RESOLUTION NO. 2023-18

A RESOLUTION OF THE TOWN OF HILLIARD, FLORIDA, A MUNICIPAL CORPORATION; APPROVING THE TOWN OF HILLIARD WATER SYSTEM ASSET MANAGEMENT AND FISCAL SUSTAINABILITY PLAN; AUTHORIZING THE TOWN CLERK AND PUBLIC WORKS DIRECTOR TO TAKE ALL ACTIONS NECESSARY TO EFFECTUATE THE INTENT OF THIS RESOLUTION; PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Florida Statutes provide for financial assistance to local government agencies to finance construction of the Town and municipal utility system improvements; and

WHEREAS, the Florida Department of Environmental Protection State Revolving Fund (SRF) has designated the Town of Hilliard Water System Improvements, identified in the Asset Management and Fiscal Sustainability Plan, as potentially eligible for available funding; and

WHEREAS, as a condition of obtaining funding from the SRF, the Town is required to implement an Asset Management and Fiscal Sustainability Plan for the Town's Water System Improvements; and

WHEREAS, the Town Council of the Town of Hilliard has determined that approval of the attached Asset Management and Fiscal Sustainability Plan for the proposed improvements, to obtain necessary funding in accordance with SRF guidelines, is in the best interest of the Town.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN OF HILLIARD, TOWN COUNCIL the following:

Section 1. That the Town of Hilliard Town Council hereby approves the Town of Hilliard Water System Asset Management and Fiscal Sustainability Plan, attached hereto and incorporated by reference as a part of this Resolution.

Section 2. That the Town Clerk and Public Works Director are authorized to take all actions necessary to effectuate the intent of this Resolution and to implement the Water System Asset Management and Fiscal Sustainability Plan in accordance with applicable Florida law and Council direction to obtain funding from the SRF.

Section 3. That the Town will annually evaluate existing rates to determine the need for any increase and will increase rates in accordance with the financial recommendations found in the Water System Asset Management and Fiscal Sustainability Plan or in proportion to the Town's needs as determined by the Council in its discretion.

Section 4. That this Resolution shall become effective immediately upon its adoption.

PASSED AND ADOPTED on this 7th day of September, 2023.

Town of Hilliard, Florida

Kenneth A. Sims, Council President

ATTEST:

Lisa Purvis, Town Clerk

APPROVED:

John P. Beasley, Mayor

FLORIDA RURAL WATER ASSOCIATION

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May 18, 2023

Mr. John Beasley, Mayor
Town of Hilliard
15859 West CR 108
Hilliard, FL 32046

Dear Mayor Beasley:

The Florida Rural Water Association (FRWA) is pleased to submit the Water System Asset Management and Fiscal Sustainability (AMFS) plan to the Town of Hilliard. FRWA prepared this Plan in partnership with the FDEP Safe Drinking Water State Revolving Fund (SDWSRF) Program to identify your system's most urgent and critical needs.

A Town's water and wastewater systems represent critical infrastructure designed to protect the public health and the environment. This report assesses the current conditions of your water fixed capital assets (e.g. water production facilities, distribution system, hydrants and valves), and more importantly provides recommendations, procedures and tools to assist with long range asset protection and water utility reinvestment. FRWA will be available to support the Town of Hilliard's AMFS plan recommendations and implementation.

The following report is considered a living document with tools for your use which must be updated at least annually (quarterly updates are recommended) by the Town of Hilliard utility management. FRWA will provide electronic copies for your use and future modification and will remain available to assist in updating and revising the Town's AMFS plan.

As a valued FRWA member, it is our goal to help make the most effective and efficient use of your limited resources. This tool is an unbiased, impartial, independent review and is solely intended for achievement of drinking water system fiscal sustainability and maintaining your valuable utility assets. Florida Rural Water Association has enjoyed serving you and wishes your system the best in all its future endeavors.

Sincerely,

Patrick Dangelo
FRWA Utility Asset Management Team

Copy: Eric Meyers, DWSRF State Revolving Fund
Gary Williams, Florida Rural Water Association, Executive Director

Town of Hilliard Water System Asset Management and Fiscal Sustainability Plan

Prepared for:

Town of Hilliard
PWS # 2451179

Prepared by:

FLORIDA RURAL WATER ASSOCIATION
Asset Management Program
In partnership with
Florida Department of Environmental Protection
and
State Revolving Fund Program

Table of Contents

Executive Summary

Asset Management Plan Defined

Asset Management Plan (AMP): The International Infrastructure Management Manual defines an asset management plan as a "plan developed for the management of one or more infrastructure assets that combines multi-disciplinary management techniques (including technical and financial) over the life cycle of the asset in the most cost effective manner to provide a specific level of service."

Lowest life cycle cost refers to the best appropriate cost for rehabilitating, repairing, or replacing an asset. While the level of service is determined by the utility consisting of its staff, customers, board members and regulators. Asset management is implemented through an asset management program and includes a written asset management plan.

Benefits of an AMP

Implementing and maintaining an active Asset Management Plan will provide numerous benefits to the Utility and its Customers, such as:

- Prolonging asset life and aiding in rehabilitation/repair/replacement decisions.
- Increased operational efficiencies.
- Informed operational and management decisions.
- Increased knowledge of asset criticality.
- Meeting consumer demands with a focus on system sustainability and improved communication.
- Setting rates based on sound operational and financial planning.
- Budgeting by focusing on activities critical to sustained performance.
- Meeting system service expectations and regulatory requirements.
- Improving responses to emergencies.
- Improving security and safety of assets.
- Capital improvement projects that meet the true needs of the system and community.
- Provides an impartial unbiased report to help explain rate sufficiency to the community.

State Revolving Fund Requirement

An active Asset Management Plan (AMP) is a requirement for participation in the State Revolving Fund Program (SRF). Asset Management and Fiscal Sustainability (AMFS) program details are identified in Rulemaking Authority FS. Law Implemented 403.8532 (FS. History–New 4-7-98, Amended 8-10-98, 7-17-17) and in Florida Administrative Code (FAC) 62-503.700(7). To be accepted for the interest rate adjustment and to be eligible for reimbursement, an asset management plan must be adopted by ordinance or resolution and written procedures must be in place to not only implement the plan, but to do so in a timely manner.

The plan must include each of the following:

(a) Identification of all assets within the project sponsor's system;

(b) An evaluation of the current age, condition, and anticipated useful life of each asset;

(c) The current value of the assets;

(d) The cost to operate and maintain all assets;

(e) A capital improvement plan based on a survey of industry standards, life expectancy, life cycle analysis, and remaining useful life;

(f) An analysis of funding needs;

(g) An analysis of population growth and drinking water use projections, as applicable, for the sponsor's planning area, and a model, if applicable, for impact fees; commercial, industrial and residential rate structures;

(h) The establishment of an adequate funding rate structure;

(i) A threshold rate set to ensure the proper operation of the utility; if the sponsor transfers any of the utility proceeds to other funds, the rates must be set higher than the threshold rate to facilitate the transfer and proper operation of the utility; and,

(j) A plan to preserve the assets; renewal, replacement, and repair of the assets, as necessary; and a risk-benefit analysis to determine the optimum renewal or replacement time.

AMP Development Stakeholders

The development of this AMFS plan involved the collective efforts of Town Management and Staff, the Florida Department of Environmental Protection State Revolving Fund (FDEP-SRF), and the Florida Rural Water Association (FRWA). Resources included Engineers (technical and financial), Certified Operators (operation and maintenance), Rate Sufficiency Analysts and utility staff with first-hand experience with the system.

Critical Assets and Priority Action List

The Table located below contains a listing of the Town of Hilliard's Critical Assets and Processes that were found to need Capital and/or Operational funding to operate as designed and within Regulatory Compliance. Please see Section 4 for a detailed description of the asset improvements listed below.

Critical Assets List				
Name	**Installed**	**Design Life**	**Condition**	**Consequence of Failure**
Hydrant Valves (8 poor, 51 not found with hydrant)	Varies	30	Poor	Moderate
System Water Valves (32)	Varies	30	Poor	Moderate
System Water Valves – (1)	Varies	30	Failed	Moderate
Asbestos Cement Water Main Piping	Varies	50	N/A	Moderate
Fire Hydrants – (3)	Varies	50	Failed	Moderate
Fire Hydrants – (4)	Varies	50	Very Poor	Moderate
Fire Hydrants – (18)	Varies	50	Poor	Moderate

Based on the list of Critical Assets and Processes that were found to need Capital and/or Operational funding and the State requirements for participation in the State Revolving Fund Program (SRF), a Priority Action List was developed to help the Town prioritize action items and establish target dates for timely completion. The Priority Action List is found on the following page.

TOWN OF HILLIARD PRIORITY ACTION LIST				
Action Item	**Target Date(s)**	**Cost Type**	**Cost**	**Responsible Party or Parties**
1. Pass Resolution Adopting AMFS Plan	Within 60 to 90 Days from Receipt of Final Plan	Administrative	No Cost	Board and Town Clerk
2. Implement Energy Audit findings	Every 2 to 3 Years	Capital	$6,000 year 1 then No Cost *	Public Works Director or Designee
3. Update Energy Audit	Every 2 to 3 Years	Administrative	No Cost*	Public Works Director or Designee
4. Determine Level of Service (LOS) Attributes, Goals, Targets, and Metrics and Prepare LOS Agreement	90 Days after Adoption	Planning	No Cost *	Board, Town Clerk, Staff and Public
5. Train Staff and Begin Using AMFS Tools (Diamond Maps or similar).	90 Days after Adoption	Administrative	No Cost* (already purchased equipment and service)	Town Clerk, Public Works Director or Designee
6. Complete RevPlan model and begin using	90 Days after FY 2023	Administrative	No Cost *	Town Clerk or Designee
7. Develop Valve Exercising, and Replacement Program	Within 6 Months after Adoption	Planning	No Cost *	Public Works Director and Staff
8. Develop Hydrant Flushing, Flow Testing and Maintenance Program	Within 6 months after Adoption	Planning	No Cost *	Public Works Director and Staff
9. Explore Financial Assistance Options	On-going beginning in FY 2023	Administrative	No Cost	Town Clerk and Finance Staff
10. Document Water Line Condition and Develop Replacement Strategy	On-going beginning FY 2023	Planning	No Cost	Public Works Director and Staff
11. Engage a Registered Engineer To Review, Plan, Design, Permit, and Construct Capital Projects	On-going beginning FY 2023	Capital	Professional Service and Construction Cost based on Project Scope	Town Clerk, Public Works Director, and Engineer

12. Engage a Registered Engineer To Review, Plan, Design, Permit finished water storage needs and capabilities	FY 2024	Capital	Professional Service cost based on Project Scope	Town Clerk, Public Works Director and Engineer
TOWN OF HILLIARD PRIORITY ACTION LIST				
Action Item	**Target Date(s)**	**Cost Type**	**Cost**	**Responsible Party or Parties**
13. Develop Operation and Maintenance Program and Procedures	Within 1 Year after Adoption	Planning	No Cost *	Public Works Director or Designee
14. Develop Change Out/Repair and Replacement Program for Critical Assets	Within 1 Year after Adoption	Planning	No Cost *	Public Works Director or Designee
15. Locate, Clean Out and Evaluate Buried or Unlocated Valves Shown on System Maps	FY 2024	Operational	No Cost *	Public Works Director and Staff
16. Monitor screens on Ground storage tanks for algae growth	On going	Operational	No Cost *	Water Plant Operator, Public Works Director, and staff
17. Check meter information annually to insure proper billing and accounting	On going	Operational	No Cost*	Public Works Director, staff
18. Develop Replacement plan for A.C. Water mains	Within 1 year after adoption	Planning	Cost will Vary Depending on Project Scope	Public Works Director , Town Clerk, Engineer
19. Replace Hydrants in Failed / Very Poor Condition; Repair/Replace Hydrants in Poor Condition; Install 25 Hydrant Valves	Failed in FY 2024/2025 Poor in FY 2025/2026 and On-going beginning in FY 2027	Capital	Failed / Very Poor- $24,500; Poor - $63,000; Hydrant Valves - $30,000; and	Water Superintendent and Staff
20. Replace failed or Add new valves into distribution system to better isolate sections of system (3 per year)	On going	Capital	$45,000	Water Superintendent and Staff
21. Update Water System Mapping	On-going	Administrative	No Cost	Water Superintendent or Designee

22. Provide Additional Staff Training Opportunities	On-going	Administrative	Cost May Vary *	Public Works Director or Designee
TOWN OF HILLIARD PRIORITY ACTION LIST				
Action Item	**Target Date(s)**	**Cost Type**	**Cost**	**Responsible Party or Parties**
23. Implement Annual Asset Replacement Program	Annually	Operational	Cost will Vary Based on Asset Replacement Program and Strategy	Board, Town Clerk, Public Works Director and Staff
24. Conduct Rate Sufficiency Study and Adjust Rate Structure as Needed with RevPlan	10/1/2023	Planning	No Cost *	Town Clerk, Public Works Director and Finance Staff
25. Revise AMFS Plan and RevPlan Model	Annually	Administrative	No Cost *	Board, Town Clerk and Public Works Director

*** As a member of the Florida Rural Water Association, FRWA can assist the Town of Hilliard with this Service.**

Fiscal Strategy and AMP Process Recommendations.

Based on this asset management and fiscal sustainability study, **specific recommendations** related to capital expenditures and operating expenditures over the next five years found in the Priority Action List are as follows:

1. Adopt this Asset Management and Fiscal Sustainability Plan (AMFS) study in the form of a Resolution. Appendix A contains a sample AMFS Resolution for the Town of Hilliard.

2. Engage a Florida Registered Engineer to support the Utility in review, funding, planning, design, permitting, and construction of critical capital and operational action items as recommended in this AMFS study.

3. Make funding applications to the following programs/agencies in support of Utility System Upgrades/Improvements as recommended by this AMFS study. A synopsis of water utility funding programs can be found at the following link: http://www.frwa.net/funding.html.

    a. FDEP-State Revolving Fund (SRF)
    b. Regional Water Management District
    c. Florida Department of Economic Opportunity Community Development Block Grant (CDBG)
    d. USDA Rural Development Direct Loan/Grant (USDA RD)
    e. FDEO Rural Infrastructure Fund Grant (RIF)
    f. Local Funding Initiative Requests

4. Evaluate and Adopt a Utility rate structure that will ensure rate sufficiency as necessary to implement capital improvements.

5. Begin using Diamond Maps for Asset Management Planning (AMP) and Computerized Maintenance Management System (or another CMMS of your choice).

6. Continue to build your asset management program by:
    a. Collecting critical field data and attributes on any new or remaining assets;
    b. Improving on processes which provide cost savings and improved service;
    c. Implementing a checklist of routine maintenance measures;
    d. Benchmarking critical processes annually;
    e. Develop policies that will support funding improvements;
    f. Develop manuals, SOPs and guidelines for critical processes;
    g. Identify responsible persons or groups to implement processes to protect critical assets;
    h. Attend asset management training annually.

1. Introduction

In accordance with FDEP Rule 62-503.700(7), F.A.C., State Revolving Fund (SRF) recipients are encouraged to implement an Asset Management Plan for all funded assets to promote the utility system's long-term sustainability. To be accepted for the ***financing rate adjustment and to be eligible for principal forgiveness/reimbursement***, an asset management plan must:

A. Be adopted by Resolution or Ordinance;
B. Have written procedures in place to implement the plan;
C. Be implemented in a timely manner.

The plan must include each of the following:

1. Identification of all assets within the project sponsor's (utility) system;

2. An evaluation of the utility system assets' current:

    a. Age
    b. Condition
    c. Anticipated useful life of each asset

3. Current value of utility system assets;

4. Operation and maintenance cost of all utility system assets;

5. A Capital Improvement Program Plan (CIPP) based on a survey of industry standards, life expectancy, life cycle analysis and remaining useful life;

6. An analysis of funding needs;

7. The establishment of an adequate funding rate structure;

8. An asset preservation plan:

    a. Renewal
    b. Replacement
    c. Repair
    d. A risk-benefit analysis to determine optimum renewal or replacement timing

9. An analysis of population growth and water treatment demand projections for the utility's planning area and an impact fee model, if applicable, for commercial, industrial and residential rate structures; and

10. A threshold rate set to ensure proper water system operation and maintenance; if the potential exists for the project sponsor to transfer *any* of the system proceeds to other funds, rates must be set higher than the threshold rate to facilitate the transfer and maintain proper operation of the system.

Fiscal Sustainability represents the accounting and financial planning process needed for proper management of system assets. It assists in determining such things as:

a. Asset maintenance, repair, or replacement cost
b. Accurate and timely capital improvement project budgeting
c. Forecasting near and long-term capital improvement needs
d. Whether the system is equipped for projected growth
e. Whether adequate reserves exist to address emergency operations.

Fiscal sustainability analysis requires a thorough understanding of the system's assets' current condition and needs. Therefore, fiscal sustainability follows asset management and is improved by sound asset management. Conversely, asset management requires a healthy fiscal outlook, since servicing and care of current assets is not free. Timely expenditures for proper servicing and care of current assets are relatively small when compared to repair and replacement expenditures that inevitably occur with component failure due to neglect.

Having a solid AMFS plan in place will benefit the Town of Hilliard in determining which assets are to be insured and for what amount, and to more effectively and efficiently identify its capital improvement needs and solutions. Additionally, the State Revolving Fund (SRF) requires a system to adopt and implement an AMFS plan to qualify for loan interest rate reduction if funding is sought. An AMFS helps a system more effectively and efficiently identify its capital improvement needs and solutions.

This AMFSP's intended approach is to assist the Town of Hilliard with conducting a basic inventory and condition assessment of its current assets. It is expected that the Town will periodically re-evaluate the condition of its assets, at least annually, to determine asset remaining useful life. A reminder can be established for staff that a given component is nearing time for servicing, repair, or replacement. Furthermore, major capital improvement needs can be reassessed periodically as they are met or resolved. In short, **this plan is not designed to be set in stone, but is intended to be a living, dynamic, evolving document**. It is recommended that the Town conduct at least an annual plan review and revise it as necessary throughout the year, resulting in a practical and useful tool for staff.

2. Asset Management Plan

Components of Asset Management

Asset Management can be described as 'a process for maintaining a desired level of customer service at the best appropriate cost.' Within that statement, 'a desired level of service' is simply what the utility wants their assets to provide. 'Best appropriate cost' is the lowest cost for an asset throughout its life. The goal is providing safe, reliable service while at the same time being conscious of the costs involved both short and long term.

Asset Management includes building an inventory of the utility's assets, developing and implementing a program that schedules and tracks all maintenance tasks, generally through work orders, and developing a set of financial controls that will help manage budgeted and actual annual expenses and revenue. By performing these tasks, targeting the system's future needs will be much easier.

Asset Management provides documentation that helps the utility understand the assets they have, how long these assets will last, and how much it will cost to maintain or replace these assets. The Plan also provides financial projections which show the utility whether rates and other revenue mechanisms are sufficient to supply the utility's future needs, 5, 10, even 20 years ahead.

Asset Management is made up of five core questions:

1. What is the current status and condition of the utility's assets?
2. What is Level of Service (LOS) required?
3. What assets are considered critical to meeting the required LOS?
4. What are the utility's Capital Improvement Program Plan (CIPP), Operations and maintenance plan (O&M), and asset's Minimum Life Cycle Cost strategies?
5. What is the utility's long term financial strategy?

Implementation

In developing this plan, FRWA has collected information on most of the water system assets. The information has been entered into Diamond Maps, a cloud based geographical information system (GIS). FRWA, in partnership with FDEP has contracted with Diamond Maps to develop Asset Management software specifically for small systems at an affordable cost. The Town has already setup its account and should continue to collect and update new assets as they are installed or replaced.

The software is easy to use, as it is set up for small communities and for water/wastewater systems. Since Town of Hilliard has around 1200 customers, the cost would be around $35 per month for unlimited users.

Meter Count	Unlimited Use Subscription
250	$15/month
500	$20/month
1,000	$30/month
2,000	$45/month
3,000	$60/month
4,000	$75/month
5,000	$90/month
10,000	$165/month

There is no obligation to continue this service if the Town of Hilliard desires to purchase alternative software. Diamond Maps can be explored at http://diamondmaps.com. If the Town decides to continue Diamond Maps as their asset management tool, it will be easy to move the data collected by FRWA to the Town's account.

Having an asset management tool to keep data current is essential for tracking the utility's assets into the future, to assist with planning and funding for asset rehabilitation or replacement, to schedule and track asset maintenance by issuing work orders and assigning tasks to personnel who will perform the work and update in the system.

In addition to the CMMS tool, Diamond Maps, the Florida Rural Water Association (FRWA) has partnered with the Florida Department of Environmental Protection (FDEP) State Revolving Loan (SRF) program and Raftelis Financial Consultants to create an online financial tracking and revenue sufficiency modeling tool, RevPlan.

RevPlan is designed to enhance asset and financial management for small/medium Florida water and wastewater utilities. It provides a free-to-member online tool to achieve financial resiliency, and to maintain utility assets for long-term sustainability. Additionally, RevPlan is programmed to populate asset information directly from Diamond Maps.

By inputting your accurate budgetary, operation and maintenance costs, capital improvement plan costs, existing asset and funding information, this tool assists the user in identifying any rate adjustments and/or external funding necessary to meet the utility finance requirements, and the impact rate increases/borrowing may have on customers.

There are a few important elements of a successful RevPlan outcome:

- The tool is only as accurate as the information used.

- One person should be assigned the task of annual RevPlan updates.
- Updating asset information in Diamond Maps is essential.

FRWA staff has entered preliminary data into RevPlan. Due to some financial data being unavailable until the end of the fiscal year a complete model was not able to be created. Once a model is created it is important that each year (or as projects come about) the system is updating RevPlan and using it to help understand the impacts of future projects and plan for rate increases.

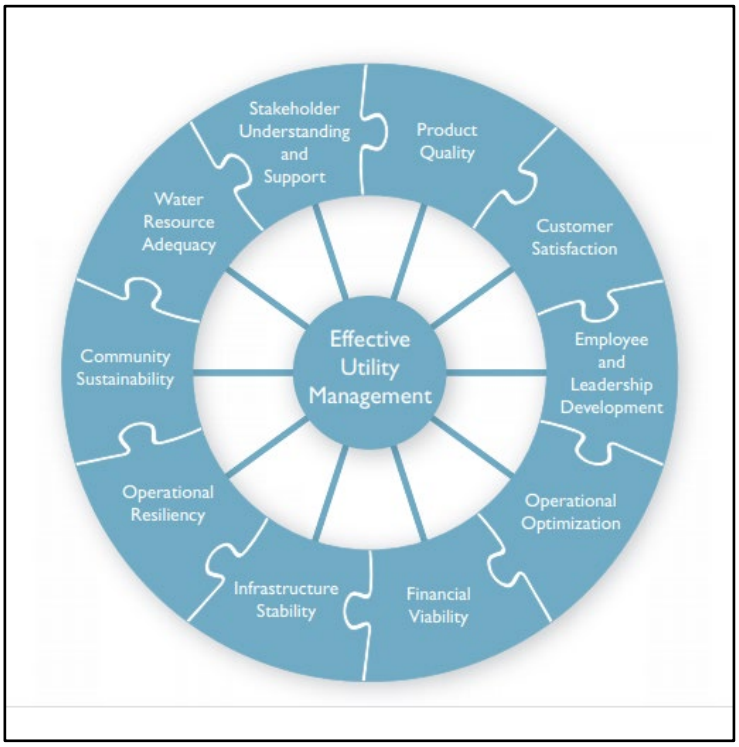
Level of Service (LOS)

As a provider of water services, a utility must decide what Level of Service (LOS) is required for its customers. When setting these goals, most importantly, the utility must decide the level of service it will provide. Ideally, these goals would be conveyed to the utility's customers via a 'Level of Service Agreement'. This document demonstrates the utility's accountability in meeting the customer's needs and its commitment to do so. There are four key elements regarding LOS:

1. Provide safe and reliable water service while meeting regulatory requirements;
2. Budget improvement projects focused on assets critical to sustained performance based on sound operational and financial planning;
3. Maintain realistic rates and adjust as necessary to ensure adequate revenue reserves for targeted asset improvement; and,
4. Ensure long-term system resilience and sustainability.

Targets must be set for individual parameters. Metrics should be created to help the utility direct efforts and resources toward predetermined goals. The established goals must include consideration of costs, budgets, rates, service levels, and level of risk. These goals are set in an agreement between the utility and its customers.

In 2008, a unique coalition representing the "Collaborating Organizations," which include the U.S.
Environmental Protection Agency and a growing number of major water sector associations supported an approach developed by water sector leaders for water utility management. The approach is based around the Ten Attributes of an Effectively Managed Utility and Five Keys to Management Success—known as Effective Utility Management (EUM). These Attributes provide a clear set of reference points and are intended to help utilities maintain a balanced focus on all important operational areas rather than reactively moving from one problem to the next or focusing on the "problem of the day."



The Ten Attributes of an Effectively Managed Utility provide useful and concise goals for water sector utility managers seeking to improve organization-wide performance. The Attributes describe desired outcomes that are applicable to all water and wastewater utilities. They comprise a comprehensive framework related to operations, infrastructure, customer satisfaction, community sustainability, natural resource stewardship, and financial performance.

Water and wastewater utilities can use the Attributes to select priorities for improvement, based on each organization's strategic objectives and the needs of the community it serves. The Attributes are not presented in a particular order, but rather can be viewed as a set of opportunities for improving utility management and operations.

To begin, the utility will assess current conditions by ranking the importance of each Attribute to the utility, based on the utility's vision, goals, and specific needs. The ranking should reflect the interests and considerations of all stakeholders (managers, staff, customers, regulators, elected officials, community interests, and others). Once you have chosen to improve one or more Attributes, the next step is to develop and implement a plan for making the desired improvements. Improvement plans support the implementation of effective practices in your chosen attribute area(s). An effective improvement plan will:

1. Set Near- and Long-term Goals: Set goals as part of the improvement plan to help define what is being worked toward. Near- and long-term goals for the utility should be linked to the strategic business plan, asset management plan, and financial plan. Goals should also be "SMART."

    - **S – Specific**: What exactly will be achieved? Make the goals specific and well defined. Each goal should be clear to anyone with even a basic knowledge of the utility.

    - **M – Measurable**: Can you measure whether you are achieving the objective? You must be able to tell how close you are to achieving the goal. You must also be able to determine when success is achieved

- **A – Assignable and Attainable**: Can you specify who is responsible for each segment of the objective? Is the goal attainable? Setting a goal to have zero water outages is great, but unrealistic. A better choice might be to set a goal that states no outage will exceed six hours.

- **R – Realistic**: Do you have the capacity, funding, and other resources available? The staff and resources of the utility must be considered when setting goals. Available personnel, equipment, materials, funds, and time play a role in setting realistic targets.

- **T – Time-Based**: What is the timeframe for achieving the objective? There must be a deadline for reaching the goal. Adequate time must be included to meet the target. However, too much time can lead to apathy and negatively affect the utility's performance.

2. Identify Effective Practices: Each Attribute area for improvement will be supported by effective practices implemented by the utility. A substantial number of water sector resources exist that detail effective utility practices for each of the Attributes.

3. Identify Resources Available and Resources Needed: For each practice/activity to be implemented as part of the improvement plan, identify resources (financial, informational, staff, or other) that exist on-hand, and those that are needed, to support implementation.

4. Identify Challenges: For the overall improvement plan and for specific practices/activities to be implemented, identify key challenges that will need to be addressed.

5. Assign Roles and Responsibilities: For each improvement action, identify roles and responsibilities for bringing the implementation to completion.

6. Define a Timeline: Establish start date, milestones, and a completion target for each activity/improvement action.

7. Establish Measures: Establish at least one (or more) measure of performance for items to be implemented under the improvement plan.

More information and resources on Effective Utility Management (EUM) can be found at www.WaterEUM.org.

The idea is to set goals and meet them. Reaching the goals should not be overly easy. Effort should be involved. The goals should target areas where a need exists. If the bar is set too low, the process is pointless. Most importantly, the utility must decide the level of service it will provide. The following table shows examples of what might be included as Level of Service goals. The LOS items for the Town of Hilliard must be specific to the system and ideally, conveyed to the utility's customers via a 'Level of Service Agreement'. This document demonstrates the utility's accountability in meeting the customer's needs and its commitment to do so.

Town of Hilliard Drinking Water (DW) Level of Service Goals			
Attribute and Service Area	**Goal**	**Performance Targets**	**Timeframe/ Reporting**
Service Delivery - Health, Safety and Security	Reduce "down time" for water outages and reduce the number and duration of Boil Water Notices	Provide water distribution employees with training necessary to be proactive in water system maintenance and to rapidly and efficiently make emergency water system repairs.	Annual report to Council
Infrastructure Stability - Asset Preservation and Condition	Improve system wide preventive maintenance (PM)	Develop a comprehensive Preventive Maintenance weekly schedule for equipment and water system components (including valve exercising) and complete all preventative maintenance tasks as scheduled.	Weekly report to Public Works Director/ Annual report to Council
Infrastructure Stability - Asset Preservation and Condition	Establish a Predictive Maintenance Schedule (PdMS)	Develop a weekly PdMS to continuously monitor equipment for signs of unexpected problems. Adjust the PdMS as needed.	Weekly report to Public Works Director/ Quarterly report to Council
Infrastructure Stability - Asset Preservation and Condition	Develop an Asset Replacement Strategy	Develop an asset replacement strategy to be updated at least annually, including financing options.	Monthly report to Public Works Director/ Annual Report to Council
Financial Viability - Service Quality and Cost	Assure that the utility is financially self-sustaining.	Perform an annual utilities rate analysis and make any needed rate adjustments every three to five years.	Annual Report to Public Works Director, Finance, and Council
Financial Viability – Service Quality and Cost	Enact automatic inflationary rate adjustments	Annual evaluation of the adequacy of inflationary rate adjustments	Annual report to Finance and Council
Financial Viability - Service Quality and Cost	Minimize Life of Asset Ownership costs	Bi-annual evaluation of unexpected equipment repairs compared to the Preventive Maintenance Schedule (PMS). Adjust the PMS if warranted.	Annual report to Public Works Director and Council
Infrastructure Stability - Conservation, Compliance,	Improve reliability of water distribution through the distribution system	Annual evaluation of the water distribution system, including piping, valves, and fire hydrants. Develop a long range plan for replacements and improvements with timelines	Monthly report to Public Works Director/ Annual report to Manager

Enhancement		and funding options.	and Council

Best Management Practices (BMP)

Utility owners, managers, and operators are expected to be responsible stewards of the system. Every decision must be based on sound judgment. Using Best Management Practices (BMPs) is an excellent tool and philosophy to implement. BMPs can be described as utilizing methods or techniques found to be the most effective and practical means in achieving an objective while making optimum use of the utility's resources.

The purpose of an Asset Management and Fiscal Sustainability plan is to help the utility operate and maintain their system in the most effective and financially sound manner. An AMFS plan is a living document and is not intended to sit on a shelf. It must be maintained, updated, and modified as conditions and situations change. Experience will help the utility fine tune the plan through the years.

3. System Description

Overview

Named after Guyler Walter Hilliard, who co-founded the Hilliard & Bailey Lumber Company in 1881, the Town of Hilliard was incorporated in 1947 and is Nassau County's second largest municipality. Hilliard is home to a Federal Aviation Administration (FAA) Air Traffic Control Center, which coordinates most commercial and civilian air traffic for the southeastern United States. Hilliard is located at 30°41'16"N 81°55'30"W (30.687760, –81.925022).[5]. Hilliard is near the Florida-Georgia border, and within the Jacksonville metropolitan area. According to the United States Census Bureau, the town has a total area of 5.5 square miles

Based on the latest estimates Hilliard has a population of 3,263. There are 966 households and 705 families residing in the town. The average household size is 2.58. The median income per household in the Town is $ 57,896 with 85% of the residence above the poverty rate.

The Drinking Water system is currently comprised of 1,121 metered connections to the Town's water supply. The water is supplied from four wells, two located at the WTP and two located out in the system. According to the most recent sanitary survey, the system's designed capacity is 1,500,000 GPD. The total storage capacity is 260,000 gallons with the use of two ground storage tanks, and one elevated storage tank.

Water Treatment is achieved by the use of chlorination for disinfection and aeration.

Form of Government

The Mayor and the Town Council serve as the governing body for the Town of Hilliard. These elected officials represent and govern the Town, and provide for the needs of our community. The Town of Hilliard takes great pride in the relationship between it's local government and it's citizens.

The Council meets on the first and third Thursday of each month at Town Hall at 7:00 p.m. in the Council Chambers to conduct Town business and to provide the citizens with an opportunity to contribute their input. Citizens are welcomed and encouraged to attend the meetings and to play an active role in their Town government and community.

Town Government

Town of Hilliard	
John Beasley	**Mayor**
Kenny Sims	**Council President / Street Commissioner**
Lee Pickett	**Council Pro Tem/ Water and Sewer Commissioner**
Dallis Hunter	**Airpark Commissioner**
Joseph Michaels	**Parks and Recreation Commissioner**
Jared Wollitz	**Fire Commissioner**

Town Management and Water Staff

The success of the Town of Hilliard Utilities Department results from the partnerships, diverse skills and unselfish contributions of their respective staff members. The Town of Hilliard Utilities Department is staffed by nine full-time employees. FRWA appreciates the assistance of those employees that helped in the preparation of this Plan.

Name	Job Title
Richie Rowe	**Public Works Director – License Class C Water Operator & Class C Wastewater Operator**
Cory Hobbs	**Assistant Public Works Director**
John Maze	**Lead Water Plant Specialist – License Class C Water Operator**
Jody Wildes	**Wastewater Specialist – License C Wastewater Operator**
Dawn Carroll	**Public Works Clerk**
Justin Tuten	**Public Works Trainee**
Charles Chavarria	**Public Works Specialist**
Mark Strickland	**Heavy Equipment Operator**
Jason Bergendahl	**Public Works Specialist – License Class C Water & Wastewater, distribution 3 Operator**

System Components

The Town's water is supplied from four wells which use chlorination for disinfection and aeration. The Water Treatment plant has a design capacity of 1.5 MGD. The average daily demand is 0.31 MGD and a maximum daily demand of 0.67 MGD (2022 sanitary survey). Storage components for finished water include the following:

Name	Capacity	Material
WTP Ground Storage Tank 1	100,000 Gallons	Concrete
WTP Ground Storage Tank 2	100,000 Gallons	Concrete
Elevated Storage Tank	60,000	Steel

- WTP GST 1 – The interior and exterior of the ground storage tank at the WTP tank 1 is reported to be in fair to good condition. Minor notes were made during the last sanitary survey about screens and growth.
- WTP GST 2- The interior and exterior of the ground storage tank at the WTP tank 2 is reported to be in fair to good condition. Minor notes were made during the last sanitary survey about screens and growth.
- Elevated Storage Tank- The tanks interior was recoated in 2019 and spot repairs were done on the exterior at that time. The tank is in average condition with no deficiencies noted during the last inspection after repairs were made.

The distribution system was originally installed in the early 1970's. Since that time, the distribution system has been routinely updated, replaced and/or expanded to better meet the needs of the Town. The system is comprised of primarily Asbestos Concrete (AC), Polyvinyl Chloride (PVC) Pipe, Ductile Iron (DI) Pipe and Cast Iron (CI) Pipe. The piping sizes range from one inch to eight inches used in the transmission of the finished water.

According to the last sanitary survey (December, 2022) and the last consumer confidence reports, one water quality violation and several monitoring violations were noted. The consumer confidence report for 2021 noted that the town exceeded the secondary maximum level for fluoride. Well 5 tested positive for total coliform in the months of July, August and October of 2022. The well has since cleared sampling and no further issues have been found.

4. Current Asset Conditions

Assets Critical to Sustained Performance

The Town's water utility is composed of ***critical infrastructure***. The utility provides essential services for the community. Proper provision of these services protect the public health and the environment. The Florida Department of Environmental Protection has strict requirements for the proper operation and maintenance of the utility system, and the Town is responsible for meeting these requirements.

Every water and wastewater system is made up of assets. Some you can see, while some you cannot. These are the physical components of the system, such as blowers, pumps, valves, pipes, tanks, motors, manholes, and buildings. Each is important in its own way and serves a function to make the system operate as it should.

One trait common to all assets is that they lose value over time. With age comes deterioration; with deterioration comes a decreased ability to provide the level and type of service the utility

should give to its customers. Another trait common to assets is that they must be maintained. Maintenance costs increase as these assets age. Operation costs can rise with age as equipment becomes worn and less efficient. At some point, it is wiser to replace components rather than continue with more frequent and costly repairs. Failed or failing equipment can cause inadequate treatment, customer complaints, damage to private property, negative environmental impacts, permit violations, and regulatory fines.

Another unfortunate reality is that all assets will ultimately fail, and if not properly maintained, some will fail prematurely. How the utility manages the consequences of these failures is vital. Not every asset presents the same failure risk. Not every asset is equally critical to the performance of the utility. Factors that contribute to asset failure are numerous and include age, environment (e.g., weather, corrosive environments), excessive use and improper or inadequate maintenance.

Replacement versus rehabilitation is always a consideration. What is best for the utility? What is best for the customer? The proper decision must be made based on information gleaned from all available resources. Continuing the use of a Computerized Maintenance Management System (CMMS) will ensure the Town's assets last longer, perform better, and provide more reliable service. Utilizing data contained in Diamond Maps, maintenance schedules can be created following both manufacturer's recommendations as well as those of industry professionals. Work orders should be created and scheduled to ensure that work is assigned and completed. Tracking and recording maintenance tasks encourages accountability of staff assigned to maintain the equipment. Diamond Maps can do this for you and is included with an active account. FRWA staff can assist the Town in creating these schedules as well as provide training in Diamond Maps.

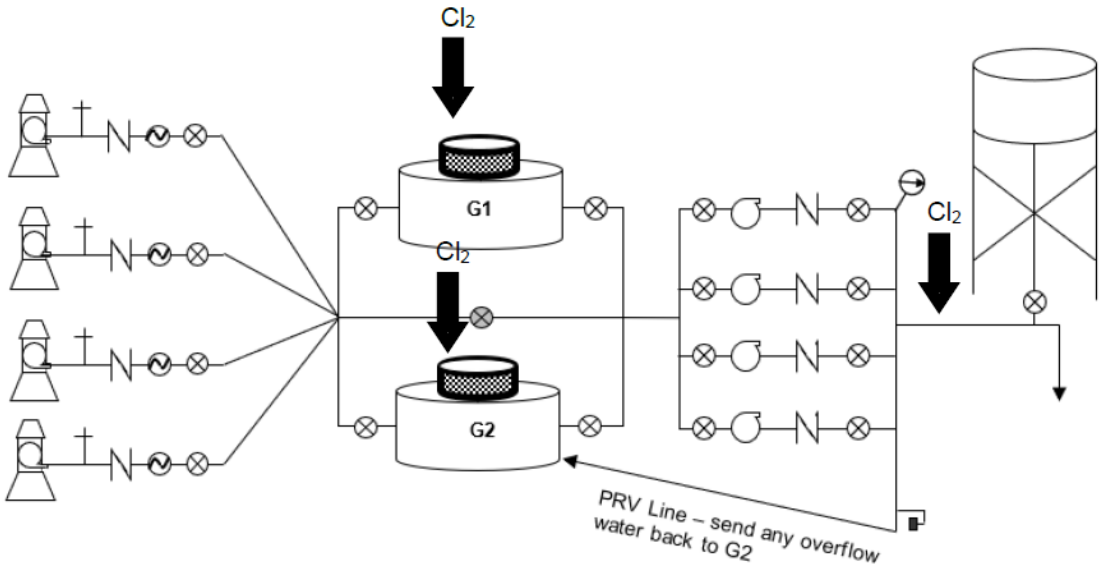
Collection and Assessment Area

It is the goal of FRWA and the AMP program to assess as close to 100% as possible, the production and distribution assets of the Town. Due to the age and condition of some of the valves, the Town requested that FRWA not assess the older valves out in the system. For the purposes of this report, the assets not assessed are shown to be in poor condition. However, as the valves are utilized, exercised, and or replaced the conditions should be added or updated into diamond maps for future planning and proper identification of functionality and actual size.

Water Production Facilities

The water production facility is in overall average condition with no major deficiencies noted on the last inspection. Previous tank inspections also concluded that there were no major issues with the current tanks associated with the water facility.

SCHEMATIC (not to scale):



The active assets at the water production facility are generally in average condition. It was noted that some equipment showed signs of deterioration and corrosion. Regular maintenance and upkeep of the equipment and supply lines at the wells and plant will ensure a longer life before the need for replacement. Time should also be taken to clean debris and remove obsolete equipment no longer needed in the operation of the facility.

Distribution System

The water distribution system was originally installed in the early 1970's. Since that time, the distribution system has been routinely updated, replaced and/or expanded to better meet the needs of the Town. The system is comprised of primarily Asbestos Concrete (AC), Polyvinyl Chloride (PVC) Pipe, Ductile Iron (DI) Pipe and Cast Iron (CI) Pipe. There are more than 28 miles of pipes ranging from one inch (1") to eight (8") used in the transmission of the finished water.

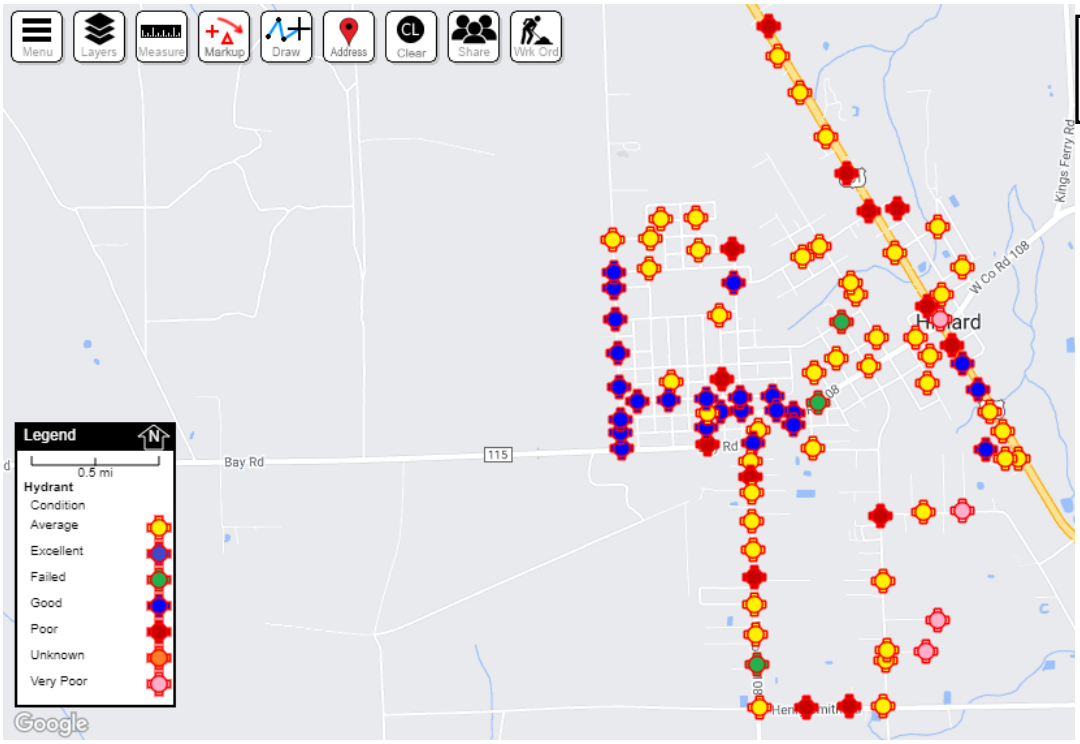
As lines begin to approach the end of their useful lives, many will begin to deteriorate making full repairs difficult. The combination of main breaks and system leaks may cause challenges for the system and higher than expected water loss. As with most systems, water loss can be a significant portion of the water produced by a utility. The most commonly accepted maximum water loss is fifteen percent (15%) of water produced, with accepted ranges from seven and a

half percent (7.5%) to twenty five percent (25%). While an assessment of the distribution piping was not conducted during this phase, the Town should keep close records of the work conducted on the mains. This should include pictures of the interior of pipes, coupons when new taps are installed, and work orders of all service and main repairs. By compiling this data over the next few years, the Town will be able to determine which areas of the distribution system need further evaluation and which may need replacement. This documentation can be compiled through the use of the work order component of Diamond Maps. The replacement of failing lines and older meters will help improve the Town's water loss.

Regular maintenance, collecting coupons and documenting water main breaks and water quality complaints is a good way to monitor the existing conditions of the piping, as it is often difficult to adequately assess. This documentation will provide a good starting point on developing a replacement strategy for some of the older or problematic water mains. Issues like lead service line connections or lead poured joints are a common occurrence with older water mains and should be removed from service, as well as any asbestos pipe which also contain health risks.

Other than the recommendation for valve replacement and additions found in Section 4, the Town should begin a regular operational maintenance program and the replacement of specific lines following the creation of a Water Main Replacement Strategy. The A.C water mains should be a high priority on that list due to possible health concerns.

Hydrants

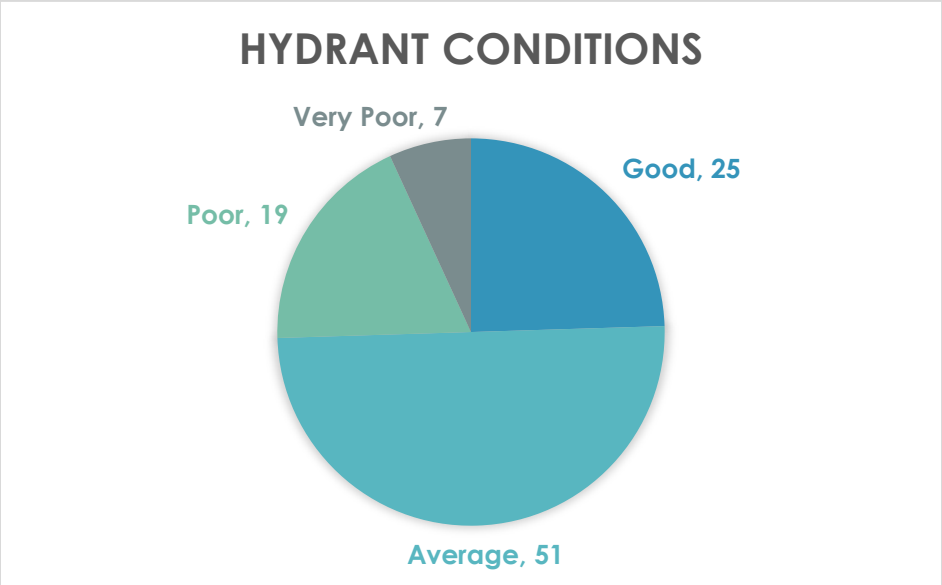


Fire Hydrant Condition

FRWA assessed all of the known 102 fire hydrants. The majority of hydrants assessed were in average to good working order and did not require any immediate need for repairs. Routine maintenance items like painting, replacing nozzle gaskets, repairing chains, and lubricating operating nuts and threads were the only deficiencies that were noted.

Fire hydrants have an expected life cycle of 50 years or more with proper routine maintenance and exercising. Approximately twenty percent (20%) of the hydrants were installed before 1980 meaning many have already passed or are near to reaching the end of their useful life. The fire hydrants serve as a critical tool for firefighting and flushing water from dead-end lines. The hydrants should be inspected and exercised at least annually. The flow should be measured and recorded for each hydrant. Records of the flows and dates assessed and exercised can then be updated into Diamond Maps to create a historic data base and a good record of work that has been or needs to be done. The work order feature in Diamond Maps may be utilized for the task of creating a hydrant maintenance and exercising program.

Of the 102 hydrants, only fifty percent (50%) have hydrant valves. It is recommended that when a hydrant is added or replaced, that a hydrant valve be installed to match existing ground level with the addition of a concrete collar.



During the course of the assessment, FRWA assessed or visually inspected 102 hydrants. Of these:

- Twenty five (25) hydrants were in good condition (27%)
- Fifty one (51) hydrants were in average condition (50%) – Minor to moderate corrosion, broken chains, minor leaks during flushing, needs painting and/or minor maintenance deficiencies.
- Nineteen (19) hydrants were in poor condition (17%) – Moderate to heavy corrosion, some difficulty turning, leaking before flushing, damaged, and/or too low to the ground.
- Seven (7) hydrants were in failed or very poor condition (6%) – Significant leaks. All outlets or operating nut seized.

Name	Conditic	Reported Issue	GPS Latitude	GPS Longitu
wHyd-10	Poor	rust, corrosion, algae	30.6974237	-81.9205494
wHyd-14	Poor	Below grade can not place key on open valve, rust and corrosion	30.6919442	-81.9185991
wHyd-16	Poor	leaning	30.7077875	-81.9290452
wHyd-18	Poor	Below grade	30.6994405	-81.9239332
wHyd-31	Poor	Did not operate, hydrant appears charged	30.6878134	-81.9321388
wHyd-33	Poor	Needs paint and safety chains	30.6841074	-81.9331121
wHyd-39	Failed	Unable to open	30.6864521	-81.9258649
wHyd-43	Failed	Unable to open	30.6910357	-81.9242359
wHyd-46	Poor	Needs riser	30.6951648	-81.9314835
wHyd-58	Poor	No valve, needs riser and paint	30.6822582	-81.9302626
wHyd-62	Poor	No valve , needs paint and riser	30.6766049	-81.9300435
wHyd-64	Failed	Operating nut is gone, hydrant needs out of service ring	30.6716596	-81.929857
wHyd-68	Poor	Needs cleaned and painted, unable to open.	30.6828333	-81.9050763
wHyd-69	Poor	Needs cleaned and painted, hard to operate. Safety chains broke	30.6817935	-81.9049898
wHyd-70	Poor	Needs cleaned and painted, hardnto operate	30.6806735	-81.904896
wHyd-72	Poor	Needs cleaned and painted, hard to operate	30.6785338	-81.9047223
wHyd-77	Poor	Hydrant leaning, needs replaced	30.6800729	-81.9216956
wHyd-79	Very Poor	Unable to open	30.6803172	-81.9163178
wHyd-82	Very Poor	Unable to open	30.6723358	-81.918675
wHyd-84	Very Poor	Below grade, unable to open	30.6741272	-81.9179416
wHyd-86	Poor	Hard to open	30.6692454	-81.9237246
wHyd-87	Poor	Needs riser, hard to operate	30.6692142	-81.9265964
wHyd-89	Poor	Hydrant is set in concrete and has moderate corrosion. Hydrant is not serviceable.	30.6896834	-81.9170097
wHyd-97	Poor	Hydrant is leaning, unable to safely assess. Needs reset and moved	30.6733651	-81.90097
wHyd-99	Very Poor	Hydrant buried almost to top.	30.6911713	-81.9177462

As the hydrant conditions change, poor condition hydrants need to be serviced, repaired or replaced within two years. Failed hydrants should be repaired or replaced immediately for fire prevention capabilities as well as system flushing. A minimum of $3,500 should be budgeted for each hydrant replacement and an additional $1,200 for hydrants without valves. This amount at a minimum should be budgeted for hydrant replacements until all hydrants have been repaired or replaced that are in a failed or poor condition. Poor condition hydrants need to be evaluated and repaired as needed. In some instances, the repair may be as simple as adding grease, while other repairs may include rebuilding or raising the hydrant. A minimum of $500 should be placed aside for repair of each hydrant rated as poor.

For future assessments of the hydrants, a flow test should be performed annually, and a report should be presented to the Town with the findings. Typically, this is done by the local fire departments. Having the hydrants flow tested is a crucial piece of information needed for fire protection. Simply flowing the hydrant is not the same as a flow test. A special meter must be used to accurately measure the flow and gallons per minute (gpm) for each hydrant.

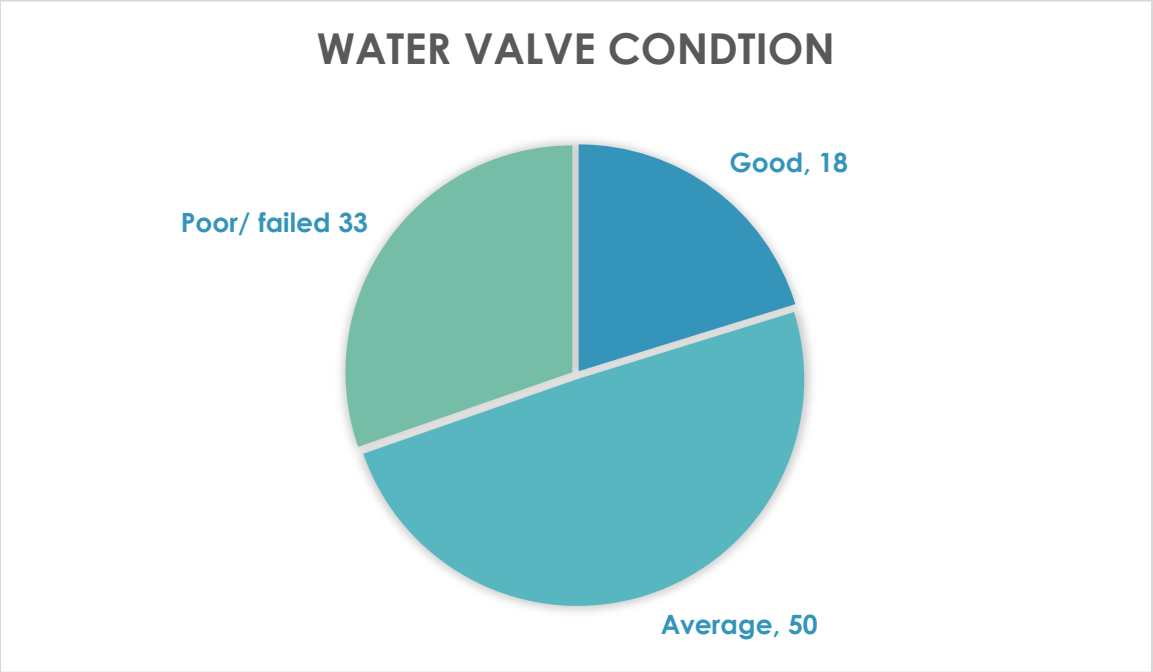
As the hydrants begin to reach the end of their useful life, it is recommended that the Town begin an annual hydrant replacement program. It is also recommended that the Town install hydrant valves as hydrants are added or replaced in the system.

Estimated total cost to replace/repair hydrants throughout system: $94,700.

- **Estimated cost to repair failed and very poor condition hydrants: $24,500.**
- **Estimated cost to repair poor condition hydrants: $9,000**
- **Estimated cost to add hydrant valve to 51 missing hydrants: $61,200 *(this number may be lowered if missing hydrant valves are found to be buried and raised to proper height.)**

System and Hydrant Valves

A total of 101 System Valves and 51 Hydrant Valves were collected by FRWA.
During the course of the assessment:



- Eighteen (18) valves were in good condition
- Fifty (50) valves were in average condition
- Thirty three (32) valves were in poor or failed condition.
- One (1) valve was found in the failed condition.

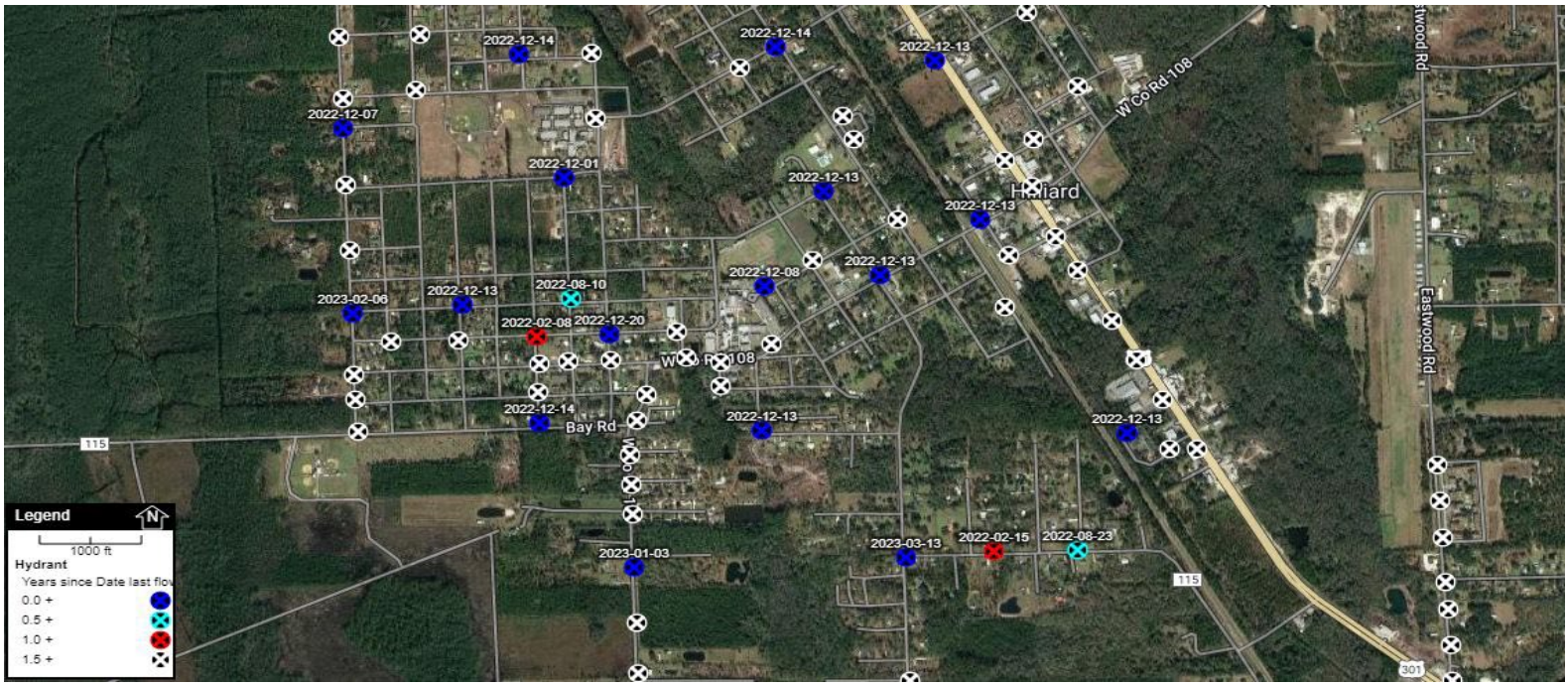
FDEP requires a valve exercising program be administered where all valves are turned at least once a year. Doing this will not only extend the life span of the valves but will help ensure that they are operational in the time of need. As the Town begins exercising, repairing, and

replacing valves, the ratings can be updated in Diamond Maps. Notating in Diamond Maps valves that are not operational and those that require repairs or replacement is useful information when they are used during emergencies and flushing programs.

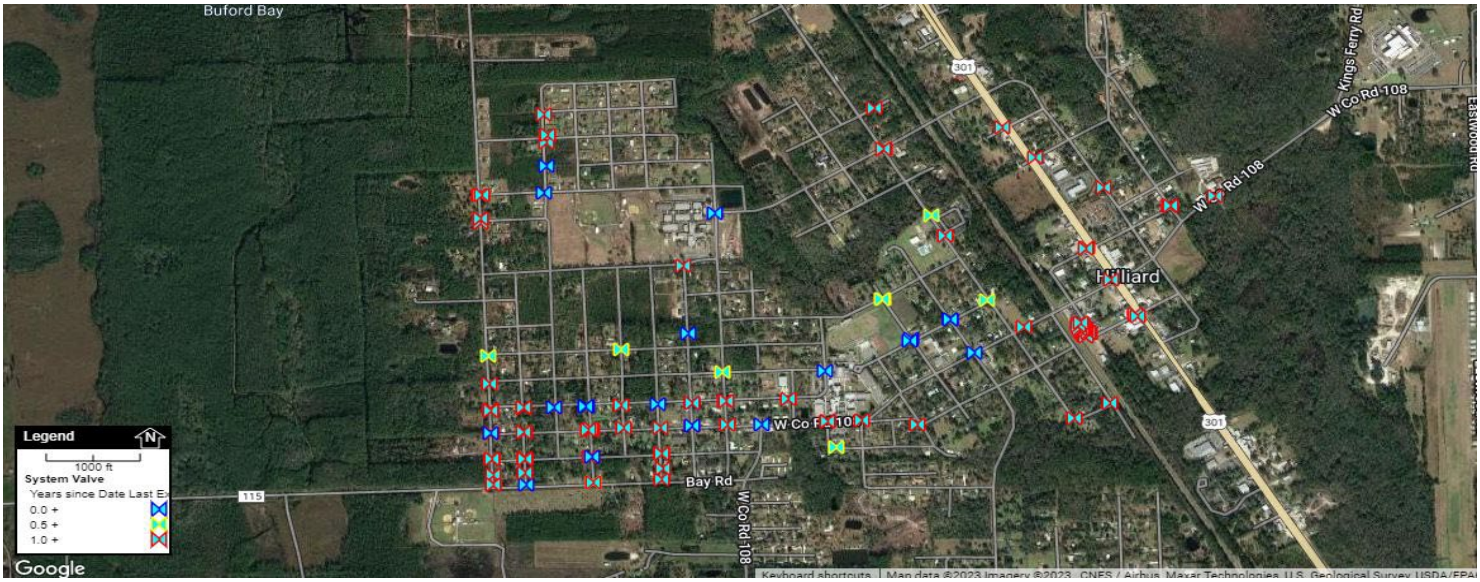
Water valves used for the isolation of water are a crucial asset when dealing with water line breaks and to help direct flushing of clean water to a certain point or side of the system. These valves have a life span of 25 years or more and can continue to remain operational after that with proper exercising. During exercising, valves can be assessed or evaluated by closing off valves and checking flows at hydrants and other flush points. Some valves are required to be turned up and down multiple times if not exercised, to properly operate. While exercising valves, it is good practice to have a flush point open if possible (hydrant or other flushing device fitting) to help wash out the buildup and deposits that form inside the seat of the valve.

As part of the AMFS plan, FRWA created two maps to be used in aid for hydrant flushing and valve exercising. The points on the map will automatically change color by the date that they were last flushed or exercised. This can be applied to any asset that needs to be inspected or exercised on an annual basis. Utilizing these maps can make sure that assets are properly maintained and accurate records are kept.

Hydrant Flushing / testing map



Valve exercise map



Additionally, forty six (46) points were added into Diamond Maps to represent valves that were listed on system maps but could not be verified if they exist or have been buried / paved over. Buried valves should be located and the GIS locations of these valves should be updated during the implementation phase to reflect current conditions and changes should be made to locations if they are found to be inaccurate. As old lines are replaced or water breaks occur new valves should be installed in order to better isolate sections of the system when available. Those valves should be promptly entered into Diamond Maps with their size and gps locations. Listed below are the notes found for the valves in poor or failed condition.

Valve ID	Condition	Reported Issue	GIS Location	
wwValvInFac-1	Poor	Unable to locate	30.69665	-81.9371
wwValvInFac-2	Poor	unable to locate	30.69569	-81.937
wwValvInFac-3	Poor	unable to locate	30.69595	-81.937
wwValvInFac-4	Poor	unable to locate	30.69487	-81.937
wwValvInFac-5	Poor	unable to locate	30.69395	-81.9371
wwValvInFac-6	Poor	DNT per system	30.69382	-81.9144
wwValvInFac-7	Poor	DNT per system	30.69349	-81.9159
wwValvInFac-8	Poor	DNT per system	30.69352	-81.9159
wwValvInFac-14	Poor	DNT per system	30.69204	-81.9188
wwValvInFac-25	Poor	DNT per system	30.689	-81.9188

Valve ID	Condition	Reported Issue	GIS Location
wwValvInFac-35	Poor	DNT per system	30.68949 -81.9189
wwValvInFac-41	Poor	DNT per system	30.69325 -81.9313
wwValvInFac-42	Poor	DNT per system	30.69143 -81.9324
wwValvInFac-46	Poor	DNT per system	30.68411 -81.9331
wwValvInFac-48	Poor	Unsure of size	30.68499 -81.9331
wwValvInFac-56	Poor	Above ground flush valve / moderate corrosion	30.6852 -81.9272
wwValvInFac-57	Poor	DNT per system	30.68891 -81.9247
wwValvInFac-58	Poor	DNT per system	30.68887 -81.9247
wwValvInFac-59	Poor	DNT per system	30.68959 -81.9233
wwValvInFac-60	Poor	DNT per system	30.68958 -81.9233
wwValvInFac-61	Poor	DNT per system	30.69026 -81.9221
wwValvInFac-62	Poor	DNT per system	30.69031 -81.9256
wwValvInFac-63	Poor	unable to locate	30.6903 -81.9257
wwValvInFac-69	Poor	DNT per system	30.68854 -81.9345
wwValvInFac-71	Poor	DNT per system	30.68781 -81.9276
wwValvInFac-85	Poor	Unable to locate	30.6794 -81.9048
wwValvInFac-86	Poor	DNT per system	30.67939 -81.9048
wwValvInFac-87	Poor	Full of dirt inside of valve box	30.67425 -81.9022
wwValvInFac-88	Poor	Unable to get to nut, valve box may be offset	30.67519 -81.9036
wwValvInFac-90	Poor	Unable to assess in high traffic lane	30.69094 -81.9179
wwValvInFac-91	Poor	Unable to open valve box	30.68979 -81.9171
wwValvInFac-95	Poor	Full of dirt, unable to assess	30.68778 -81.9311
wwValvInFac-100	Failed	Valve to deep to access , reported broke by system	30.68032 -81.9136

Hydrant Valve ID	Condition	Reported Issue	GIS Location

Hydrant Valve ID	Condition	Reported Issue	GIS Location
7	Poor	Buried	30.6974213 -81.9205413
8	Poor	Buried	30.6950157 -81.920782
10	Poor	Buried	30.7076877 -81.9291301
11	Poor	Buried	30.7060918 -81.9284686
12	Poor	Buried	30.6994456 -81.9239316
22	Poor	Valve box has been shifted over, needs reset.	30.6914358 -81.932346
48	Poor	Buried	30.6886891 -81.9163068
51	Poor	Valve box has been shifted over, needs reset.	30.6733641 -81.9009679

As mentioned previously in this report, it is the goal of FRWA and the AMP program to assess as close to 100% of the production and distributions assets of the Town as possible. Due to the age and condition of the assets in the downtown area, the Town requested that FRWA not assess the valves that were passed their expected design life. The location of these valves were collected and mapped using GPS, however they were not assessed in keeping with the wishes of the Town. For the purposes of this report, the assets not assessed are shown to be in poor condition.

It is recommended that all valves buried or paved over be located, mapped and assessed. It is also recommended that valves be raised to match the existing ground level with the addition of a concrete collar to prevent damage from mowers or adjacent road work when applicable.

- **Estimated cost to replace failed condition valves: $1600**
- **Estimated cost to replace/repair poor condition valves: $30,300**
- **Cost to locate, evaluate, clean out and reset valve boxes: Free if done by system**

Water Meters

The Town currently has and maintains 1,121 water meters throughout the Town for residential and commercial use. The guidelines for meter replacement varies from different manufactures but industry standards are set at replacement being done every 20 years or 1,000,000 gallons. Older meters slow down over time and lead to higher numbers of unaccounted for water and lost revenue. The town has recently updated the water meters to an AMR reading system. This should be planned for again in the above mentioned time frame to keep accurate accounting of water sold and help insure correct revenues.

Water meters should be considered a critical component of the Town's revenue stream. Inaccurate meters can cost a Town thousands of dollars over time. Therefore, making sure that meters are working properly, and replacing old and broken meters annually, is an industry standard and best management practice. Regular testing of large commercial/industrial meters (two inches and above) or meters installed at high use locations is also recommended. Meters testing below AWWA standards should be repaired or replaced ensuring accuracy and preventing lost revenue.

5. Operations and Maintenance Strategies (O&M)

O&M consists of preventive and emergency/reactive maintenance. The strategy for O&M varies by the asset, criticality, condition, and operating history. All assets have a certain risk associated with their failure. This risk must be used as the basis for establishing a maintenance program to make sure that the utility addresses the highest risk assets. In addition, the maintenance program should address the level of service performance objectives to ensure that the utility is running at a level acceptable to the customer. Unexpected incidents could require changing the maintenance schedule for some assets. This is because corrective action must be taken in response to unexpected incidents, including those found during routine inspections and O&M activities. Utility staff will record condition assessments when maintenance is performed, at established intervals, or during scheduled inspections. As an asset is repaired or replaced, its condition will improve and therefore it can reduce the overall risk of the asset failing. This maintenance strategy should be revisited annually.

Two important considerations in planning O&M strategies are:

- Unplanned repairs should be held at 30% or less of annual maintenance activities.
- Unplanned maintenance in excess of 30% indicates a need to evaluate causes and adjust strategies.

Staff Training

Utility maintenance is quite unique. It can involve one or a combination of water system repairs, customer service issues, troubleshooting and repair, pump and motor repairs and other technical work. This skill set is not common. Training staff, whether they are new or long-term employees, is very important. It is recommended that the Town initiate or enhance their training program for its employees. In addition to technical training, safety training is also necessary. Treatment Plants and distribution/collection systems can be dangerous places to work. Electrical safety, troubleshooting panel boxes, trenching and shoring, and confined space entry are just a few of the topics that could benefit the Town and its staff.

FRWA personnel can provide some of the training needed by Town of Hilliard staff members. Training services that we offer to members are listed on our website http://www.frwa.net/ under the Training Tab.

There is no such thing as too much training. The more your staff knows, the more capable, safe, and professional they become. This enhanced sense of professionalism will improve the quality of overall service and accountability to the community.

Preventive Maintenance

Preventive maintenance is the day-to-day work necessary to keep assets operating properly, which includes the following:

1. Regular and ongoing annual tasks necessary to keep the assets at their required service level.
2. Day-to-day and general upkeep designed to keep the assets operating at the required levels of service.
3. Tasks that provide for the normal care and attention of the asset including repairs and minor replacements.
4. Performing the base level of preventative maintenance as defined in equipment owner's manuals.

These preventative maintenance guidelines are supplemented by industry accepted best management practices (BMPs).

Equipment must be maintained according to manufacturer's recommendations to achieve maximum return on investment. By simply following the manufacturer's suggested preventive maintenance the useful life of equipment can be increased two to three times when compared to "run till failure" mode of operation. Communities that have disregarded preventive maintenance practices can achieve positive returns from a relatively small additional investment. Deferred maintenance tasks that have not historically been performed due to inadequate funding or staffing must be programmed into future operating budgets. Proper funding provides staffing and supplies to achieve life expectancy projected by the manufacturer and engineer.

Table 5.A on the following page is a sample O&M Program for this system and is based on best management practices, manufacturers' recommended service intervals, staff experience, and other sources. *This schedule is only an example.* The true schedule must be created by Town of Hilliard staff, based on their historical knowledge and information gleaned from the O&M **Table** Manuals and other sources.

5.A: Sample O&M Program

Task Name	Frequency	Task Name	Frequency
Visually Inspect Well Site for Damage or Tampering	Per Visit	Respond to any complaints	As they occur
Ensure proper operation of equipment (note any issues)	Per Visit	Decommission unnecessary equipment	As they occur
Calibrate all meters and necessary equipment	Per Visit	Inspect CL2 system and alarms	Every six months
Check plant as per DEP requirements	Per Visit	Perform P/M on pumps and motors	Manufacturer recommendation
Complete all log work	Per Visit	Perform P/M on plant and safety equipment	Manufacturer recommendation
Collect all samples	As required by Permit	Inspect storage tank	Annually
Perform general housekeeping on grounds and building.	Weekly	Calibrate meter and backflows	Annually
Exercise Generator	Monthly	Exercise hydrants and valves	Annually
Confirm submittal of monthly reports	Monthly	Update AMFSP	Annually

Diamond Maps can be used to schedule maintenance tasks. Recurring items (e.g. annual flow meter calibrations) can be set up in advance. In fact, all maintenance activities can be coordinated in Diamond Maps using its work order and other classification features.

Performing the work is important. Tracking the work is also important. Being able to easily check on when specific maintenance tasks were performed or are scheduled will make the utility run more efficiently and prolong the life of critical equipment.

Proactive vs Reactive Maintenance

Reactive maintenance is often carried out by customer requests or sudden asset failures. Required service and maintenance to fix the customer's issue(s) or asset failure is identified by staff inspection and corrective action is then taken. Reactive maintenance is sometimes performed under emergency conditions, such as a main break at the treatment plant causing a water disruption. As mentioned above, if your system is responding to and performing reactive/emergency maintenance more than 30% of the time, you will need to adjust your maintenance schedules and increase proactive maintenance schedules.

Proactive maintenance consists of preventive and predictive maintenance. Preventive

maintenance includes scheduled tasks to keep equipment operable. Predictive maintenance tasks try to determine potential failure points. An example of predictive maintenance is infrared analysis of electrical connections. Using special equipment, a technician can "see" loose or corroded connections that would be invisible to the naked eye. This allows the utility to "predict" and correct a potential problem early. Assets are monitored frequently, and routine maintenance is performed to increase asset longevity and prevent failure.

Upon adoption of this AMPFS plan or any DEP-approved AMP, the FRWA Utility Asset Management (UAM) team intends to upload the Town of Hilliard's asset data definition file into "Diamond Maps", described in Section 2, and will populate the field data. The appropriate Town personnel will be trained on Diamond Maps functionality and can immediately begin using it for scheduling and tracking system asset routine and preventive maintenance.

6. Capital Improvement Plan

A Capital Improvement Plan is a multi-year financial planning tool that looks into the future to forecast the Town's asset needs. It encourages the system and the community to forecast not only what expenditures they intend and expect to make, but also to identify potential funding sources in order to more properly plan for the acquisition of the asset. The CIP is designed to be a flexible planning tool and is updated and revised on an annual basis.

Capital improvement projects generally create a new asset that previously did not exist or upgrades or improves an existing component's capacity. These projects are the consequence of growth, environmental needs, or regulatory requirements. Included in a CIP are typically:

1. Any expenditure that purchases or creates a new asset or in any way improves an asset beyond its original design capacity.
2. Any upgrades that increase asset capacity.
3. Any construction designed to produce an improvement in an asset's standard operation beyond its present ability.

Capital improvement projects will populate this list. Renewal expenditures do not increase the asset's design capacity, but restores an existing asset to its original capacity, such as:

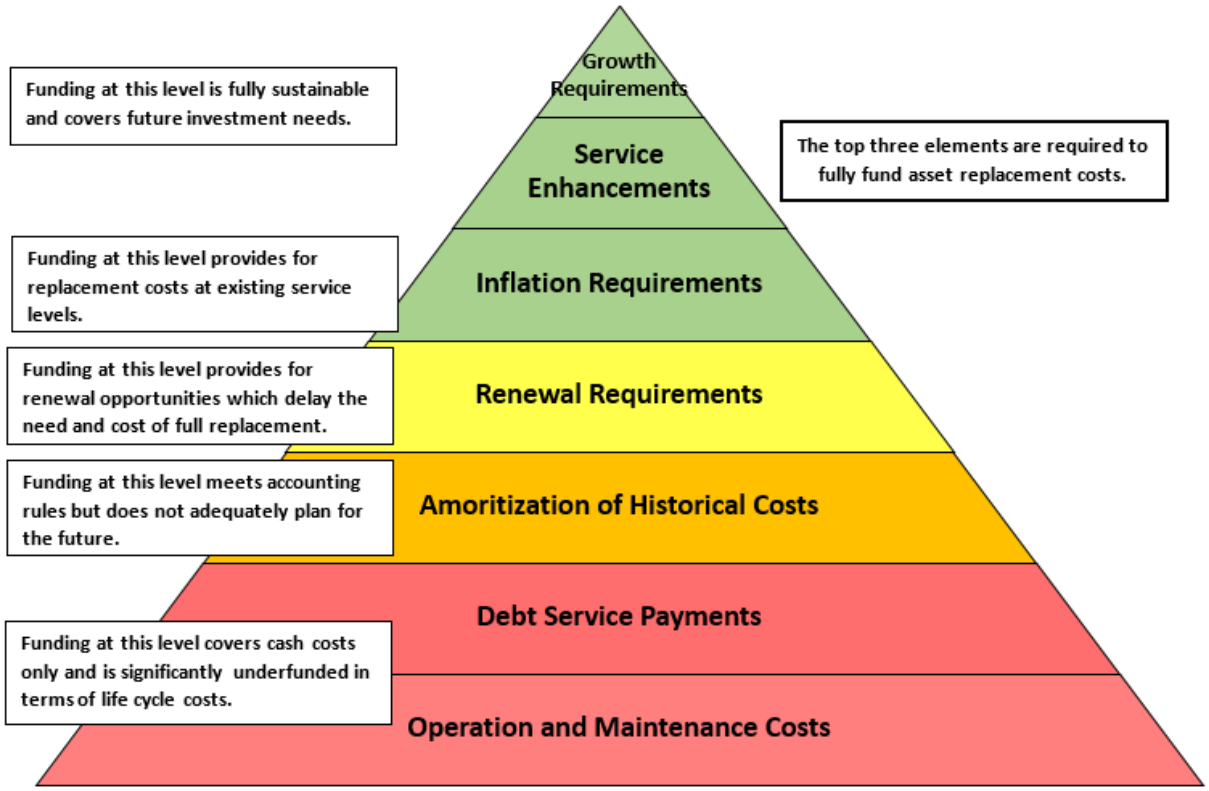
1. Any activities that do not increase the capacity of the asset. (i.e., activities that do not upgrade and enhance the asset but merely restore them to their original size, condition and capacity, for example, rebuilding an existing pump).
2. Any rehabilitation involving improvements and realignment or anything that restores the assets to a new or fresh condition (e.g., distribution main repair or hydrant replacement).

In making renewal decisions, the utility considers several categories other than the normally recognized physical failure or breakage. Such renewal decisions include the following:

1. Structural
2. Capacity
3. Level of service failures
4. Outdated functionality
5. Cost or economic impact

The utility staff and management typically know of potential assets that need to be repaired or rehabilitated. Reminders in the Diamond Maps task calendar let the staff members know when the condition of an asset begins to decline according to the manufacturer's life cycle recommendations. The utility staff members can take these reminders and recommendations into account. Because the anticipated needs of the utility will change each year, the CIP is updated annually to reflect those changes. Attached below is a ten year CIP plan for both the drinking water and wastewater systems provided by the town. Frwa urges the town to make a comprehensive Capital Improvement Plan to address the future needs of the Utility system. This can and should change as emergencies arise and grant opportunities become available.

CIP Schedule											
Description	Funding Source	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Sewer line rehab	Other	$0	$100,000	$100,000	$100,000	$20,000	$0	$0	$0	$0	$0
Water Line	Other	$45,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
WTP Gen Switch	Water Revenues	$8,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
AMI Metering	Water Revenues	$110,000	$110,000	$110,000	$110,000	$0	$0	$0	$0	$0	$0
Digester cleaning	Wastewater Revenues	$80,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
5a land WWTP	Wastewater Revenues	$27,500	$0	$0	$0	$0	$0	$0	$0	$0	$0
2 wetland pumps	Wastewater Revenues	$15,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
filter	Other	$5,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Jet Rig	Wastewater Revenues	$60,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
water truck	Water Revenues	$46,900	$0	$0	$0	$0	$0	$0	$0	$0	$0
PWD truck	Other	$0	$40,000	$0	$0	$0	$0	$0	$0	$0	$0
Water Distribution	Water Revenues	$52,300	$52,300	$52,300	$52,300	$52,300	$52,300	$52,300	$52,300	$52,300	$52,300
Wastewater Collection	Wastewater Revenues	$220,600	$220,600	$220,600	$220,600	$220,600	$220,600	$220,600	$220,600	$220,600	$220,600



This report, with the assistance of RevPlan, helps develop such a financial plan by presenting several scenarios for consideration and culminating with final recommendations.

Financial Performance

Financial data available from the annual financial statements were copied into a Financial Health Checkup tool provided by the Environmental Finance Center at the University of North Carolina at Chapel Hill. This free tool assists in the assessment of the financial performance of a water utility fund by computing key financial indicators that measure a variety of important metrics. Each metric is compared against targets and demonstrates the financial strengths and weaknesses of the utility fund in the past five years.

As indicated by the Snapshot chart, the Town of Hilliard met three out of the six financial targets. The Town should seek to strengthen the utility fund to address future needs.

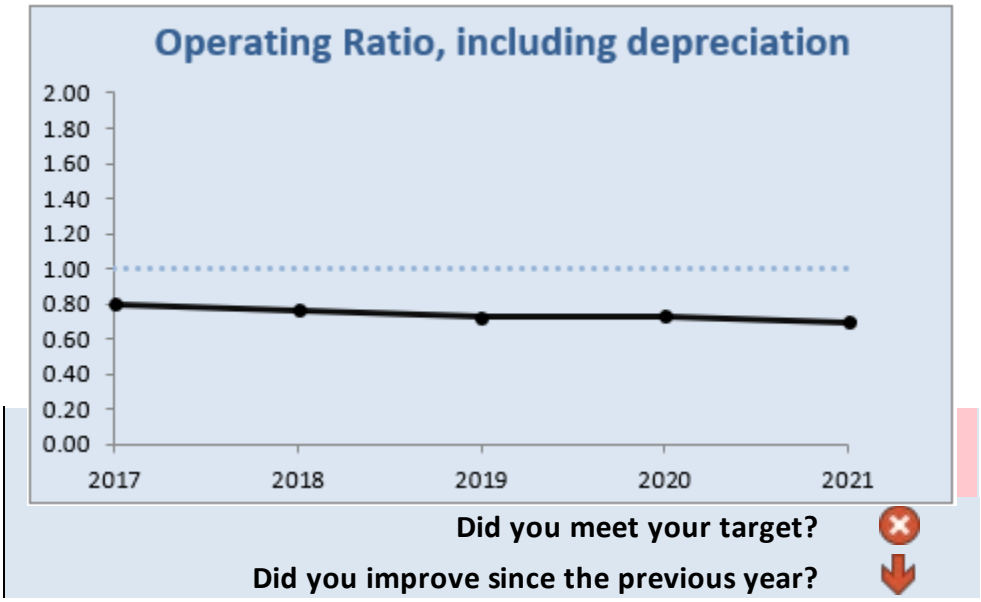
Operating Ratio (including depreciation): Did the system generate the revenue needed to pay for O&M and a little for capital? Benchmark is 1.0

Key:

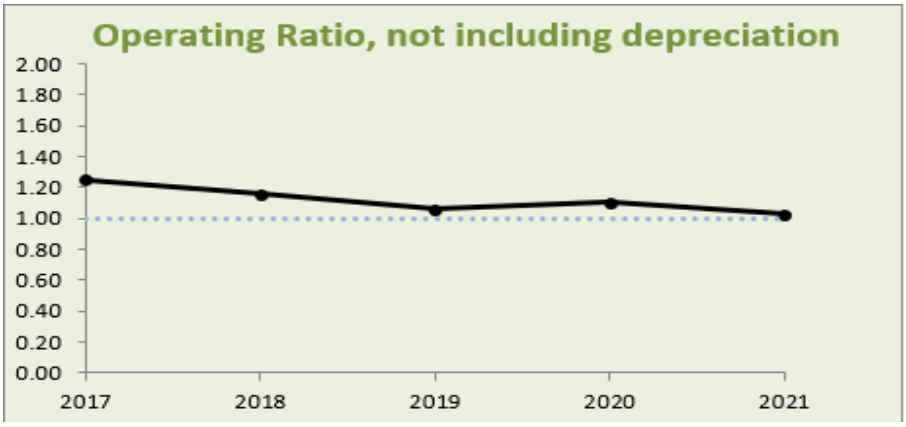
Blue line = target

Above dotted line = exceeded target (good)

Below dotted line = did not meet target (needs improvement)

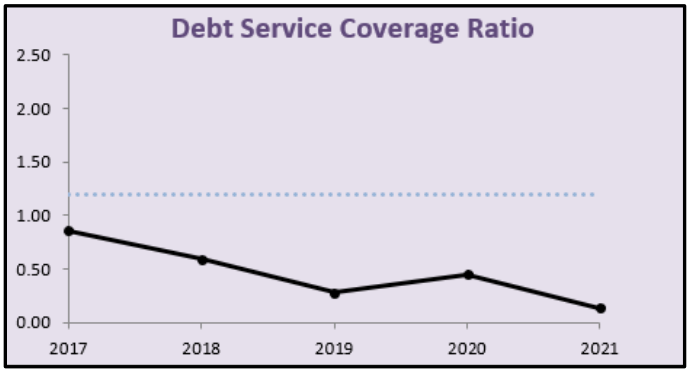


Operating Ratio (not including depreciation): Did the system generate the revenues to pay for O&M by itself? Benchmark is 1.0 although recommended is 1.5



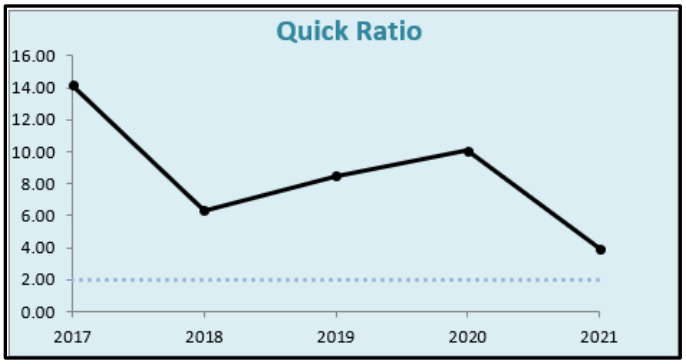
Value for Town of Hilliard in Fiscal Year 2021:	1.03
Did you meet your target in Fiscal Year 2021?	
Did you improve since the previous year?	

Debt Service Coverage: Did the system generate the revenues needed to pay for O&M and existing debt service? Benchmark is >1.2.



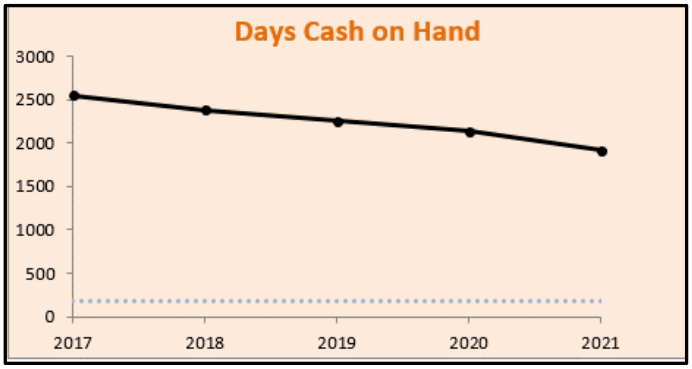
Value for Town of Hilliard in Fiscal Year 2021:	0.13
Did you meet your target in Fiscal Year 2021?	
Did you improve since the previous year?	

Quick Ratio: Did you have enough liquidity to pay your current liabilities at the end of the year? Benchmark is at least 2.0.



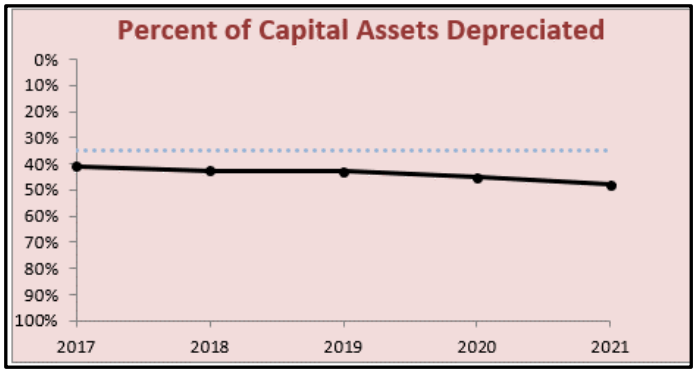
Value for Town of Hilliard in Fiscal Year 2021:	3.9
Did you meet your target in Fiscal Year 2021?	✓
Did you improve since the previous year?	↓

Days Cash on Hand: How many days could you continue to operate the utility with the cash levels available? Benchmark is 270 days.



Value for Town of Hilliard in Fiscal Year 2021:	1918
Did you meet your target in Fiscal Year 2021?	✓
Did you improve since the previous year?	↓

Percent of Capital Assets Depreciated: How much have your utility's assets depreciated (nearing the end of their lives)? Benchmark is staying away from 100%.



Value for Town of Hilliard in Fiscal Year 2021:	48%
Did you meet your target in Fiscal Year 2021?	✗
Did you improve since the previous year?	↓

Based on the results of the key financial indicators it is recommended that the Town of Hilliard continue strengthening their utility fund to have enough funds to cover daily expenses, debt service, capital replacement costs, emergencies, and unexpected revenue shortfalls. As the water system ages and the percent of assets depreciated increases each year, it is important for the proprietary fund to become fully sustainable by securing funding levels that provide for renewal opportunities, the full replacement costs of assets, service enhancements and growth requirements. Upon completion of the fiscal year a RevPlan model would help to determine what increases are needed to be able to make sure that the system can reach the requirements to be self-sustainable and meet its growing obligations.

Asset Statistics

The table below summarizes the asset information from the Town collected by FRWA and found in RevPlan:

Town of Hilliard Water System	
Total Replacement Cost of Water System	$2,234,299.64
Percent of Assets Needing Replacement	5.68%
Cost of Replacing All Assets Needing Replacement	$126,861.88
Annual Replacement Cost of System	$52,288.17

Please note that the $2.2 million dollar replacement cost of the water system documented above, along with the annual replacement cost of $52,288 for the system is low. These figures do not include certain assets such as large equipment, vehicles, water mains and some property improvements normally associated with maintaining a utility system. As a result, any proposed rate adjustments suggested by FRWA should be considered a minimum or a starting point for review and consideration by the Town.

Based on the findings of the Asset Management Plan, it is important for Town of Hilliard to start setting aside reserves for the replacement of its assets, to make sure that the base charge is adequately covering fixed costs and that its usage charges are sufficient to fund its variable costs.

Reserves

Reserve balances for utility systems are funds set aside for a specific cash flow requirement, financial need, project, task, or legal covenant. All types of reserves can play a significant role in addressing current and future challenges facing utility systems, such as demand volatility, water supply costs, large capital requirements, asset replacements, natural disasters and potential liabilities from system failures associated with aged infrastructure. All utilities should establish formal financial policies relative to reserves. Such policies should articulate how these balances are established, their use, and how the adequacy of each respective reserve fund balance is determined. Once reserve targets are established, they should be reviewed annually during the budgeting process.

In the Town of Hilliard, the unrestricted cash available at end of FY 2021 was $810,021, with annual operating expenses (without depreciation) of approximately $1,025,227 in FY 2021 giving the Town 288 days of cash on hand according to the Audited Budget. Please note that these figures are from the last audited budget and may not reflect current amounts or past trends like listed above in the cash on hand chart. The chart above is a historic trend and not current amounts.

For planning purposes and without a stated reserve policy from the Town, FRWA builds the financial model by ensuring the annual unrestricted reserve funding is adequate to 270 days of the current year operation and maintenance budget. While there is not a one size fits all approach to building reserves, FRWA cautions utilities about dropping below 90 days and encourages them to work towards a balance of cash on hand equal to or greater than 270 days. Cash reserves are essential to ensure a utility's long-term financial sustainability and resiliency. Each utility system has its own unique circumstances and considerations that should be factored into the selection of the types of reserves and corresponding policies that best meet its needs and objectives.

Rates

A 'rule of thumb' FRWA subscribes to regarding rates is that base charges pay for fixed expenses and usage charges fund the variable expenses. Rates should generate sufficient revenue to cover the full cost of operating a water system. By charging customers the full cost of water, small water systems send a message that water is a valued commodity that must be used wisely and not wasted. When rates are set to cover the full cost of production, water systems are more likely to have financial stability and security. The current residential and commercial rate structure is as follows and is per whole thousand:

Water Base Rates Inside Town	Outside Town

Residential - $15.61	$23.43 (base + 50% of residential)
Commercial -$ 36.43	$54.64 (base + 50% of residential)
Eastwood Oak- $16.23	

Water Usage Rates (Residential)	Inside Town	Outside Town
0 to 6,000 Gallons	$ 2.93	$ 4.39
6,001 and up	$5.20	$7.80

Water Usage Rates (Commercial)	Inside Town	Outside Town
0 to 2,000 Gallons	$1.29	$4.39
2,001-10,000 Gallons	$3.90	$5.85
10,001 and up	$5.20	$7.80

Rate Recommendation:

Due to problems with new billing software for the last fiscal year, an accurate RevPlan model was not able to be created. Rate recommendations will need to be established after a completed model is available. Completion of the model in Revplan should be done no later than 3 months after the end of the 2023 fiscal year. The Town of Hilliard has taken proactive steps with its current utility rates by implementing an automatic rate increase following the Municipal Cost Index. Raising the rates each year by the Municipal Cost Index will help the Town of Hilliard's residents gradually experience water and sewer rate increases instead of absorbing the costs all at once if the rates stay stagnate.

8. Energy Management

Energy costs often make up twenty-five to thirty percent of a utility's total operation and maintenance costs. They also represent the largest controllable cost of providing water and wastewater services. EPA's *"Ensuring a Sustainable Future: An Energy Management Guidebook for Wastewater and Water Utilities"* provides details to support utilities in energy management and cost reduction by using the steps described in this guidebook. The Guidebook takes utilities through a series of steps to analyze their current energy usage, use energy audits to identify ways to improve efficiency and measure the effectiveness of energy projects.

Energy Conservation and Cost Savings

The Town should ensure all assets, not just those connected to a power source, are evaluated for energy efficiency. The following are common energy management initiatives the Town should implement going forward:

1. Load management
2. Replace weather-stripping and insulation on buildings
3. Installation of insulated metal roofing over energy inefficient shingle roofing
4. On-demand hot water heaters
5. Variable frequency driven pumps and electrical equipment
6. Energy efficient infrastructure
7. LED lighting
8. Meg electric motors
9. MCC electrical lug thermal investigation
10. Flag underperforming assets for rehabilitation or replacement

The above 10 energy saving initiatives are just a start and most can be accomplished in-house. A more comprehensive energy audit, conducted by an energy consultant/professional, is recommended to evaluate how much energy is consumed system-wide and identify measures that can be taken to utilize energy more efficiently. The primary goal is reducing power consumption and cost through physical or operational changes.

Each system will have unique opportunities to reduce energy use or cost depending on system specific changes and opportunities within the power provider's rate schedules. For example, an audit of an individual water treatment plant (WTP) will attempt to pinpoint wasted or unneeded facility energy consumption.

With the cost of electricity rising, the reduction of energy use should be a priority for systems. A key deliverable of an energy audit is a thorough analysis of the effect of overdesign on energy efficiency. Plants are designed to perform at maximum flow and loading conditions. Unfortunately, most plants are not efficient at average conditions. Aging infrastructure is another source of inefficient usage of energy in WTPs across the country. The justification for addressing aging infrastructure related energy waste is also included in the energy audit process.

Energy Conservation Measures

The following table provides typical water and wastewater high-use energy operations and associated potential energy saving measures.

High Energy Using Operations	Energy Saving Measures

Minimum Equipment Information to Gather	Additional Equipment Information to Gather	Conditions to Consider
Lighting		• Pulse start metal halide • Indirect fluorescent • Super-efficient T8s • Comprehensive control for large buildings
Heating, Ventilation, Air Conditioning (HVAC)		• Water source heat pumps • Prescriptive incentives for remote telemetry units • Custom incentives for larger units • Low volume fume hood • Occupancy controls • Heat pump for generator oil sump

Energy Audit Approach

An energy audit is intended to evaluate how much energy is consumed and identify measures that can be taken to utilize energy more efficiently. The primary goal is reducing power consumption and cost through physical and operational changes. Each system will have unique opportunities to reduce energy use or cost depending on system specific changes an opportunities within the power provider's rate schedules. An audit of an individual treatment plant is an attempt to pinpoint wasted or unneeded facility energy consumption. It is recommended to perform an energy audit every two to three years to analyze a return on investment.

A water system energy audit approach checklist, similar to the one on the following page for pumps and motors, can be a useful tool to identify areas of potential concern and to develop a plan of action to resolve them.

• Pump style • Number of pump stages • Pump and motor speed(s) • Pump rated head (name plate) • Motor rated power and voltage (name plate) • Full load amps • Rated and actual pump discharge • Operation schedules	• Pump manufacturer's pump curves • Actual pump curve • Power factor • Load profile • Analysis of variable frequency drives (vfd's) if present • Pipe sizes • Water level (source) • Motor current • Pump suction pressure • Discharge pressure	• Maintenance records • Consistently throttled values • Excessive noise or vibrations • Buildup of sand and/or grit • Evidence of wear or cavitation on pump, impellers or pump bearings. • Out-of-alignment conditions • Significant flow rate/ pressure variations • Active by-pass piping • Restrictions in pipes or pumps • Restrictive/leaking pump shaft packing

In 2022, an Energy Assessment was conducted by FRWA staff at the Town's treatment plants. The results of that assessment is summarized in the table below:

Town of Hilliard Energy Audit Recommendations			
Audit Recommendations	**Cost of Improvement**	**Payback (Years)**	**Total Annual Cost Savings**
1. Premium Efficiency Pump Motor for Well #2	$3,000	4.75	$631.89
2. Premium Efficiency Pump Motor for Well #5	$3,000	2.67	$1,121.75
	Total Projected Annual Cost Savings		**$1,753.64**

The Town of Hilliard Drinking Water System Energy Efficiency Assessment noted that an investment of $6,000.00 in energy efficient equipment upgrades, depending upon the exact cost of procuring the needed equipment, could potentially save the Town of Hilliard $1,753.64 annually against its drinking water treatment system total energy expenditures of $17,189.05, or a savings of approximately 10%.

Several grants and loans are available to systems for completing such projects. A list of common funding sources is found in Section 9 of this Plan.

Please know that FRWA offers Energy Assessments to our members and SRF recipients that are participating in the AMPFS program. It is recommended that audits be completed every two to three years. For future energy assessments, please contact your local Circuit Rider or the FRWA office to participate.

9. Conclusions

Our conclusions are based on our observations during the data collection procedure, discussions with Town of Hilliard staff, regulatory inspection data, and our experience related to similar assets.

Areas needing attention are detailed in Section 4 and include:

Water Production and Distribution System:

- Clean and remove any obstructions and debris in buildings and around water production sites.
- Develop a regular operational maintenance program for the system.
- Document water line condition and water line breaks and develop a replacement strategy for any older or problematic water mains.
- Regularly update the Capital Improvement Plan to fund the replacement of production and distribution assets following the creation of a Replacement Strategy.
- Develop a plan to replace A.C. Pipe in the distribution system.
- Engage an engineer to evaluate if more finished water storage capacity is needed as the daily demand is almost 100% of storage capability.

Hydrants and Hydrant Valves:

- Develop an annual hydrant maintenance program to coincide with the current flushing program and record any deficiencies inside Diamond Maps.
- Repair all poor condition hydrants and hydrant valves and replace all failed condition hydrants and replace hydrant valves if applicable. (some hydrants have already been repaired)
- Ensure operation of accompanying hydrant valves and install new valves with any hydrant installation.
- Conduct an annual flow test at each of the hydrants.
- Begin an annual hydrant replacement program.
- Attempt to locate and raise found hydrant valves to match the existing ground level with the addition of a concrete collar.

Water Valves:

- Continue annual valve exercising program that has been created in Diamond Maps and record any deficiencies inside Diamond Maps.

- Repair or assess all poor condition system valves and replace all failed condition system valves.
- Locate and clean out buried valve boxes and exercise if possible. Evaluate any remaining valves throughout system for accurate representation in Diamond Maps.
- Raise system valves to match the existing ground level with the addition of a concrete collar.
- As old lines are replaced or water breaks necessitate, new valves should be installed in order to isolate sections of the system.
- Add Insert-a-valves or equivalent where needed to help isolate sections of the system. Three per year.

Water Meters:

- Continue to ensure that all data from meter change out program that was previously done is correct and all meters are being billed for. Possibly manually read meters once annually to ensure correct data into system for accurate billing and accounting.

Energy Audit:

- Incorporate energy audit recommendations of repair/replacing pumps and/or motors into the Capital Improvement Plan.

Other Areas:

- An Asset Management Planning (AMP) and Computerized Maintenance Management System (CMMS) program must be implemented to maintain assets efficiently and effectively.
- Develop a more comprehensive Capital Improvement Plan and work in planning and identifying water system improvement projects. Pursue alternative revenue funding sources for capital improvement projects.
- Staff training on maintenance, safety, and use of the AMP/CMMS tool must be completed.
- Strengthen the water system fund in order to cover daily expenses, debt service, capital replacement costs, emergencies, and unexpected revenue shortfalls. Rates must be increased and routinely monitored to ensure adequate funding for operations and system improvements.
- Determine Level of Service (LOS) Attributes, Goals, Targets, and Metrics and Prepare LOS Agreement.
- Perform regular audits of Energy Saving initiatives. Even small changes in energy use can result in large savings.

- ***The Asset Management Plan must be adopted by Resolution or Ordinance.*** This demonstrates the utility's commitment to the plan. After adoption, implementation of the AMP must occur.

Implementing this Asset Management and Fiscal Sustainability Plan

Implementing an Asset Management and Fiscal Sustainability Plan requires several items:

1. **Assign specific personnel** to oversee and perform the tasks of Asset Management.

2. **Develop and use a Computerized Maintenance Management System (CMMS) program**. The information provided in this AMPFS plan will give the utility a good starting point to begin. Properly maintaining assets will ensure their useful life is extended and will ultimately save money. Asset maintenance tasks are scheduled and tracked, new assets are captured, and assets removed from service are retired properly using CMMS. Transitioning from reactive to preventive and predictive maintenance philosophies will net potentially large savings for the utility. Diamond Maps is one example among many options that are available. FRWA can help with set up and implementation.

3. **Develop specific Level of Service items**. Create a Level of Service (LOS) Agreement and inform customers of the Utility's commitment to providing the stated LOS. Successes can be shared with customers. This can dramatically improve customer relations. This also gives utility employees goals to strive for and can positively impact morale. We have included a sample LOS list in Section 2.

4. **Develop specific Change Out/Repair/Replacement Programs**. The Town budgets for Repair and Replacement and should continue to evaluate the system to adjust the annual budgeted amounts accordingly. An example includes budgeting for a certain number of stepped system refurbishments each year.

5. **Modify the existing rate structure.** The Town should make changes to their rate structure to capture all possible revenue and share the burden of maintaining the system among all classes of users. Continue to make sure adequate funds are available to properly operate and maintain the facilities. Rate increases, when required, can be accomplished in a stepped fashion rather than an 'all now' approach to lessen the resulting customer impact.

6. **Explore financial assistance options.** Financial assistance is especially useful in the beginning stages of Asset Management since budget shortfalls likely exist and high cost items may be needed quickly. For a table of common funding sources, see Section 9.

7. **<u>Revisit the AMFS plan annually.</u>** An Asset Management Plan is a living document. It can be revised at any time but must be revisited and evaluated at least once each year. Common updates or revisions include:

    - Changes to your asset management team;
    - Updates to the asset inventory;
    - Updates to asset condition and criticality ranking charts;
    - Updates to asset condition and criticality assessment procedures
    - Updates to operation and maintenance activities;
    - Changes to financial strategies and long-term funding plans.

The annual review should begin by asking yourself:

"What changes have occurred since our last AMPFS plan update?"

Funding Sources for Water and Wastewater Systems

On the following page is a table of common funding sources, including web links and contact information. All municipal systems should be making the effort to secure funding, which can be in the form of low or no interest loans, grants or a combination of both.

Agency/Program	Website	Contact
FDEP Drinking Water State Revolving Fund Program (DWSRF)	https://floridadep.gov/wra/srf/content/dwsrf-program	Eric Meyers eric.v.meyers@floridadep.gov 850-245-2991
FDEP Clean Water State Revolving Fund Loan Program (CWSRF)	https://floridadep.gov/wra/srf/content/cwsrf-program	Mike Chase Michael.Chase@FloridaDEP.gov 850-245-2969
USDA Rural Development- Water and Wastewater Direct Loans and Grants	https://www.rd.usda.gov/programs-services/rural-economic-development-loan-grant-program https://www.rd.usda.gov/programs-services/water-waste-disposal-loan-grant-program	Jeanie Isler jeanie.isler@fl.usda.gov 352-338-3440
Economic Development Administration- Public Works and Economic Adjustment Assistance Programs	https://www.eda.gov/resources/economic-development-directory/states/fl.htm https://www.grants.gov/web/grants/view-opportunity.html?oppId=294771	Greg Vaday gvaday@eda.gov 404-730-3009
National Rural Water Association- Revolving Loan Fund	https://nrwa.org/initiatives/revolving-loan-fund/	Gary Williams Gary.Williams@frwa.net 850-668-2746
Florida Department of Economic Opportunity- Florida Small Cities Community Development Block Grant Program	http://www.floridajobs.org/community-planning-and-development/assistance-for-governments-and-organizations/florida-small-cities-community-development-block-grant-program	Roger Doherty roger.doherty@deo.myflorida.com 850-717-8417
Northwest Florida Water Management Town - Cooperative Funding Initiative (CFI)	https://www.nwfwater.com/Water-Resources/Funding-Programs	Christina Coger Christina.Coger@nwfwater.com 850-539-5999

Closing

This Asset Management and Fiscal Sustainability plan is presented to the Town of Hilliard for consideration and final adoption. Its creation would not be possible without the cooperation of the Town staff and the Florida Department of Environmental Protection State Revolving Fund (FDEP-SRF).

As a valued FRWA member, it is our goal to help make the most effective and efficient use of your limited resources. The Asset Management and Fiscal Sustainability Plan is an unbiased, impartial, independent review and is solely intended for achievement of drinking water and wastewater system fiscal sustainability and maintaining your valuable utility assets. The Florida Rural Water Association has enjoyed serving you and will happily assist the Town of Hilliard with any future projects to ensure your Asset Management Plan is a success.

APPENDIX A: Sample Resolution

RESOLUTION NO. 2023-_____

A RESOLUTION OF THE TOWN OF HILLIARD, FLORIDA, APPROVING THE TOWN OF HILLIARD WATER SYSTEM ASSET MANAGEMENT AND FISCAL SUSTAINABILITY PLAN; AUTHORIZING THE TOWN CLERK AND PUBLIC WORKS DIRECTOR TO TAKE ALL ACTIONS NECESSARY TO EFFECTUATE THE INTENT OF THIS RESOLUTION; PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Florida Statutes provide for financial assistance to local government agencies to finance construction of the Town and municipal utility system improvements; and

WHEREAS, the Florida Department of Environmental Protection State Revolving Fund (SRF) has designated the Town of Hilliard Water System Improvements, identified in the Asset Management and Fiscal Sustainability Plan, as potentially eligible for available funding; and

WHEREAS, as a condition of obtaining funding from the SRF, the Town is required to implement an Asset Management and Fiscal Sustainability Plan for the Town's Water System Improvements; and

WHEREAS, the Town Council of the Town of Hilliard has determined that approval of the attached Asset Management and Fiscal Sustainability Plan for the proposed improvements, in order to obtain necessary funding in accordance with SRF guidelines, is in the best interest of the Town.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN OF HILLIARD BOARD OF COMMISSIONERS the following:

Section 1. That the Town of Hilliard Town Council hereby approves the Town of Hilliard Water System Asset Management and Fiscal Sustainability Plan, attached hereto and incorporated by reference as a part of this Resolution.

Section 2. That the Town Clerk and Public Works Director are authorized to take all actions necessary to effectuate the intent of this Resolution and to implement the Water System Asset Management and Fiscal Sustainability Plan in accordance with applicable Florida law and Council direction in order to obtain funding from the SRF.

Section 3. That the Town will annually evaluate existing rates to determine the need for any increase and will increase rates in accordance with the financial recommendations found in the Water System Asset Management and Fiscal Sustainability Plan or in proportion to the Town's needs as determined by the Board in its discretion.

Section 4. That this Resolution shall become effective immediately upon its adoption.

PASSED AND ADOPTED on this _____ day of_____, 2023.

Town of Hilliard, Florida

_____
Mayor

ATTEST:

_____
Town Clerk

APPROVED AS TO FORM:

_____
Town Attorney

Appendix B: Master Asset List