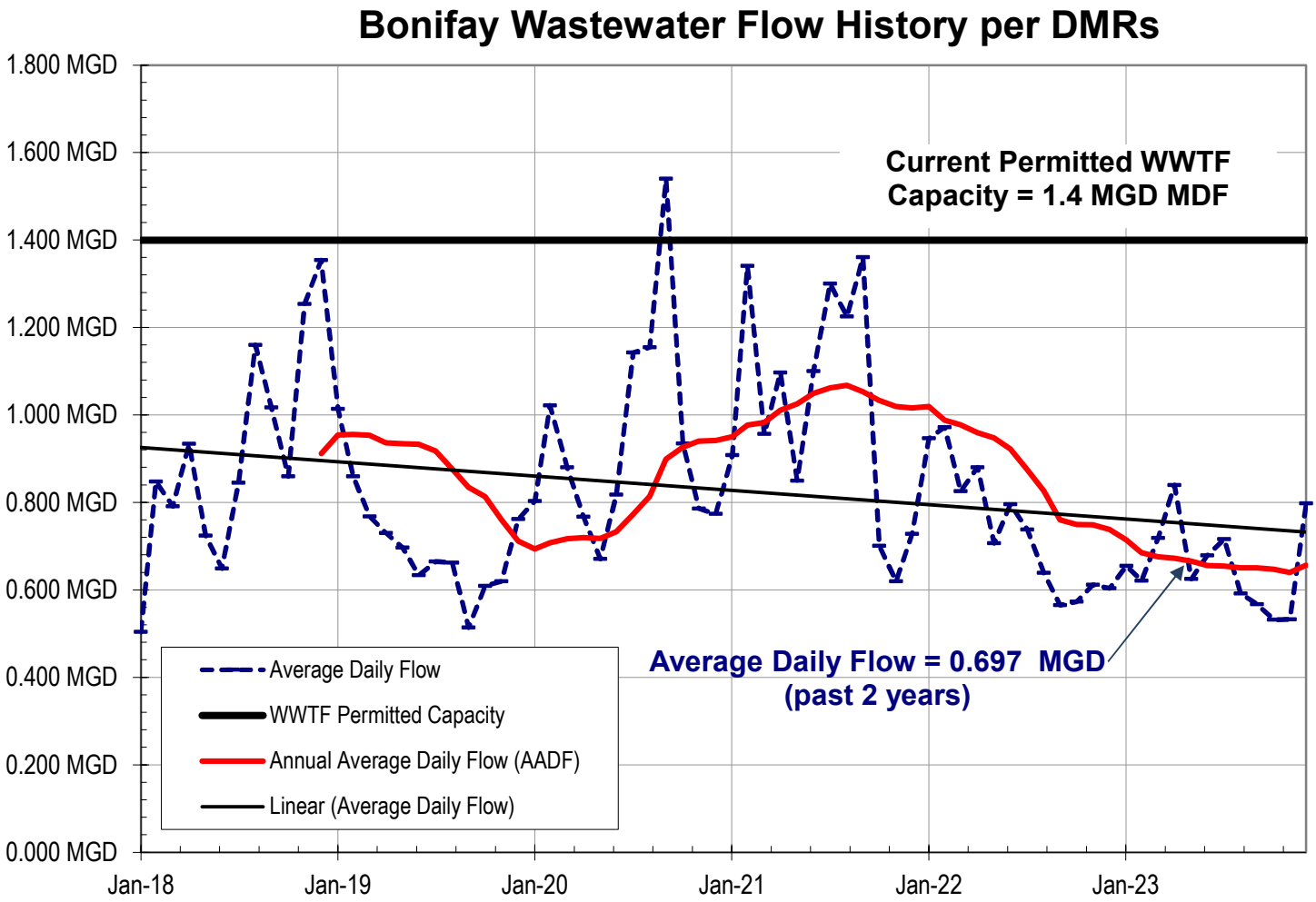

Figure 2 ~ Historic Wastewater Flows

(MGD denotes Million Gallons per Day)

The amount of wastewater used by the customers on the system is provided below, see Figure 2 for flow records:

City Population.....2,759
(based on data.census.gov)

Equivalent Residential Connections.....1,609

Monthly Average Daily Flow per DMRs (for past 2 years).....0.697 MGD (480 gpm)

Permitted Plant Capacity (Monthly Average Day Flow).....1.400 MGD (970 gpm)

Percentage of wastewater treatment plant used.....50 %

The City has a biological treatment system with two Sequential Batch Reactors (SBR) with fine bubble diffusers. The SBRs decant to three equalization tanks followed by effluent disinfection in two baffled chlorine contact tanks. After, chlorination, dechlorination with sulfur dioxide is followed by post aeration and then effluent disposal to an un-named tributary to Camp Branch, Class III fresh waters. Biosolids treatment is provided by sludge transfer pumps from the SBRs to primary and then secondary stage aerobic digestion. Digested sludge is pumped to a screw press and then discharged to either land application or a biosolids treatment facility. Annual average flows through the WWTP have remained well below the permitted capacity of 1.400 MGD.

Utilities are Capital Intensive.

The water supply and wastewater treatment industry are very capital intensive because almost every component of these systems requires fixed capital investments in long-term infrastructure. Water facilities include water supply, treatment, storage, distribution, and disposal of treatment residuals. Wastewater facilities include sewage collection, pumping (lift stations), transmission, treatment, disposal of treated effluent, and disposal of biosolids.

Funding Utilities.

Utilities typically operate for many years without fully recovering the initial construction costs. Loans and grants supported by rates are used to finance capital facilities. In addition to paying the debt obligation for existing facilities, rates support operation, maintenance, salaries, chemicals, power, vehicles, equipment, repair and replacement. Rates frequently cannot be structured to accommodate new or expanded facilities for new customers. Capacity Fees are used to assess new customers for capital construction costs and allow new customers to "buy-in" to the system. Capacity Fees bridge the funding gap needed to build the new facilities to provide service to new residents and businesses. Capacity Fees cannot be used for operation, maintenance, repair, replacement, or normal utility administrative costs. Capacity Fees should be held in a separate account from water/wastewater revenue and general funds. Finally, Capacity Fees must benefit the new users paying the Capacity Fees.

It is just too easy to neglect existing facilities and run them into the ground instead of being proactive in their repair and replacement. Problems with this approach are:

1. Cost for replacement is several times greater than for repair and maintenance;
2. Real cost of utility operation is hidden from the ratepayer and governing board;
3. Assets are not properly valued and preserved;
4. Improper stewardship of public assets;
5. Grants never cover all replacement costs; and
6. Diversion of public funds from more worthy uses.

FRWA Rough Order of Magnitude Capital Improvement Cost Projections.

Twenty years ago, conventional lime softening water treatment plants would cost about $4 to $6 per gallon to construct, today one would expect to spend approximately $6 to $15 per gallon to construct. Actual costs vary greatly by community, by region, and between design consultants. Plus, any estimate must include unique site-specific needs like new raw water wells, piping, land, instrumentation & controls, emergency power generation, or deep wells. The FRWA has developed cost estimating curves based on construction work in Florida for various types of water treatment techniques. These estimating curves have been used to prepare the rough order of magnitude costs for replacement shown herein.

Establishing the cost for new wastewater treatment capacity is equally difficult for wastewater treatment plants. Rough order of magnitude costs are included for wastewater plants, collection systems, lift stations, and force mains. Twenty years ago, an extended aeration secondary treatment plant would cost about $3 to $5 per gallon to construct, today you would expect to spend approximately $20 to $25 per gallon to construct. Actual costs vary greatly by regulated treatment requirements, by community, by region, and between design consultants. Recent final construction costs for advanced treatment wastewater plant and effluent reuse systems required by regulatory consent order for a Florida utility with much fewer wastewater connections than Bonifay have been more than $28/gallon. All costs included are the Engineer's opinion of probable costs.

Scheduling Presentation of Capacity Fees Study Findings and Recommendations.

We are happy to come to your next City Council meeting to explain our analysis and report. We anticipate that you will have questions to discuss and options to consider. The presentation is between 20 to 30-minutes in length, which would be followed by commission discussion. This activity typically takes about 60 to 90 minutes and can be held during a special workshop or a normal commission meeting. This is an informative meeting and decisions about Capacity Fees are usually taken at subsequent meetings. It is important that all commission members be in attendance since the adoption of Capacity Fees increases can produce public comment.

We have enjoyed serving you and wish your water and wastewater system the best. Please feel free to contact me if you have any further questions.

Sincerely,

Katherine Van Zant

Katherine Van Zant, P.E.
Florida Rural Water Association

Water & Wastewater Capacity Fee Report

City of Bonifay

FRWA Member:

Address: 611 E. Bay Ave.
Bonifay, FL 32425

Telephone: (850) 790-5970

Contact: Matthew Perry

E-mail: Matthew.Perry@cityofbonifay.com

County: **Holmes**

City Population: 2,759

Connections:	Water:	1,746	Wastewater:	1,158
	Facility ID:	**1300083**	Facility ID:	FL0027731
	Capacity:	3.600 MGD	Capacity:	1.400 MGD
	ADF	0.882 MGD	ADF	0.697 MGD
	MDF	1.263 MGD	MMF	0.972 MGD

April 5, 2024

Version: **DRAFT**

Prepared by: Katherine Van Zant, P.E.

Florida Rural Water Association

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Katherine Van Zant, P.E.
FL PE# 43964

Florida Rural Water Association

2970 Wellington Circle, Tallahassee, Florida 32309

Member: **City of Bonifay**
Contact: **Matthew Perry**
Address: **Bonifay, FL 32425**

Date: **5-Apr-24**
Version: **DRAFT**
Conn: **1,746**
PWS: **1300083**

Water Capacity Fee Recommendations

Water Capacity Fee Calculation

Where:

Total Treatment Capacity =	3,600,000 gpd
Max Day Demand from MORs past 2 years =	1,263,000 gpd
Percentage of WTP used =	35.1%
Average Daily Demand from MORs past 2 years =	881,513 gpd

Category	Remaining Useful Life		Replacement Value
Wells	**$804,000**	30%	$2,680,000
Water Treatment	**$424,732**	10%	$4,247,316
Elevated Storage Tanks	**$1,083,333**	23%	$4,800,000
Distribution System	**$4,168,654**	38%	$10,957,605
Less Water Utility Debt	**($768,121)**		**($768,121)**
Totals	**$5,712,598**	26%	**$21,916,800**
Cost per Gallon	$1.59 / gal		$6.09 / gal

Equivalent Residential Water Connection (ERC) Calculation

Where:

	Remaining Useful Life Basis	Replacement Value Basis	
System Value ($) =	$5,712,598	$21,916,800	
Max Daily Demand based on MORs past 2 years =	1,263,000 gpd	1,263,000 gpd	
ERCs =	2,286	2,286	*see ERC calculation worksheet*
Max Daily Demand / Connection =	**552 gpd/ERC**	**552 gpd/ERC**	
Avg Daily Demand / Connection =	**386 gpd/ERC**	**386 gpd/ERC**	

ERC Costs = $\frac{\text{System Value (\$) x MDD / ERC}}{\text{Total Treatment Capacity gpd (Max Day)}}$

ERC Costs = $\frac{\$5{,}712{,}598 \times 552 \text{ gpd/ERC}}{3{,}600{,}000 \text{ gpd}}$ = **$876.71 / ERC** Remaining Useful Life Basis

Use **$880 / ERC**

ERC Costs = $\frac{\$21{,}916{,}800 \times 552 \text{ gpd/ERC}}{3{,}600{,}000 \text{ gpd}}$ = **$3,363.58 / ERC** Replacement Value Basis

Use **$3,360 / ERC**

Remaining Equivalent Residential Water Connections Available

Where:

Max Daily Demand / ERC =	552 gpd/ERC	2,286 = ERCs
Total Treatment Capacity (Max Day) =	3,600,000 gpd	
Max Day Demand =	1,263,000 gpd	**2,337,000 gpd** = WTP Capacity Remaining (MDF)
Percentage of WTP used =	35.1%	64.9% = WTP Capacity Remaining

4,230 = ERCs Remaining

Note: 1. Approximate Useful Value based on industry standards, consistent with FRWA Deparatment of Environmental Protection Asset Management Plan.

2. Utility debt for capital expenditures is taken out because repayment of debt will be paid by new users in rates

Florida Rural Water Association

2970 Wellington Circle, Tallahassee, Florida 32309

Member: **City of Bonifay**
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Address: **Bonifay, FL 32425**

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Version: **DRAFT**
Conn: **1,158**
GMS: **FL0027731**

Wastewater Capacity Fee Recommendations

Wastewater Capacity Fee Calculation

Where:

Total Treatment Capacity =	1.400 MGD	Monthly Average Day Flow
MADF from DMRs =	0.697 MGD	*for past 24 months*
Percentage of WWTF used =	49.8%	

Category	Remaining Useful Life		Replacement Value
WWTP	$11,407,407	41%	$28,000,000
Lift Stations	$1,015,000	31%	$3,300,000
Force Main	$971,577	49%	$1,999,047
Gravity Sewers & Manholes	$3,802,000	45%	$8,428,000
Less Wastewater Utility Debt	**($1,141,641)**		**($1,141,641)**
Totals	**$16,054,344**	40%	**$40,585,406**
Cost per Gallon	$11.47 / gal		$28.99 / gal

Equivalent Residential Water Connection (ERC) Calculation

Where:

	Remaining Useful Life Basis	Replacement Value Basis	
System Value ($) =	$16,054,344	$40,585,406	
MADF from DMRs =	0.697 MGD	0.697 MGD	
ERCs =	1,609	1,609	*see ERC calculation worksheet*
Average Day Flow / Connection =	**433 gpd/ERC**	**433 gpd/ERC**	

ERC Costs = System Value ($) x MADF/ERC ÷ Total Treatment Capacity gpd (MADF)

ERC Costs = $16,054,344 ÷ 1,400,000 gpd = 433 gpd/ERC **$4,970.59 / ERC** Remaining Useful Life Basis

Use **$4,970 / ERC**

ERC Costs = $40,585,406 ÷ 1,400,000 gpd = 433 gpd/ERC **$12,565.66 / ERC** Replacement Value Basis

Use **$12,570 / ERC**

Remaining Equivalent Residential Wastewater Connections Available

Where:

Monthly ADF / ERC =	433 gpd/ERC	1,609	= ERCs
Total Treatment Capacity =	1.400 MGD		
Monthly ADF from DMRs	0.697 MGD	0.703 MGD	= Capacity Remaining
Percentage of WWTF used =	49.8%	50.2%	
		1,621	**= ERCs Remaining**

Note: 1. Approximate Useful Value based on industry standards, consistent with FRWA Department of Environmental Protection Asset Management Plan.

2. Utility debt for capital expenditures is taken out because repayment of debt will be paid by new users in rates.

3. Infrastructure paid by developers and turned over the to City, based on information provided by City staff, is not included in Replacement Value or Remaining Useful Life costs

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Wellfield & Source Water

Replacement Value at today's cost: $ 670,000

Well		Year Drilled	Casing Dia (inches)	Capacity (gpm)	Approx. Useful Value	Estimated Useful Life Value ($)	Estimated Replacement Value ($)
1		1958	12-in	500	10%	$ 67,000	$ 670,000
2		1976	12-in	500	10%	$ 67,000	$ 670,000
3		1988	10-in	1,000	28%	$ 188,000	$ 670,000
4	**not in operation - permanently offline**	2004		500		$ -	
5		2010	10-in	600	72%	$ 482,000	$ 670,000
				2,600 gpm	27-yrs	**$ 804,000**	**$ 2,680,000**

3.744 MGD

Projected Replacement Value at today's cost: **$ 2,680,000**

Note: Approximate Useful Value based on industry standards, consistent with FRWA Deparatment of Environmental Protection Asset Management Plan: 50 years., operating wells assumed to have 10% useful life minimum.

Florida Rural Water Association

2970 Wellington Circle, Tallahassee, Florida 32309

Member: **City of Bonifay**
Contact: **Matthew Perry**
Address: **Bonifay, FL 32425**

5-Apr-24
Version: **DRAFT**
Conn: **1,746**
PWS: **1300083**

Estimated Construction Costs vs. Plant Size & Type

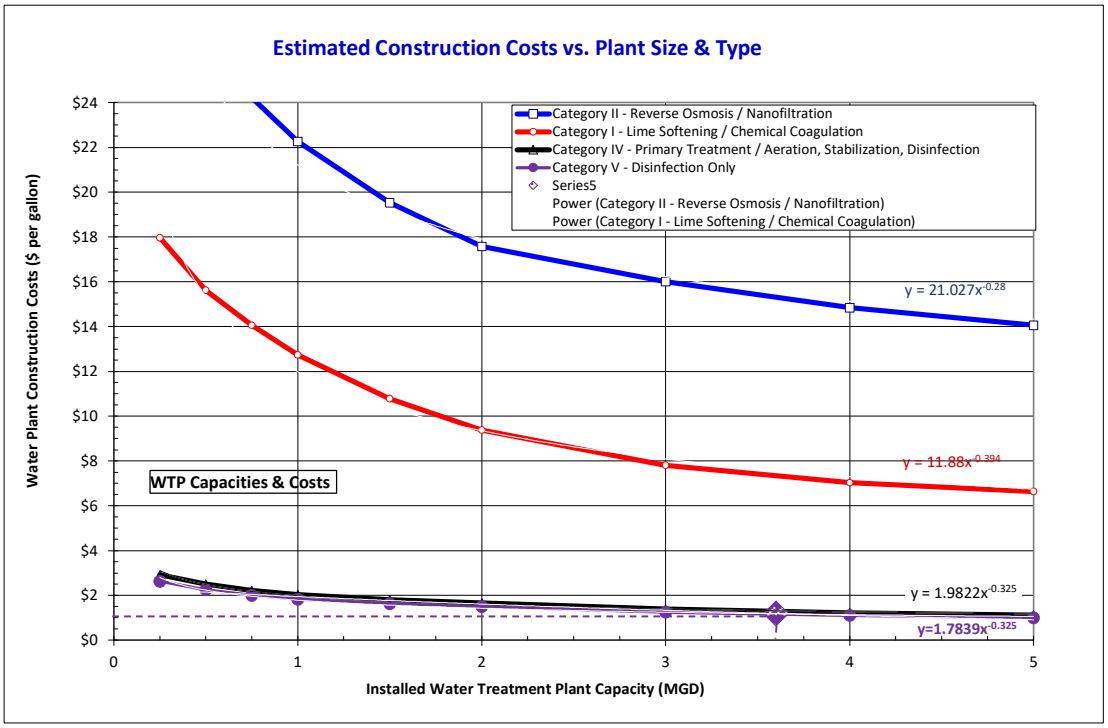
Water Treatment Plant Size (MGD)	**3.600 MGD**	Permitted WTP Maximum Day Flow DEP records

FDEP Permitted Category per Rule 62-699.310(2)(e), F.A.C.	**V**
FDEP Permitted Staffing Classification per Rule 62-699.310(2)(e), F.A.C.	**C**
Average Construction Year	1983

Water Plant Category

Category II - Reverse Osmosis / Nanofiltration	**No**	$0.00
Deep Well Injection for Brine Disposal	**No**	$0.00
Category I - Lime Softening / Chemical Caogulation	**No**	$0.00
Category IV - Primary Treatment / Aeration, Stabilization, Disinfection	**No**	$0.00
Category V - Disinfection Only	**Yes**	$1.18

Water Plant Construction Costs ($ per gallon)	$1.18	
Total Water Plant Construction Costs Estimate	**$4,247,316**	Replacement Cost
	$424,732	Useful Value



Note: *1. Approximate Useful Value based on industry standards, consistent with FRWA Deparatment of Environmental Protection Asset Management Plan and Florida Public Service Commission Average Service Life Guidelines, F.A.C. 25-30.140, Class C Utility: years 27. Minimum Useful Life 10%.*

3. WTP Construction year based on average of well installation dates for wells in operation.

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Distribution System Piping - Inventory, Condition & Current Value

Neglect lines less than 4-inches from value of water distribution system

Replacement Value at today's cost price per inch-diameter per foot: $8.50

Pipe Dia (inches)	Pipe Material	Length (feet)	Length (miles)	Approximate Average Age	Approx. Useful Value	Value ($ per ft)	Estimated Useful Life Value ($)	Estimated Replacement Value ($)
4-in	DIP, PVC	9,854-ft	1.87 mi	71-yrs	29%	$34.00 /ft	$97,160	$335,036
6-in	DIP, PVC	164,953-ft	31.24 mi	65-yrs	35%	$51.00 /ft	$2,944,411	$8,412,603
8-in	DIP, PVC	29,687-ft	5.62 mi	49-yrs	51%	$68.00 /ft	$1,029,545	$2,018,716
12-in	PVC	1,875-ft	0.36 mi	49-yrs	51%	$102.00 /ft	$97,538	$191,250
						Weighted Average		
		206,369-ft	39.09 mi			$53.10 /ft	$4,168,654	$10,957,605

Replacement Value at today's cost: $10,957,605

NOTES:

1. Lengths, material and age based on City GIS maps and interviews with Utilities staff.

2. Approximate Useful Value based on industry standards, consistent with FRWA Deparatment of Environmental Protection Asset Management Plan: 100 years.

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PWS: **1300083**

Finished Water Storage Tanks

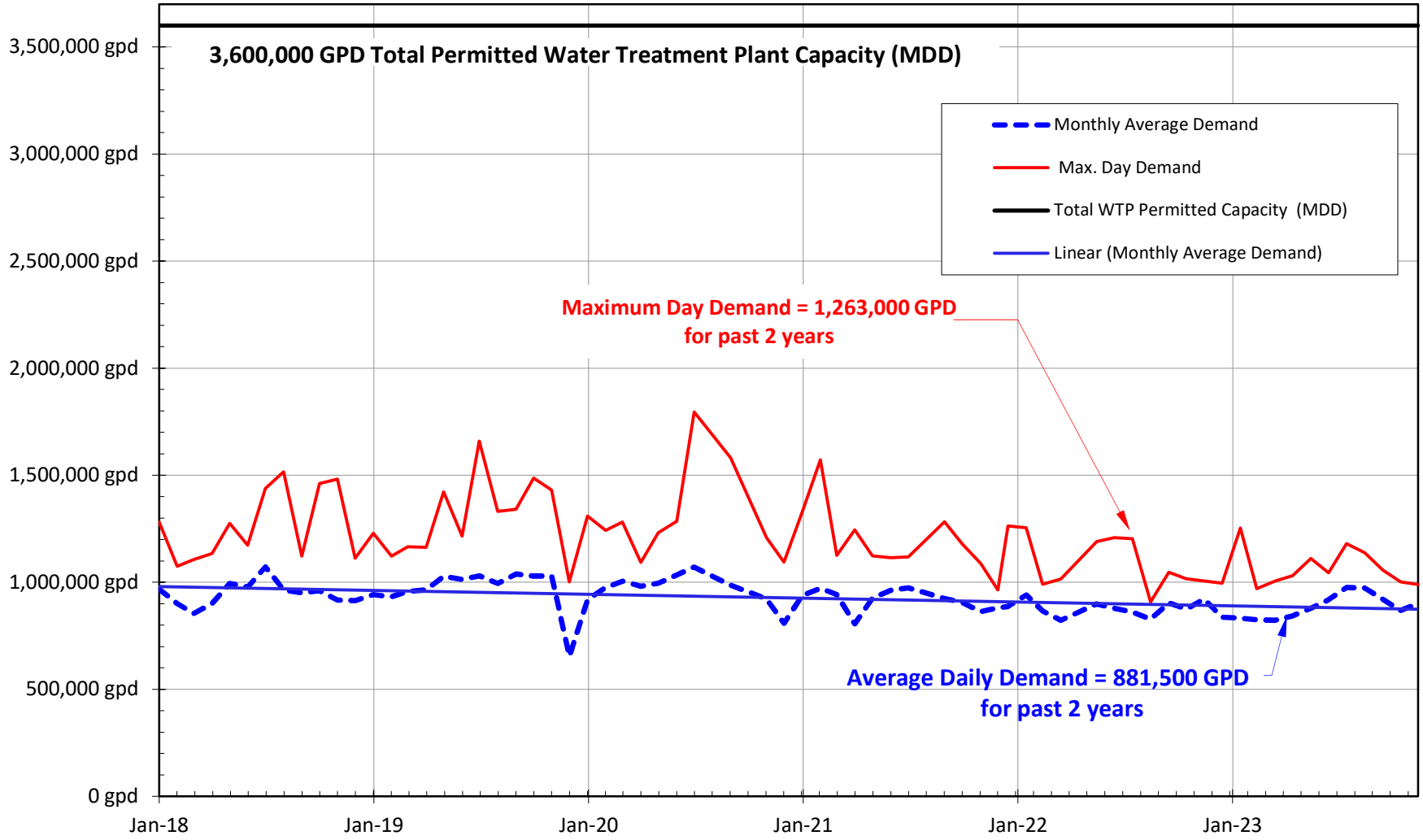
Steel Elevated Storage Tanks have an estimated 45-years useful life	$6.00/gal
Concrete Ground Storage Tanks have an estimated 50-years useful life	$7.00/gal
Steel Ground Storage Tanks have an estimated 37-years useful life	$6.00/gal
Hydropneumatic Tanks have an estimated 25-years useful life	$6.00/gal

Tank	Name / Location	Year Installed	Type & Material	Capacity (gal)	Approx. Useful Value	Estimated Useful Life Value ($)	Estimated Replacement Life Value ($)
1	School	1952	Elevated - Steel	150,000	10%	$90,000	$900,000
2	I-10 at Well 3	1987	Elevated - Steel	150,000	18%	$160,000	$900,000
3	Well 4	2004	Elevated - Steel	250,000	56%	$833,333	$3,000,000
				550,000 gal		**$1,083,333**	**$4,800,000**

Replacement Value at today's cost: **$4,800,000**

Notes: *1. Approximate Useful Value based on industry standards, consistent with FRWA Deparatment of Environmental Protection Asset Management Plan, Florida Public Service Commission Average Service Life Guidelines, F.A.C. 25-39.140, and AWWA standards. Minimum Useful Life = 10%.*

Bonifay Water Demand History per MORs



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Conn: 1,746
PWS: **2450364**

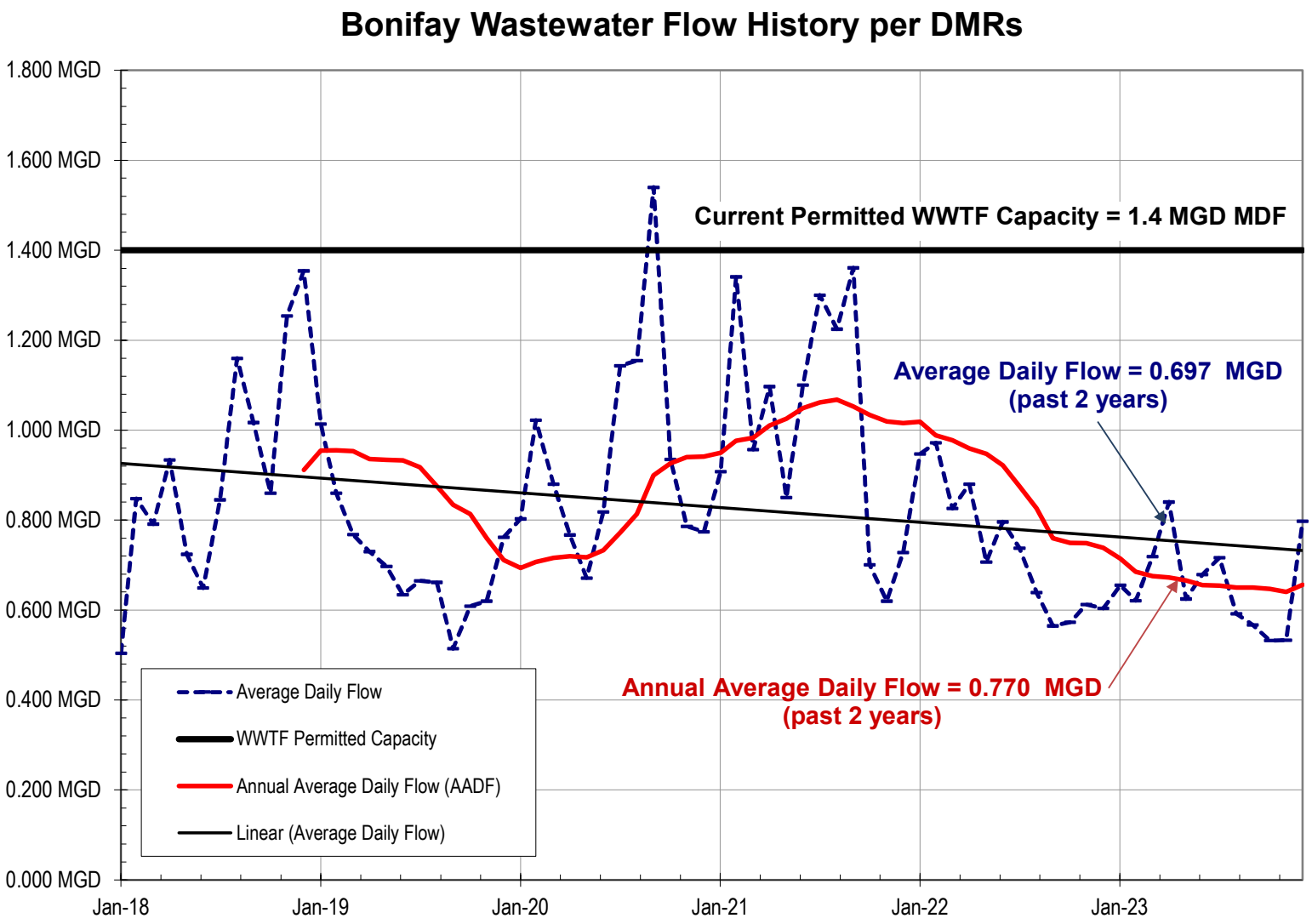
Historic Water Treatment Plant Flow Data from MORs

from Monthly Operation Reports per 62-555.900(2), (3), (4) (6) or (5) (in MGDs)

Month	Monthly Average Demand	ADD (Annual)	Max. Day Demand	MDD (Annual)	Ratio MDD:ADD	Total WTP Permitted Capacity (MDD)	% Water Permit Capacity
Jan-18	967,710 gpd		1,281,000 gpd		1.32	3,600,000 gpd	36%
Feb-18	899,786 gpd		1,074,000 gpd		1.19	3,600,000 gpd	30%
Mar-18	854,742 gpd		1,107,000 gpd		1.30	3,600,000 gpd	31%
Apr-18	900,367 gpd		1,134,000 gpd		1.26	3,600,000 gpd	32%
May-18	994,406 gpd		1,275,000 gpd		1.28	3,600,000 gpd	35%
Jun-18	977,723 gpd		1,173,000 gpd		1.20	3,600,000 gpd	33%
Jul-18	1,071,387 gpd		1,439,000 gpd		1.34	3,600,000 gpd	40%
Aug-18	964,742 gpd		1,516,000 gpd		1.57	3,600,000 gpd	42%
Sep-18	949,897 gpd		1,122,000 gpd		1.18	3,600,000 gpd	31%
Oct-18	961,335 gpd		1,461,084 gpd		1.52	3,600,000 gpd	41%
Nov-18	916,320 gpd		1,481,000 gpd		1.62	3,600,000 gpd	41%
Dec-18	914,936 gpd	947,779 gpd	1,112,000 gpd	1,516,000 gpd	1.22	3,600,000 gpd	31%
Jan-19	941,697 gpd		1,228,000 gpd		1.30	3,600,000 gpd	34%
Feb-19	932,429 gpd		1,122,000 gpd		1.20	3,600,000 gpd	31%
Mar-19	957,194 gpd		1,166,000 gpd		1.22	3,600,000 gpd	32%
Apr-19	964,500 gpd		1,164,000 gpd		1.21	3,600,000 gpd	32%
May-19	1,027,452 gpd		1,422,000 gpd		1.38	3,600,000 gpd	40%
Jun-19	1,013,233 gpd		1,215,000 gpd		1.20	3,600,000 gpd	34%
Jul-19	1,030,019 gpd		1,659,000 gpd		1.61	3,600,000 gpd	46%
Aug-19	993,806 gpd		1,331,000 gpd		1.34	3,600,000 gpd	37%
Sep-19	1,038,467 gpd		1,341,000 gpd		1.29	3,600,000 gpd	37%
Oct-19	1,028,548 gpd		1,486,000 gpd		1.44	3,600,000 gpd	41%
Nov-19	1,029,300 gpd		1,430,000 gpd		1.39	3,600,000 gpd	40%
Dec-19	653,774 gpd	967,535 gpd	1,002,000 gpd	1,659,000 gpd	1.53	3,600,000 gpd	28%
Jan-20	917,806 gpd		1,309,000 gpd		1.43	3,600,000 gpd	36%
Feb-20	975,690 gpd		1,243,000 gpd		1.27	3,600,000 gpd	35%
Mar-20	1,005,290 gpd		1,281,000 gpd		1.27	3,600,000 gpd	36%
Apr-20	981,200 gpd		1,092,000 gpd		1.11	3,600,000 gpd	30%
May-20	995,323 gpd		1,232,000 gpd		1.24	3,600,000 gpd	34%
Jun-20	1,033,300 gpd		1,285,000 gpd		1.24	3,600,000 gpd	36%
Jul-20	1,070,355 gpd		1,795,000 gpd		1.68	3,600,000 gpd	50%
Aug-20						3,600,000 gpd	
Sep-20	986,130 gpd		1,582,000 gpd		1.60	3,600,000 gpd	44%
Oct-20						3,600,000 gpd	
Nov-20	922,200 gpd		1,208,000 gpd		1.31	3,600,000 gpd	34%
Dec-20	807,958 gpd	969,525 gpd	1,094,000 gpd	1,795,000 gpd	1.35	3,600,000 gpd	30%
Jan-21	938,419 gpd		1,328,000 gpd		1.42	3,600,000 gpd	37%
Feb-21	971,613 gpd		1,572,000 gpd		1.62	3,600,000 gpd	44%
Mar-21	943,097 gpd		1,126,000 gpd		1.19	3,600,000 gpd	31%
Apr-21	805,419 gpd		1,245,000 gpd		1.55	3,600,000 gpd	35%
May-21	926,452 gpd		1,123,000 gpd		1.21	3,600,000 gpd	31%
Jun-21	962,700 gpd		1,115,000 gpd		1.16	3,600,000 gpd	31%
Jul-21	973,484 gpd		1,118,000 gpd		1.15	3,600,000 gpd	31%
Aug-21						3,600,000 gpd	
Sep-21	923,567 gpd		1,282,000 gpd		1.39	3,600,000 gpd	36%
Oct-21	906,323 gpd		1,179,000 gpd		1.30	3,600,000 gpd	33%
Nov-21	863,033 gpd		1,088,000 gpd		1.26	3,600,000 gpd	30%
Dec-21	879,774 gpd	917,626 gpd	964,000 gpd	1,194,545 gpd	1.10	3,600,000 gpd	27%
Jan-22	887,000 gpd		1,263,000 gpd		1.42	3,600,000 gpd	35%
Feb-22	940,893 gpd		1,255,000 gpd		1.33	3,600,000 gpd	35%
Mar-22	865,613 gpd		991,000 gpd		1.14	3,600,000 gpd	28%
Apr-22	822,133 gpd		1,015,000 gpd		1.23	3,600,000 gpd	28%
May-22						3,600,000 gpd	
Jun-22	899,200 gpd		1,190,000 gpd		1.32	3,600,000 gpd	33%
Jul-22	879,097 gpd		1,208,000 gpd		1.37	3,600,000 gpd	34%
Aug-22	860,742 gpd		1,203,000 gpd		1.40	3,600,000 gpd	33%
Sep-22	827,067 gpd		908,000 gpd		1.10	3,600,000 gpd	25%
Oct-22	903,484 gpd		1,047,000 gpd		1.16	3,600,000 gpd	29%
Nov-22	875,033 gpd		1,016,000 gpd		1.16	3,600,000 gpd	28%
Dec-22	921,645 gpd	880,173 gpd		1,263,000 gpd	0.00	3,600,000 gpd	0%
Jan-23	837,290 gpd		995,000 gpd		1.19	3,600,000 gpd	28%
Feb-23	831,929 gpd		1,254,000 gpd		1.51	3,600,000 gpd	35%
Mar-23	825,387 gpd		970,000 gpd		1.18	3,600,000 gpd	27%
Apr-23	822,033 gpd		1,005,000 gpd		1.22	3,600,000 gpd	28%
May-23	842,194 gpd		1,031,000 gpd		1.22	3,600,000 gpd	29%
Jun-23	878,800 gpd		1,111,000 gpd		1.26	3,600,000 gpd	31%
Jul-23	918,065 gpd		1,045,000 gpd		1.14	3,600,000 gpd	29%
Aug-23	975,194 gpd		1,181,000 gpd		1.21	3,600,000 gpd	33%
Sep-23	973,433 gpd		1,138,000 gpd		1.17	3,600,000 gpd	32%
Oct-23	920,871 gpd		1,056,000 gpd		1.15	3,600,000 gpd	29%
Nov-23	867,867 gpd		1,001,000 gpd		1.15	3,600,000 gpd	28%
Dec-23	899,839 gpd	882,742 gpd	990,000 gpd	1,254,000 gpd	1.10	3,600,000 gpd	28%

Average Day Demand (GPD) from MORs	**881,513 gpd**	For past 2 years
MDF/ADF from MORs	**1.43**	For past 2 years
Max Daily Demand (GPD) from MORs	**1,263,000 gpd**	For past 2 years

	ADD	MDD	TPC
2018	947,779 gpd	1,516,000 gpd	3,600,000 gpd
2019	967,535 gpd	1,659,000 gpd	3,600,000 gpd
2020	969,525 gpd	1,795,000 gpd	3,600,000 gpd
2021	917,626 gpd	1,194,545 gpd	3,600,000 gpd
2022	880,173 gpd	1,263,000 gpd	3,600,000 gpd
2023	882,742 gpd	1,254,000 gpd	3,600,000 gpd


Bonifay Wastewater Flow History per DMRs
1.800 MGD
1.600 MGD
1.400 MGD
1.200 MGD
1.000 MGD
0.800 MGD
0.600 MGD
0.400 MGD
0.200 MGD
0.000 MGD
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Current Permitted WWTF Capacity = 1.4 MGD MDF
Average Daily Flow = 0.697 MGD
(past 2 years)
Annual Average Daily Flow = 0.770 MGD
(past 2 years)
Average Daily Flow
WWTF Permitted Capacity
Annual Average Daily Flow (AADF)
Linear (Average Daily Flow)

Florida Rural Water Association

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Date: 5-Apr-24
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Conn: 1,158
GMS: **FL0027260**

Historic Wastewater Treatment Plant Flow Data from DMRs

from Discharge Monitoring Reports per 62-620.910(10) (in MGDs)

Month	Days/Month	Year	Monthly Average	Annual Average	Monthly Average WWTP Permitted Capacity (FLW-01)	
Jan-18	31	**2018**	0.504 MGD		1.400 MGD	
Feb-18	28		0.848 MGD		1.400 MGD	
Mar-18	31		0.791 MGD		1.400 MGD	
Apr-18	30		0.934 MGD		1.400 MGD	
May-18	31		0.724 MGD		1.400 MGD	
Jun-18	30		0.649 MGD		1.400 MGD	
Jul-18	31		0.845 MGD		1.400 MGD	
Aug-18	31		1.160 MGD		1.400 MGD	
Sep-18	30		1.017 MGD		1.400 MGD	
Oct-18	31		0.860 MGD		1.400 MGD	
Nov-18	30		1.254 MGD		1.400 MGD	
Dec-18	31		1.354 MGD	0.912 MGD	1.400 MGD	
Jan-19	31	**2019**	1.014 MGD	0.954 MGD	1.400 MGD	
Feb-19	28		0.860 MGD	0.955 MGD	1.400 MGD	
Mar-19	31		0.768 MGD	0.953 MGD	1.400 MGD	
Apr-19	30		0.730 MGD	0.936 MGD	1.400 MGD	
May-19	31		0.697 MGD	0.934 MGD	1.400 MGD	
Jun-19	30		0.634 MGD	0.933 MGD	1.400 MGD	
Jul-19	31		0.665 MGD	0.918 MGD	1.400 MGD	
Aug-19	31		0.662 MGD	0.876 MGD	1.400 MGD	
Sep-19	30		0.514 MGD	0.834 MGD	1.400 MGD	
Oct-19	31		0.609 MGD	0.813 MGD	1.400 MGD	
Nov-19	30		0.620 MGD	0.761 MGD	1.400 MGD	
Dec-19	31		0.762 MGD	0.711 MGD	1.400 MGD	
Jan-20	31	**2020**	0.803 MGD	0.694 MGD	1.400 MGD	
Feb-20	28		1.022 MGD	0.707 MGD	1.400 MGD	
Mar-20	31		0.880 MGD	0.717 MGD	1.400 MGD	
Apr-20	30		0.767 MGD	0.720 MGD	1.400 MGD	
May-20	31		0.671 MGD	0.717 MGD	1.400 MGD	
Jun-20	30		0.818 MGD	0.733 MGD	1.400 MGD	
Jul-20	31		1.143 MGD	0.773 MGD	1.400 MGD	
Aug-20	31		1.155 MGD	0.814 MGD	1.400 MGD	
Sep-20	30		1.540 MGD	0.899 MGD	1.400 MGD	
Oct-20	31		0.935 MGD	0.926 MGD	1.400 MGD	
Nov-20	30		0.786 MGD	0.940 MGD	1.400 MGD	
Dec-20	31		0.774 MGD	0.941 MGD	1.400 MGD	
Jan-21	31	**2021**	0.908 MGD	0.950 MGD	1.400 MGD	
Feb-21	28		1.341 MGD	0.977 MGD	1.400 MGD	
Mar-21	31		0.957 MGD	0.983 MGD	1.400 MGD	
Apr-21	30		1.097 MGD	1.010 MGD	1.400 MGD	
May-21	31		0.850 MGD	1.025 MGD	1.400 MGD	
Jun-21	30		1.100 MGD	1.049 MGD	1.400 MGD	
Jul-21	31		1.300 MGD	1.062 MGD	1.400 MGD	
Aug-21	31		1.225 MGD	1.068 MGD	1.400 MGD	
Sep-21	30		1.361 MGD	1.053 MGD	1.400 MGD	
Oct-21	31		0.701 MGD	1.033 MGD	1.400 MGD	
Nov-21	30		0.620 MGD	1.020 MGD	1.400 MGD	
Dec-21	31		0.728 MGD	1.016 MGD	1.400 MGD	
Jan-22	31	**2022**	0.947 MGD	1.019 MGD	1.400 MGD	
Feb-22	28		0.972 MGD	0.988 MGD	1.400 MGD	
Mar-22	31		0.826 MGD	0.977 MGD	1.400 MGD	
Apr-22	30		0.880 MGD	0.959 MGD	1.400 MGD	
May-22	31		0.707 MGD	0.947 MGD	1.400 MGD	
Jun-22	30		0.796 MGD	0.922 MGD	1.400 MGD	
Jul-22	31		0.738 MGD	0.875 MGD	1.400 MGD	
Aug-22	31		0.639 MGD	0.826 MGD	1.400 MGD	
Sep-22	30		0.565 MGD	0.760 MGD	1.400 MGD	
Oct-22	31		0.573 MGD	0.749 MGD	1.400 MGD	
Nov-22	30		0.612 MGD	0.749 MGD	1.400 MGD	
Dec-22	31		0.604 MGD	0.738 MGD	1.400 MGD	
Jan-23	31	**2023**	0.655 MGD	0.714 MGD	1.400 MGD	
Feb-23	28		0.621 MGD	0.685 MGD	1.400 MGD	
Mar-23	31		0.719 MGD	0.676 MGD	1.400 MGD	
Apr-23	30		0.840 MGD	0.672 MGD	1.400 MGD	
May-23	31		0.625 MGD	0.666 MGD	1.400 MGD	
Jun-23	30		0.679 MGD	0.656 MGD	1.400 MGD	
Jul-23	31		0.716 MGD	0.654 MGD	1.400 MGD	
Aug-23	31		0.592 MGD	0.650 MGD	1.400 MGD	
Sep-23	30		0.567 MGD	0.650 MGD	1.400 MGD	
Oct-23	31		0.532 MGD	0.647 MGD	1.400 MGD	
Nov-23	30		0.533 MGD	0.640 MGD	1.400 MGD	
Dec-23	31		0.798 MGD	0.656 MGD	1.400 MGD	
Average			0.697 MGD	0.770 MGD		2 year period
Maximum			0.972 MGD			2 year period
Average			0.829 MGD	0.849 MGD		full period

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Version: **DRAFT**
Conn: **1,158**
GMS: **FL0027731**

Estimated WWTF Construction Costs

Year built: SBR in 1990 with treatment plant additions in 2011 and 2015

	Capacity	Construction Cost	$/gallon	Average Age (years)	Useful Life
Inflent rotary screens and degritter, 2 Sequencing Batch Reactors, 3 equalization tanks, filters, chlorine contact, dechlorination, post aeration, aerobic digestion and anaerobic digestion, screw press for dewatering, sludge drying beds	1.400 MGD	$28,000,000	$20.00 / gal	16	41%

Replacement Value at today's cost: **$28,000,000**
Useful Life Value at today's cost: **$11,407,407**

Notes: 1. WWTP cost based on similar construction in Florida and engineer estimate
2. Approximate Useful Value based on industry standards, consistent with FRWA Deparatment of Environmental Protection Asset Management Plan and Florida Public Service Commission Average Service Life Guidelines, F.A.C. 25-30.140 : 27 years.

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Wastewater Lift Stations

		Estimated Construction Cost	Average Age (years)	Useful Life Value	Unit Cost
Duplex Submersible Lift Stations	14	$2,800,000	28	$840,000	$200,000 / ea
Holmes County Correctional Institutation Triplex Lift Station	1	$250,000	38	$12,500	$250,000 / ea
Master Influent triplex submersible Lift Station	1	$250,000	14	$162,500	$250,000 / ea
			Useful Life Value:	**$1,015,000**	
			Replacement Value at today's cost:	**$3,300,000**	

1. Age based on best available information from City staff and City GIS data input.

2. Approximate Useful Value of existing lift stations based on industry standards, consistent with FRWA Deparatment of Environmental Protection Asset Management Plan: 40 years. Minimum useful life = 10%.

3. Cost based on similar construction in Florida and engineer estimate.

Florida Rural Water Association

Date: **5-Apr-24**

Member: **City of Bonifay**
Contact: **Matthew Perry**
City: **Bonifay, FL 32425**

Version: **DRAFT**
Conn: **1,158**
GMS: **FL0027731**

Wastewater Transmission System - Inventory, Condition & Current Value

Includes Wastewater Force Main and Effluent Disposal Lines

Replacement Value at today's cost price per inch-diameter per foot: $8.50

Pipe Dia (inches)	Pipe Material	Length (feet)	Length (miles)	Approximate Average Age	Approx. Useful Value	Value ($ per ft)	Estimated Useful Life Value ($)	Estimated Replacement Value ($)
Wastewater Force Main								
4-in	PVC	13,937-ft	2.64 mi	29-yrs	52%	$34.00 /ft	$244,827	$473,858
6-in	PVC	11,212-ft	2.12 mi	29-yrs	52%	$51.00 /ft	$295,436	$571,812
8-in	PVC	2,939-ft	0.56 mi	29-yrs	52%	$68.00 /ft	$103,257	$199,852
10-in	PVC	3,045-ft	0.58 mi	26-yrs	57%	$85.00 /ft	$146,668	$258,825
12-in	PVC	4,850-ft	0.92 mi	38-yrs	37%	$102.00 /ft	$181,390	$494,700
		35,983-ft	6.81 mi			Useful Life Value:	**$971,577**	**$1,999,047**
						Replacement Value at today's cost:	**$1,999,047**	

NOTES:

1. Age, material, diameter and lengths of pipelines based on GIS data and interviews with operations staff.

2. Approximate Useful Value of existing force main based on industry standards, consistent with FRWA Deparatment of Environmental Protection Asset Management Plan: 60 years.

3. Cost based on similar construction in Florida and engineer estimate

4. Share of system cost is for force main 4-inches and larger for sewage transmission, collection system force mains required for connections (3-inches and smaller) are not included

Florida Rural Water Association

2970 Wellington Circle, Tallahassee, Florida 32309

Member: **City of Bonifay**
Contact: **Matthew Perry**
City: **Bonifay, FL 32425**

Date: **5-Apr-24**
Version: **DRAFT**
Conn: **1,158**
GMS: **FL0027731**

Wastewater Collection System - Inventory, Condition & Current Value

Replacement Value at today's cost price per inch-diameter per foot: $7.50

PVC	Pipe Material	Length (feet)	Length (miles)	Average Age (years) [1]	Approx. Useful Value [3]	Value ($ per ft)	Estimated Useful Life Value ($)	Estimated Replacement Value ($)
8-in	PVC, Clay	70,301-ft	13.31 mi	36-yrs	64%	$60.00 /ft	$2,699,558	$4,218,060
10-in	PVC	2,011-ft	0.38 mi	13-yrs	87%	$75.00 /ft	$131,218	$150,825
12-in	PVC	100-ft	0.02 mi	13-yrs	87%	$90.00 /ft	$7,830	$9,000
		70,301-ft	**13.31 mi**			Rounded	**$2,700,000**	**$4,377,885**
							$4,378,000	

Manholes

Category	Material	Quantity		Avg Est Age (years) [1]	Approx. Useful Value [3]	Value ($ per unit)	Estimated Useful Life Value ($)	Estimated Replacement Value ($)
Manholes	Concrete	405		36-yrs	27%	$10,000	$1,102,380	$4,050,000
							$1,102,000	**$4,050,000**
						Replacement Value at today's cost:	$4,050,000	

NOTES:

1. Age of pipelines are based on interviews with Utilities staff and available GIS data.

2. Pipe Diameter based on interviews with Utility staff and available GIS data.

3. Approximate Useful Value of existing piping and manholes based on industry standards, consistent with FRWA Department of Environmental Protection Asset Management Plan: 100 years gravity sewers, 50 years manholes.

4. Cost based on similar construction in Florida and engineer estimate.

5. Share of system cost is for gravity sewers greater than 4-inches, collection system gravity sewers 4-inches and smaller required for connections are not included

Florida Rural Water Association

2970 Wellington Circle, Tallahassee, Florida 32309

Member: **City of Bonifay**
Contact: **Matthew Perry**
Address: **Bonifay, FL 32425**

Date: **5-Apr-24**
Version: **DRAFT**
Conn: **1,746**
PWS **1300083**

Equivalent Residential Connection (ERC) Worksheet

WATER ERCS

Water Meter Breakdown by Size

Type	Quantity	Size	ERC Factor	Total ERCs
Residential	1,456	3/4"	1	1456
Residential	2	2"	8	16
Nonresidential	255	3/4"	1	255
Nonresidential	23	2"	8	184
Nonresidential	5	4"	25	125
Nonresidential	5	6"	50	250
Total	**1,746**			**2286**

Ratio ERCs / Service Connection: 1.31

2286 **Water ERCs**

WASTEWATER ERCS

Type	Quantity	Size	ERC Factor	Total ERCs
Residential	915	3/4"	1	915
Residential	1	2"	8	10
Nonresidential	214	3/4"	1	214
Nonresidential	19	2"	8	155
Nonresidential	4	4"	25	105
Nonresidential	4	6"	50	210
Total	**1,158**			**1609**

Ratio ERCs / Service Connection: 1.39

1609 **Wastewater ERCs**

Source: 1/5/2024 and 3/14/2024, Assistant City Cerk and Public Works Director