



Strategic Business Plan 2019



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BRUNSWICK-GLYNN JOINT WATER AND SEWER COMMISSION

The Brunswick-Glynn Joint Water and Sewer Commission (BGJWSC) ensures the availability and quality of water and wastewater services to meet the growing needs of our community by investing in the future of our water and wastewater systems. Our focus is two-fold. First, we focus on providing a high-quality product and customer service for our current customer base. Secondly, we prepare for the medium and long-term water needs for our area. BGJWSC maintains and operates water supply wells, water treatment stations, and distribution systems as well as wastewater collection systems, wastewater pumping stations, and wastewater treatment plants for more than 30,000 residential and business service connections in Brunswick and Glynn County with thousands of indirect customers visiting the area on an annual basis due to the tourism industry. BGJWSC is funded primarily by fees charged to customers based on their use of the water and wastewater systems.



BGJWSC Stats

- 65,000+ Local Residents Served
- 2,900,000 Tourists Served Annually
- 28,000+ Customer Accounts
- \$31 Million Annual Operating Budget
- 163 Full Time Employees

Average Monthly Residential Bill

- Water Base Fees - \$9.87
- Water Usage Charges - \$4.32
- Sewer Base Fees - \$18.63
- Sewer Usage Charges - \$15.46
- Total Bill - \$48.28



Challenges and Opportunities

Letter from the Executive Director

As a relatively young utility commission, the Brunswick-Glynn Joint Water and Sewer Commission is still facing critical challenges in all areas to mature as an organization which sustainably provides the highest level of service at an affordable cost. The BGJWSC came into existence in 2008 as a result of combining the City of Brunswick Water and Sewer Department with the Glynn County Water and Sewer Department. The utility, because of its relatively short existence and the cumulative issues it inherited, has decades of asset neglect to remedy, key program needs to establish, and organization structure to improve – all in order to better meet the many challenges currently faced. Asset condition concerns, heavy debt, problem personnel from two sets of cultures, training needs, lack of formal processes, safety concerns, inconsistent policies, and poor organizational structures were all part of the new utility. Along with these issues, have come many opportunities to improve the services provided, the utility sustainability, and the costs of providing services while maintaining the utility for the long-term.

Over the past two years, the BGJWSC has made some big improvements: some organizational changes with more to come as resources allow; some performance measures have been established with far more to come; long-term planning has become the focus rather than living for the day in spite of the many pressures to do otherwise.

Incremental improvements are appearing in most areas of service and operations. New staff has been hired in the Planning and Construction area to meet developer review and inspection needs while managing capital project needs. New staff has been hired in the Customer Service area to institute a call center dedicated to providing the care our customers deserve when they call for assistance with billing issues or for operational needs they are experiencing. Certainly, these improvements are indicative of the energy and commitment the staff has to improvement and are indicative of the future direction of the utility.

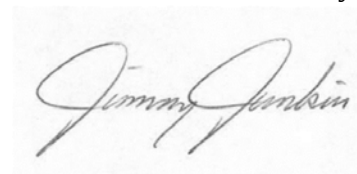
In the near future, we will be focused on: improving customer satisfaction ratings; rehabilitating operational assets; modernizing the materials and technologies applied in all facets of the utility; setting priorities and optimizing reinvestment expenditures; documenting and formalizing procedures and processes; improving organizational structure to improve efficiencies and reduce costs; improve the training and safety management of the organization to provide greater resiliency in the long term; become a much more data-driven entity where the data guides to greater performance throughout; finally and most importantly, apply formal and strategic asset management principles to the operational groups.

In the development of the strategic business plan, major emphasis has been placed on and built around the formal asset management program. This area will lead to the greatest improvements in the key areas initially selected for strategic importance to the organization. Certainly, asset conditions are affecting reliability, level of service to our community, and costs.

Asset Management is not a software but rather a concept of how to effectively manage and minimize the life cycle costs of assets. This involves having an inventory of all assets, conducting condition assessments of assets, conducting assessments to insure the appropriate application of the asset, insuring proper preventive maintenance is done on assets, insuring reactive maintenance is done on time with the best available techniques, and finally, optimizing the resources used to perform these tasks.

While the strategic business plan and the concentrated focus on asset management will be the guideposts to significant organizational improvement, the change won't occur over night. There is no silver bullet and Rome was not built in a day. Understanding the needs and getting an organized approach to change is the key to long-term success. Continuous improvement must be our motto and that can only be achieved through a systematic process and perseverance.

Sincerely,

A handwritten signature in cursive script, reading "Jimmy Junkin". The signature is written in dark ink on a light-colored background.

Jimmy Junkin
Executive Director
BGJWSC

History of Water and Sewer in Brunswick and Glynn County



Commission meeting minutes from November 1927 indicate that a special election was held to gauge support for the issuance of bonds to expand the existing sewer system. The measure passed 447 to 9. Since those days, the water and sewer system for Brunswick and Glynn County has been repaired and expanded many times to the system that it is today. Until 2008, the water and sewer systems were operated by the separate City and County governments. In

2006, the Brunswick-Glynn Joint Water and Sewer Commission (BGJWSC or JWSC) was formed. Since that time, the JWSC has gone through several structural and leadership changes. Each change has brought a new aspect to the table that has helped strengthen the organization.

The JWSC has since combined the old City and County water systems on the North Mainland into one. The water systems on the mainland and St. Simons Island remain separate due to the large costs associated with looping those systems. Both water systems are operated similarly to provide safe, high quality drinking water for the residents and visitors of Glynn County.



The sewer systems are broken into three separate systems as delineated by the wastewater treatment facilities servicing each district. The three systems are Academy Creek, Dunbar Creek, and Southport. Each of these wastewater collection systems is operated in the same manner with the treatment plants consistently meeting permit requirements despite each plant having unique operational requirements.



BGJWSC ASSETS BY THE NUMBERS

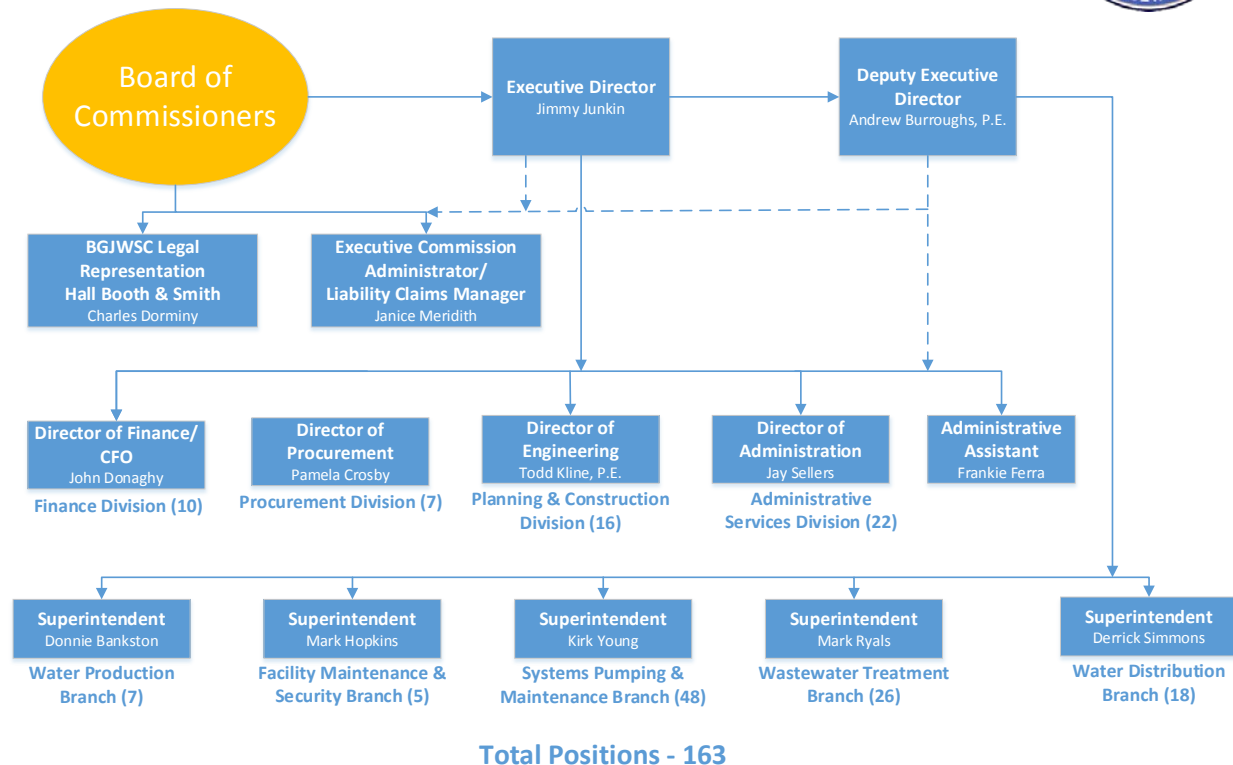
28,834	WATER METERS
7,438	MANHOLES
4,793	FIRE HYDRANTS
521	MILES OF WATER MAIN
298	MILES OF GRAVITY WASTEWATER MAIN
157	WASTEWATER LIFT STATIONS
121	MILES OF PRESSURIZED WASTEWATER MAIN
19	WATER PRODUCTION WELLS
14	WATER GROUND STORAGE TANKS
10	WATER ELEVATED STORAGE TANKS
3	WASTEWATER TREATMENT PLANTS

BGJWSC Organizational Structure

Brunswick-Glynn County Joint Water & Sewer Commission

Organizational Structure Senior Management Team

October 2018



The Office of the Director manages and coordinates work between the other nine divisions of the JWSC. Based upon direction from the Board of Commissioners, the Office of the Director institute policies and practices to fulfill the mission of the BGJWSC. Jimmy Junkin is the Executive Director of the JWSC. He has been with the JWSC since 2016.

The Finance Division oversees the financial processing and reporting requirements for the BGJWSC. It is required to complete a third party financial audit annually. With feedback from these auditors, the Finance Division strives to practice continuous improvement to ensure that the rates and fees collected by the JWSC are maintained in a legal and financially sound manner. John Donaghy, CPA, CMA, is the Director of Finance/Chief Financial Officer for the JWSC. He has been with the JWSC since 2006.

The Procurement Division oversees the solicitation of public bids and proposals and the execution of purchasing agreements and contracts needed to be outsourced by the JWSC for the completion of its mission. Pamela Drury-Crosby is the Director of Procurement for the JWSC. She has been with the JWSC since 2015.

The Planning & Construction Division oversees capital project management and daily inspection for the repair and expansion of the JWSC water and wastewater system. In addition, Planning & Construction reviews all proposed new developments that are considering Brunswick or Glynn County. These development projects are

reviewed for compliance with the JWSC Development Standards to ensure that these assets are of sufficient quality to provide adequate water and wastewater service to the customers. Todd Kline, P.E. is the Director of Engineering for the JWSC. He has been with the JWSC since 2015.

The Administration Division oversees meter reading, billing, customer service, and information technology for the JWSC. They also oversee the collection of payments from customer billing and produce a variety of educational material for the public. Jay Sellers is the Director of Administration for the JWSC. He has been with the JWSC since 2013.

The Water Production Branch oversees the supply and treatment of drinking water to the JWSC customers. They are also responsible for the maintenance of the water storage tanks and provide laboratory analysis to ensure safe, clean drinking water for our customers. Donnie Bankston is the Water Production Superintendent for the JWSC. He has been with the JWSC since 2010.

The Facilities Maintenance and Securities Branch oversees the maintenance of all JWSC buildings, landscaping at all JWSC sites, and ROW clearing when needed. Mark Hopkins is the Facilities Maintenance and Securities Superintendent. He has been with the JWSC since 2000.

The Systems Pumping and Maintenance Branch maintain the wastewater collection system including gravity wastewater, wastewater pump stations, and pressure force mains that collect and convey the raw wastewater to the wastewater treatment plants. SP&M also provides assessment services to the system using closed circuit television monitoring and smoke testing to aid in the planning of maintenance and projects. Kirk Young is the Systems Pumping and Maintenance Superintendent. He has been with the JWSC since 2014.

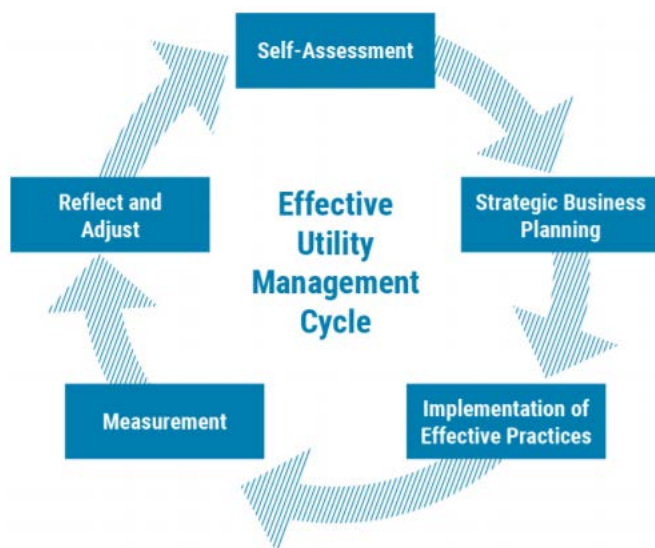
The Wastewater Treatment Branch operates and maintains the three wastewater treatments plants owned and operated by the JWSC. Through the proper operation of the treatment plants, the treated effluent discharged from each plant is consistently well below permitting standards for the protection of the environment. Wastewater Treatment also oversees the Pretreatment program that investigates industrial and commercial customer discharges to ensure that they are within set parameters to not damage the treatment processes. Mark Ryals is the Wastewater Treatment Superintendent. He has been with the JWSC since 1995.

The Water Distribution Branch maintains the water distribution system includes the water mains, service connections, and fire hydrants. They also set meters for new developments once required. Water Distribution flushes water through hydrants to maintain adequate movement through the system to ensure safe drinking water. Derrick Simmons is the Water Distribution Superintendent. He has been with the JWSC since 2004.

Effective Utility Management Cycle

In 2006, the U.S. EPA and a variety of leading industry organizations came together to provide “a common sense, replicable, and proactive set of approaches to meet these current and future challenges.” Effective Utility Management was created from this collaboration and provides water and wastewater utilities with a roadmap on how to steer themselves through the ever changing landscape of water and wastewater treatment. By instituting the principles provided by this program, the JWSC has taken a 360° review of our operations and well as helping to plan for future decision-making. One of the key points that this program makes is that there are Ten Attributes of an Effectively Managed Utility. However, the plan cautions utilities against trying to immediately implement the entire program due to the perceived complexity and administrative time necessary to do so.

To limit the scope of this project to allow for maximum success, JWSC staff completed the Utility Self-Assessment provided in the Effectively Managed Utility primer. To be most effective, out of this self-assessment the JWSC determined which of the Ten Attributes were most critical to the utility as well as which attributes the utility was struggling with the most. We selected three areas that were most critical and three that needed the most improvement. Since these attributes are crucial to the long-term success of the organization, several key performance indicators are presented with each attribute. These key performance indicators will be tracked annually to determine the success and/or failure of the business plan from year to year.



Building upon the work of the self-assessment, staff presents a mission statement and ten objectives for the next year. These objectives form the baseline for the JWSC moving forward into the future. The objectives are overarching and cumbersome to some degree. These can be broken down into five areas of focus: Environmental Compliance, Responsible Decision Making, Community Resource, Workforce Development, and Customer Service. From these five areas, the JWSC plans to implement 20 initiatives throughout calendar year 2019 with four initiatives supporting each of the five key areas.

Successful implementation requires measurement to determine the effectiveness of each initiative. These initiatives are each presented with key performance

indicators to keep track of the organization’s progress throughout the year. Keeping track of these throughout the year will allow staff to maintain focus on these initiatives as well as provide an early glimpse of how the plan as a whole is progressing.

Strategic business planning is not a one-year process, but rather a long-term process that must be updated periodically. The goal of this plan would be to provide five-year objectives with one-year initiatives. The initiatives will be updated annually to reflect the areas of most immediate need identified by the Commission and the staff.

Most Critical Attributes

Financial Viability

From the EUM primer, a utility that practices Financial Viability:

- Understands and plans for the full life-cycle cost of utility operations and value of water resources.
- Establishes and maintains an effective balance between long-term debt, asset values, operations and maintenance expenditures, and operating revenues.
- Establishes predictable rates—consistent with community expectations and acceptability—adequate to recover costs, provide for reserves, maintain support from bond rating agencies, plan and invest for future needs, and taking into account affordability and the needs of disadvantaged households.
- Implements sound strategies for collecting customer payments.
- Understands the opportunities available to diversify revenues and raise capital through adoption of new business models, including revenues from resource recovery.

Financial Viability is key to the short and long-term success of the JWSC and the surrounding community. In order to meet the goals of our customer base and provide reliable infrastructure while maintaining affordable rates and managing competing local priorities, the JWSC must utilize the practices established above in the EUM primer.

For the short term planning of the utility, hereafter defined as one to three years, the JWSC will maintain an ongoing look at five key performance indicators to verify that the initiatives set forth in the following section of this document are having the positive outcomes intended. These KPIs are:

- % of Annual Budget Related to Operations and Maintenance Expenses
- % of Annual Budget Related to Capital Reinvestment
- % of Annual Budget Related to Administrative Resources
- User Rates Compared to US EPA Affordability Criteria
- Rate Increases Compared to the Consumer Price Index

For the long-term viability of the utility, hereafter defined as five plus years, the JWSC will maintain an ongoing look at five KPIs to verify that the initiatives set forth in the following section of this document are having the desired outcomes. These KPIs are:

- Number of Customer Accounts
- % of Customer Accounts in Arrears
- Debt Coverage Ratio
- Days Cash on Hand
- Current Bond Rating

Operational Optimization

From the EUM primer, a utility that practices Operational Optimization:

- Ensures ongoing, timely, cost-effective, reliable, and sustainable performance improvements in all facets of its operations in service to public health and environmental protection.
- Makes effective use of data from automated and smart systems, and learns from performance monitoring.
- Minimizes resource use, loss, and impacts from day-to-day operations, and reduces all forms of waste.

- Maintains awareness of information and operational technology developments to anticipate and support timely adoption of improvements.

Operational Optimization is necessary for the JWSC to ensure the safety of the drinking water and the natural resources of the surrounding community. Furthermore, Operational Optimization lowers the day-to-day operating costs associated with the water and wastewater services, which helps to stabilize rates.

In order to optimize the use of the JWSC resources, the JWSC will maintain 8 KPIs related to Resource Optimization. These are:

- Number of Water Accounts Per Water Employee Count
- Number of Wastewater Accounts Per Wastewater Employee Count
- Total Number of Accounts Per Administrative Employee Count
- Total Number of Accounts Per Total Employee Count
- Energy Expense Per Million Gallons of Water Treated
- Energy Expense Per Million Gallons of Wastewater Treated
- Operations and Maintenance Cost Per Million Gallons Water Treated
- Operations and Maintenance Cost Per Million Gallons Wastewater Treated

In order to conserve the natural resources provided by our area, the JWSC will maintain 5 KPIs related to Water Management Efficiency. These KPIs are:

- % Total Water Loss
- % Non-Revenue Water
- Number of Non-Compliance Events Related to Drinking Water
- Number of Non-Compliance Events Related to Wastewater
- Average Water Usage Per Capita

Infrastructure Strategy and Performance

From the EUM primer, a utility that practices Infrastructure Strategy and Performance:

- Understands the condition of and costs associated with critical infrastructure assets.
- Plans infrastructure investments consistent with community needs, anticipated growth, system reliability goals, and relevant community priorities, building in a robust set of adaptation strategies (e.g., for changing weather patterns, customer base).
- Maintains and enhances the condition of all assets over the long-term at the lowest possible life-cycle cost and acceptable risk consistent with customer, community, and regulator-supported service levels.
- Assures asset repair, rehabilitation, and replacement efforts are coordinated within the community to minimize disruptions and other negative consequences.

Infrastructure Strategy and Performance provides direction for the JWSC in the maintenance, rehabilitation, repair, and replacement of the utility's infrastructure. Proper execution of Infrastructure Strategy and Performance will minimize disruption to the day-to-day activities of the residents of Brunswick and Glynn County while ensuring the continued availability of the assets for use.

One of the key components of Infrastructure Strategy and Performance is asset management. Asset management begins with the knowledge of current asset inventories, conditions, and criticality. With that in mind, the JWSC will maintain 4 KPIs related to asset inventories. These KPIs are:

- % of Asset Register Completed

- % of Critical Asset Register Completed
- % of Assets with CAP 1 Level Condition Assessments
- % of Critical Assets with CAP 2 Level Condition Assessments

Through proper asset management, assets should be renewed or replaced in a timely fashion to minimize risk of failures. With that in mind, the JWSC will maintain 4 KPIs related to asset renewal and replacement. These KPIs are:

- % of Assets Beyond Estimated Useful Life
- Miles of Collection System Replaced or Rehabilitated Annually
- Miles of Distribution System Replaced or Rehabilitated Annually
- % of R&R Funds Allocated to Asset Management Predicted Projects

The greatest non-financial impacts felt by the customer base are related to asset failures. These asset failures cause disruption to the lives of our customers as well as reduces the public confidence in the integrity of the utility's assets. With that in mind, the JWSC will maintain 6 KPIs related to System Integrity. These KPIs are:

- Number of Water Main Breaks Overall
- Number of Water Main Breaks Not Caused by Contractor Interference
- Number of Water Main Breaks Per 50 Miles of Distribution Piping
- Average Length of Unplanned Water Service Interruptions
- Number of Wastewater Major Spills Overflows or Wastewater Spills Overall
- Number of Sanitary Wastewater Major Spills Overflows or Wastewater Spills Per 50 Miles of Collection Piping

The maintenance of infrastructure is the single largest cost to the customers of the JWSC. It is our duty to make sure that this maintenance is completed in an intelligent and efficient manner to minimize costs and service disruptions. With this in mind, the JWSC will maintain 4 KPIs related to infrastructure planning and maintenance. These KPIs are:

- % of Maintenance Work Planned/Preventative
- % Cost of Maintenance Work Planned/Preventative
- % Maintenance Labor Utilization
- % of Preventative/Planned Work Orders Completed on Schedule
- Number of Planned Maintenance Work Orders Not Completed on Schedule Due to Lack of Available Parts

Attributes Requiring Most Improvement

Community Sustainability

From the EUM primer, a utility that practices Community Sustainability:

- Takes an active leadership role in promoting and organizing community sustainability improvements through collaboration with local partners (e.g., transportation departments, electrical utilities, planning departments, economic development organizations, watershed and source water protection groups).
- Manages operations, infrastructure, and investments to support the economic, environmental, and social health of its community.
- Integrates water resource management with other critical community infrastructure, social and economic development planning to support community-wide resilience, support for disadvantaged households, community sustainability, and livability.

The success of Brunswick and Glynn County is significantly impacted by the JWSC. The JWSC is the Lifeblood of the Community as water and wastewater services impact every person who lives, works, or visits the area. These impacts occur through the affordability of customer bills, the reliability of services, and the expansion of the water and wastewater system to further economic development. The JWSC also is the organization with the responsibility for the education of the public concerning water conservation and environmental protection. With this in mind, the JWSC will maintain 4 KPIs related to Community Sustainability. These KPIs are:

- Average Chloride Concentration in Upper Floridian Aquifer
- Number of Customers Helped with Customer Payment Assistance Program
- Number of Residential Equivalent Units Sold Annually
- Number of Commercial Residential Equivalent Units Sold Annually
- Number of New Community Jobs Related to Water and Wastewater Expansion
- Number of Public Education Campaigns Completed
- Percent of Wastewater Lift Stations with Available Capacity
- Percent of New Project Development Reviews Completed On Time
- Average Days Until Completion of New Project Development Submittal Reviews
- Number of Private Asset Dedications Completed
- Total Value of Spending in Local Community

Employee Leadership and Development

From the EUM primer, a utility that practices Employee Leadership and Development:

- Recruits, develops, and retains a workforce that is competent, motivated, adaptive, and safety focused.
- Establishes a participatory, collaborative organization dedicated to continual learning, improvement, and innovation.
- Ensures employee institutional knowledge is retained, transferred, and improved upon over time. Emphasizes and invests in opportunities for professional and leadership development, taking into account the differing needs and expectations of a multigenerational workforce and for resource recovery operations.
- Establishes an integrated and well-coordinated senior leadership team.

Employee Leadership and Development benefits the JWSC as a whole as well as the customer base. A well-developed workforce is a smarter, more efficient work force. This translates to lower costs to the consumer, better planning, and more consumer confidence in the utility. With this in mind, the JWSC will maintain 12 KPIs related to Employee Leadership and Development. These KPIs are:

- Employee Turnover Rate
- Voluntary Employee Turnover Rate
- Retirement Turnover Rate
- Employee Job Satisfaction
- % of Job Descriptions Reviewed and Updated Annually
- Training Hours Per Non-Licensed Employee
- % of Required CEHs for Licensed Employees Provided
- % of Employee with Needed Certifications
- % of Employee Performance Appraisals Submitted On Time
- % of Available Positions Filled with Internal Candidates
- % of Available Positions Filled with Minority Candidates
- % of Managerial Positions with Succession Plans
- % of Managerial Positions with Vacancies

Enterprise Resiliency

From the EUM primer, a utility that practices Enterprise Resiliency:

- Ensures utility leadership and staff work together internally, and coordinate with external partners, to anticipate, respond to, and avoid problems.
- Proactively identifies, assesses, establishes tolerance levels for, and effectively manages a full range of business risks (including interdependencies with other services and utilities, legal, regulatory, financial, environmental, safety, physical and cyber security, knowledge loss, talent, and natural disaster-related) consistent with industry trends and system reliability goals.
- Plans for and actively manages around business continuity.

With the experiences of Hurricane Matthew and Hurricane Irma, it became very apparent to the JWSC that the utility needs to spend more time preparing for natural disasters and other risks. These other risks include safety concerns for the employees and the public. With this in mind, the JWSC will maintain 18 KPIs related to Enterprise Resiliency. These KPIs are:

- Number of Work-Related Injuries/Incidents
- Number of Recorded Near Misses
- Number of Days Lost to On-the-Job Injuries
- Number of Damage Claims Filed
- Total Cost of Damage Claims
- Risk/Vulnerability Assessment Up to Date?
- Number of Emergency Response Training Exercises Completed Annually
- Number of Other Agencies Participating in Training Exercises Annually
- % of Total Assets with Backup Power/Pumping
- % of Critical Assets with Backup Power/Pumping
- Number of Days of Chemical Demand for Treatment On-Hand
- Longest Lead Time for Operationally Critical Parts Not On-Hand

- % of Staff with FEMA Incident Command Training
- Emergency Operations Plan Reviewed Annually?
- Ratio of Wastewater Demand to Firm Wastewater Capacity
- Ratio of Water Demand to Firm Water Capacity
- Number of Cyber Security Events Recorded Annually
- Days of Operating Expenditures Held in Reserve

Mission and Objectives

Mission Statement

It is the mission of the Brunswick-Glynn Joint Water and Wastewater Commission to safeguard the public health and safety by providing sufficient drinking water and environmentally responsible wastewater treatment in a financially sound manner while meeting or exceeding all regulatory requirements and supporting planned growth in the community.

Objectives

The JWSC will accomplish its mission by:

1. Sustaining proper operation of the water supply and distribution assets to ensure safe drinking water and sufficient flows for fire protection for the residents, businesses, and visitors of Brunswick and Glynn County.
2. Maintaining proper operation of the wastewater collection systems and treatment plants to ensure the protection of the area's bountiful natural resources for the enjoyment of the community.
3. Committing to asset management principles to properly maintain and plan for the repair and replacement of the utility's assets at most fiscally responsible cost while staying current with technological advances in our industry and being proactive in preparing for future regulatory challenges.
4. Working closely with local and state government agencies and local development for the continued expansion of the water and wastewater systems to provide for the growth of Brunswick and Glynn County in manner that upholds the practices and principles of the JWSC.
5. Optimizing fiscal responsibility and data-driven continuous improvement principles in the day-to-day activities of the organization to minimize costs associated with rate increases in order to maintain affordability and service reliability.
6. Providing quality customer service and public education to our current and potential customers to engender a mutual respect between the customer base and the utility.
7. Developing our workforce through the consistent training of employees at all levels of the organization to allow for the transfer and retention of system and technical knowledge as our employees retire or

leave the organization.

8. Ensuring that the employees of the JWSC work in a consistently safe manner to limit the exposure to risk from the day-to-day tasks assigned through training and systematic safety audits of each work group.
9. Establishing a clearly defined organizational culture that reflects the values and intentions of the Joint Water and Wastewater Commission leadership with an emphasis on maintaining public trust.
10. Raising awareness of the importance of water and wastewater to the success and health of an economically viable community.

2019 Strategic Initiatives

Environmental Compliance



- Maintain regulatory compliance with all permits
- Educate public on compliance efforts and results
- Reduce business down time from boil water advisories
- Improve sewer capacity through inflow/infiltration reduction

Responsible Decision Making



- Expand strategic asset management program
- Improve budget controls for each operating division
- Improve inventory control measures
- Decrease maintenance inefficiencies

Community Resource



- Educate community on value of water and wastewater services
- Facilitate simpler development practices by working with City and County
- Determine where system expansion should be prioritized
- Eliminate sewer capacity roadblocks

Workforce Development



- Ensure continuing education requirements are met for credential employees
- Provide consistent training for non-credentialed personnel
- Improve employee safety through consistent safety training and auditing
- Document institutional knowledge of tenured employees

Customer Service



- Work to make monthly bills more affordable to low-income customers
- Ensure customer billings are equitable
- Improve public trust with values based customer service
- Provide consistent information to customer base

Clearly Define Organizational Values

Background

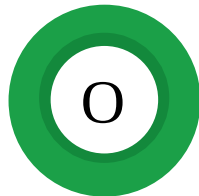
Any organization is only as strong as the leadership and workforce allow it to become. The structure of the BGJWSC is quite segmented based upon working environment. There is little continuity across the organization related to day-to-day work habits, hiring habits, disciplinary habits, and spending habits. For the BGJWSC to move forward as an organization, it is crucial to develop a strong organizational culture that can be applied across each division. If one division is extremely cost aware and consistently is managing the budget successfully, yet another division is lackadaisical in its approach to the budget, the good of one division can be undone by the bad of the other.



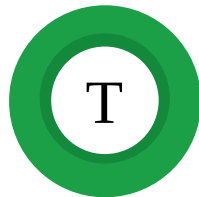
- Staff commitment to development
- Current staff inherently exhibits strong values
- Recent hirings have demonstrated a commitment to public service
- Commission makeup largely community driven



- No definition of current organizational values
- Public misinformation seemingly widespread
- Inconsistencies with organizational priorities as a result of turnover
- Segmented thinking among operating divisions



- Improved onboarding of staff and Commissioners
- Consistency in decision making across operational divisions
- Improved customer outcomes and public image
- Clear and consistent direction



- Political influences
- Lack of employee and Commission buy-in
- Failure to incorporate values of policies and programs
- Values could change due to social and economic pressures

Expected Outcomes

Completion of this initiative should improve employee retention, employee morale, and productivity. Maintaining a strong organizational culture has a positive effect on all aspects of the BGJWSC daily work. Customer confidence should also improve as the staff makes positive changes and impacts in the community. This will generate employee pride for the organization and foster an environment of continual improvement. This initiative will provide the foundation for the success of all subsequent initiatives.

Key KPIs to Track

- Employee Turnover Rate
- Voluntary Employee Turnover Rate
- Retirement Turnover Rate
- % of Employees Within 5 Years of Retirement Eligibility
- Employee Job Satisfaction
- % of Employee Performance Appraisals Submitted On Time

Monthly Operating Budget Review Meetings

Background

The billing rates charged by the BGJWSC support a \$31,000,000 annual operating budget. It is the duty of the organization to verify that the money is being spent in a fiscally responsible manner. Rate increases are never popular and public confidence in the organization needs to be improved. Proper budget management will allow the Commissioners to make more informed decisions on the operating budget for the coming years.

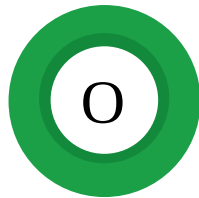
Spending more money than is budgeted in the operating budget can ultimately have a detrimental effect on the capital budget. The BGJWSC needs to increase the rate of asset reinvestment, so any reductions in the capital budget are unacceptable for the long-term health of the systems. A more thorough monthly review process will at the least create an awareness of potential expense issues earlier in the fiscal year.



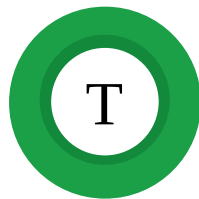
- Strong financial reporting software
- Knowledgeable and experienced staff
- Real time reporting available
- Strong Commission input and support



- Stronger analytical tools needed
- Time demands on budget managers and small finance staff
- Reports currently tabular and not graphical
- Inconsistencies in expense classification



- Development of analytical tools to streamline process
- Consolidation and consistency of expense line items
- Improved accountability and efficiency of budget execution
- Awareness of spending patterns could allow for resource sharing



- Resource sharing could incentivize additional spending
- Employee buy-in and increased workloads on finance and support staff
- Technology shortcomings
- Operational issues prioritized over financial reviews

Expected Outcomes

Completion of this initiative will help to provide the Commission with more accurate information on year-to-date expenditures in different line items. This will allow for a more thorough review of the current fiscal year and aid in the preparation of the budget for the following fiscal year. With the size of this organization, miscodings are going to occur, but by correcting them in a timely manner, the information available will be

more accurate. This will create a cultural shift amongst budget managers to one of proactive financial management rather than a culture of explaining problems after the fact.

Key KPIs to Track

- % of YTD Budget Related to Operations and Maintenance Expenses
- % of YTD Budget Related to Capital Reinvestment
- % of YTD Budget Related to Administrative Resources
- % of YTD Revenue Budget Billed
- Energy Expense Per Million Gallons of Water Treated
- Energy Expense Per Million Gallons of Wastewater Treated
- Operations and Maintenance Cost Per Million Gallons Water Treated
- Operations and Maintenance Cost Per Million Gallons Wastewater Treated

Plan Development Review Workflow Mapping

Background

Every organization has a multitude of processes that occur on a recurring basis. Every process has the potential to contain inefficiencies of some kind. These inefficiencies may include the duplication of effort, incorrect personnel being tasked with a particular subprocess, and a failure to understand the desired outcomes. In order to determine the inefficiencies that occur in a particular process, an evaluation tool known as workflow mapping is necessary. Workflow mapping is the process of documenting the specific steps and actions that take place to complete a particular task.

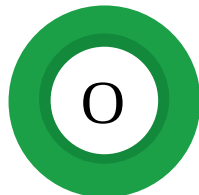
Given the multitude of processes the JWSC completes as part of the routine administration of the utility, staff believes it is important to narrow the focus to those areas perceived as the greatest issues to our customer base. To that end, we are beginning our workflow mapping project with a focus on the plan development review for new subdivisions and businesses.



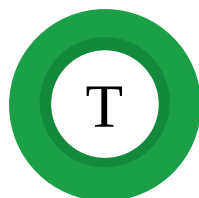
- Knowledgeable, experienced staff has relationships with most applicants
- Open to constructive feedback for improvement opportunities
- Systematic approach utilized including all operational stakeholders
- Many improvements already realized



- Perception problems
- Inconsistencies between reviews
- No clear, easily understandable definition of process
- Inconsistencies among intergovernmental policies and ordinances



- Finalizing and updating construction standards
- Applicants and owners access to review processes
- Request stakeholder feedback to streamline processes
- Improved communication protocols and public image



- Lack of employee buy-in and human resources to implement changes
- Focus on initiative could create greater issues in the interim
- Technology and communication barriers
- Competing interests between applicants and utility

Expected Outcomes

Completion of this initiative will identify potential areas of inefficiencies on the part of the BGJWSC. Some inefficiencies may be identified on the City/County side as well as the private development side. Upon completion, the BGJWSC will make the necessary adjustments to the review process that are causing both legitimate and perceived roadblocks, provided that the changes maintain the integrity of the process. By the end of the calendar year, the process should be mostly streamlined to allow for timely and effective reviews of potential developments. A public meeting will be held with necessary stakeholders outlining the improved process upon completion.

Key KPIs to Track

- Percent of New Project Development Reviews Completed On Time
- Average Days Until Completion of New Project Development Submittal Reviews
- Number of Private Asset Dedications Completed
- Percent Positive Responses on Customer Satisfaction Survey

Monthly Compliance Campaign

Background

The BGJWSC does a great job of maintaining compliance with applicable state and federal regulations. Documentation from the Georgia Environmental Protection Division have said such. However, our customers only hear about any issues that we have or issues that affect them personally. While the BGJWSC should never be out in the community boasting of completing the most basic functions of the organization, it is important to make the public aware of how the money they are providing is being used to maintain compliance.

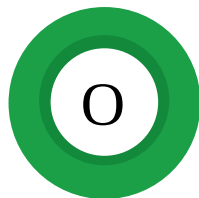
The goal of this initiative is to generate a monthly compliance release focusing on a different portion of the BGJWSC's environmental compliance responsibility. The releases will not simply be a report on the current state of compliance.



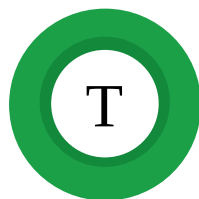
- Increases awareness of BGJWSC efforts
- Shows prioritization of environmental stewardship
- Increases operational transparency
- Ease of reach of social media



- Potentially too complex for easy understanding
- Difficulties in continuing produce quality content
- Could be misinterpreted
- Difficult to reach all segments using conventional methods



- Generate good public relations
- Public education of system needs
- Can generate support from community leaders for funding efforts
- Potential to validate resource needs



- Competing interests within environmental community
- If compliance problems exist, could highlight issues
- Backlash from vocal minority could skew focus

Expected Outcomes

Completion of this initiative should increase public awareness of BGJWSC compliance activities. Furthermore, continued successful compliance should help garner public support for the work that completed by the organization. This will allow for effective communication of spending habits and the benefits delivered to each citizen and the environment. This will reinforce the positive relationships currently in place with regulatory agencies.

Key KPIs to Track

- Number of Non-Compliance Events Related to Drinking Water
- Number of Non-Compliance Events Related to Wastewater
- Number of Water Main Breaks Overall
- Number of Water Main Breaks Not Caused by Contractor Influence
- Number of Water Main Breaks Per 50 Miles of Distribution Piping
- Number of Wastewater Major Spills Overflows or Wastewater Spills Overall
- Number of Sanitary Wastewater Major Spills Overflows or Wastewater Spills Per 50 Miles of Collection Piping
- Number of Unique Grease Trap Inspections Completed

Continuing Education Requirements Audit

Background

The JWSC has several staff members who have continuing education requirements because of state licensure. Each water and wastewater operator is required to maintain continuing education to keep him or her up to date with the latest trends in the treatment industry. Currently these employees are required to keep up with his or her own education requirements. The JWSC provides training opportunities to these staff members, most of which attend the Georgia Rural Water Conference on Jekyll Island. At this time, staff is not directed to any particular classes.

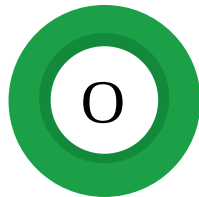
Other than operators, professional staff members have accounting and engineering license requirements as well. The majority of the provided training hours for these employees comes from conference attendance. Each professional staff member determines which conference they would like to attend, and based upon funding and the Director's approval, attend the conference to fulfill educational requirements.



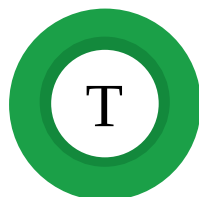
- Strengthens compliance efforts
- Consumer confidence due to standardization of skill sets
- Improves networking availability for knowledge sharing
- Reinforces importance and value of staff members



- Poorly focused or generalized training results in no specific gains
- Training often requires travel which takes staff away from tasks
- No guarantee of knowledge retention
- Not all training qualifies for CEH/PDH credits



- Reduce training costs due to proper planning of needs
- Improved intentional employee development
- Could improve employee retention
- Improved skill sets can lead to lower operational costs



- Loss of employees due to recruitment from other agencies
- Creates demand for more compensation
- Increased division of employees if opportunities are not equal

Expected Outcomes

Completion of this initiative will improve compliance with state requirements for certifications. Training can be directed to improve necessary skill sets to increase efficiency and potentially level of service provided to our customers. Employee morale could improve as a result of employees feeling more valued by the organization due to the investment of training dollars. This will aid in future succession planning improvements.

Key KPIs to Track

- % of Required CEHs for Licensed Employees Provided
- % of Employee with Needed Certifications
- % of Job Descriptions Reviewed and Updated Annually

Customer Payment Assistance Program

Background

The JWSC has a significant portion of the customer base which currently experiences difficulty meeting their monthly bills. The JWSC has looked into a variety of options to provide some means of customer assistance for those truly in need. The “Round-Up Program” is one example. Staff is working to initiate this program and look for other options to fund an assistance program.



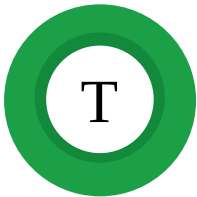
- Helps reduce impact to economically challenged customers
- Positive public relations impact
- Administered by third party to limit issues of favoritism
- Criteria for application already exists



- Limited funding sources readily available
- Public education may be difficult
- Some contributions used to pay administrative costs to third party



- Reduction in bad debt and service disconnections
- Increased customer satisfaction
- Reduction in criticism of rate structure
- Staff time can be dedicated to other tasks



- Lack of public interest in participation
- Perceived inequities between customer base
- Potential fund mismanagement
- Customer could become dependent on aid

Expected Outcomes

Completion of initiative will improve service affordability to low income customers. As rate adjustments become necessary, the effects of the adjustments will be mitigated to those customers most effected. By utilizing a third party to administer the program, any perceived BGJWSC bias is removed from the equation. It will demonstrate to the community that the JWSC has a commitment to its customers and their welfare. This is an emerging trend throughout the water and wastewater industry. To stay current with these developments, the BGJWSC must establish one of these programs.

Key KPIs to Track

- Funds Collected from Donations
- Number of Individual Donors
- Number of Customers Aided by Customer Payment Assistance Program
- Dollars of Assistance Provided
- Reduction in Aged Accounts Recovery Time

St. Simons Island Smoke Testing

Background

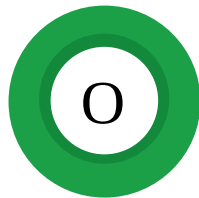
SSI has already undergone flow monitoring and the data at the treatment plant indicates severe I&I is an ongoing issue with rain dependent I&I being extreme and certainly creating capacity concerns at the plant. The next step is to smoke test the critical basins and dye test them to find significant RDI/I sources to address this portion of the I&I issue. Smoke testing is a proven tactic for identifying areas of need in a collection system. It is cost effective and minimally intrusive to the public.



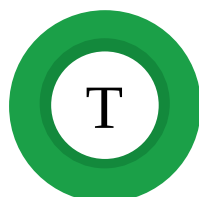
- Helps to prioritize capital expenses
- Cost effective and timely method to determine issues
- Easy to understand
- Least intrusive method for problem identification



- Outcomes reliant on public participation
- Test may not show all defects
- Labor intensive to catalog and notify homeowners of defects
- Obligation to fix issues once aware



- Potential to gain significant sewer capacity after fixes
- Public identification of individual responsibility with sewer capacities
- Educate public of capital needs



- Potential to induce stressors in public realm
- Public notification may not be comprehensive
- Lack of confidence that smoke is non-toxic
- Lack of local contractors to handle workload

Expected Outcomes

This initiative will allow further planning on St. Simons Island for the rehabilitation of the sewer system in a systematic fashion focusing on areas with the greatest impact. Sewer basins will be prioritized for projects, most likely trenchless CIPP rehabilitation of both collection lines and service connections, and will be included in updated five-year capital plans. Completion of the capital projects will open up sewer capacity across St. Simons Island and reduce energy costs to the BGJWSC, and ultimately, the customer base due to less pumping requirements.

Private assets likely have a large contribution to the RDI/I problems on the island and will require rehabilitation. Ongoing public education campaigns will help get the message out to the customers about the need to take care of private assets.

Key KPIs to Track

- % of Critical Assets with CAP 2 Level Condition Assessments
- % of Service Laterals with Leaks
- Number of Lateral Defects Identified
- % of Lateral Defects Corrected
- Average Wastewater Usage per Capita

Weekly Maintenance Planning

Background

In the past, the planning process is day-to-day. Specific tasks of work orders are loosely identified on a daily basis. Currently, the approach being pushed is to identify task needs and work orders for the coming week for each division and for each crew. With proactive planning in advance, better preparation and therefore greater efficiencies and productivities are being achieved throughout the JWSC operating divisions. More systematic planning methods are evolving to further improve on this process.

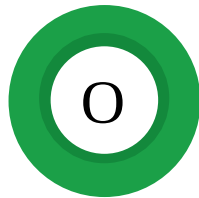
Reactive maintenance work is often inefficient and is often completed on overtime. Scheduling work out will help reduce the overtime and also increase the amount of preventative maintenance tasks that are completed by staff. Preventative maintenance work will need to be cataloged to determine scheduling needs moving forward.



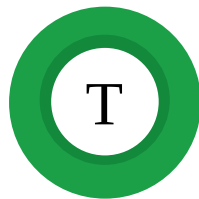
- Software in place to facilitate advanced planning and scheduling
- Staff growing in their knowledge of capabilities of software
- Improves staff accountability
- Allows for predictive maintenance/reduction in equipment downtime



- Time consuming for staff to implement properly
- Requires behavioral changes of both superintendents and staff
- Increases reliance on and cost of IT infrastructure



- Improved productivity and efficiency in operations
- Increased resource sharing among divisions
- Can provide proactive customer support
- More efficient tracking of resource use



- Lack of employee buy-in
- Learning curve for employees could take longer than anticipated
- Rigid scheduling practices can harm customer service efforts

Expected Outcomes

Completion of this objective will allow for more efficient maintenance and increased employee accountability. It will also allow managers to take a more holistic approach to maintenance rather than focusing purely on the next problem. Increased preventative maintenance through proper scheduling will help reduce callouts and overtime due to equipment failures. Overall, this will be a major step forward in furthering the asset management programs of the BGJWSC.

Proper planning of maintenance tasks has a ripple effect on other support functions as well. Having a schedule of tasks can help coordinate road cuts between operating groups to limit paving costs. It can help with parts ordering to lower costs. Finally, it can aid the Administration Division in building public confidence through proper notification prior to service outages.

Key KPIs to Track

- % of Maintenance Work Planned/Preventative
- % Cost of Maintenance Work Planned/Preventative
- % Maintenance Labor Utilization
- % of Preventative/Planned Work Orders Completed on Schedule
- % Equipment Utilization
- Annual Overtime Cost

Monthly Work Group with Local Authorities

Background

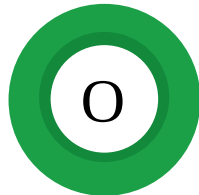
Currently, exchanges between staff and representatives from other authorities and agencies is on an as called basis instead of a programmed or scheduled discussions where key topics of mutual interest are covered regularly. There have been efforts between the JWSC and Glynn County to hold quarterly meetings, which both staffs have found helpful. Meetings with the City of Brunswick are not currently held with any regularity.



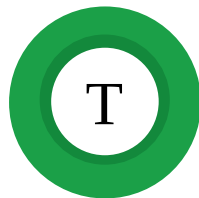
- Improves communication between government agencies
- Better planning of multiple jobs
- Wide variety of technical resources to solve problems
- Current staff members have good working relationships



- Involves significant time commitment from different agencies
- Each agency has differing priorities
- Creates project scheduling conflicts
- Limited ability for community input



- Reduction in paving costs from single mobilization
- Greater project effectiveness with less community impact
- Improves sharing of best practices
- Increases understanding of ordinance requirements for proposed changes



- Potential for significant scope creep
- Finger pointing when delays occur
- Sharing of costs are not always equitable
- Delegation of project management responsibilities to other groups

Expected Outcomes

Completion of this objective will increase communication between all three local government operations staff. This will allow for improved project planning and scheduling to limit the impact to the local citizens and businesses. This can be especially helpful when it comes to paving. Once a road cut is planned, each group will get the opportunity to complete necessary work prior to repaving to limit the amount of patches that are required. During these meetings, ideas are shared on best practices to help lower costs to all three entities. Future project plans can be synchronized to have the greatest future effectiveness by completing work on the water, sewer, stormwater, and transportation systems at the same time.

From a non-project related perspective, these meetings can be used to coordinate table top training exercises to improve emergency response coordination between entities. This will allow all groups to be more effective in

emergency response and limit the duplication of efforts. As another benefit, these meetings will increase BGJWSC awareness and engagement of local community development efforts to determine how the organization can best aid in these efforts.

Key KPIs to Track

- Number of Emergency Response Training Exercises Completed Annually
- Number of Other Agencies Participating in Training Exercises Annually
- Annual Paving Expenses
- Number of Boil Water Advisories Associated with Contractor Interference

Learning Management System for All Personnel

Background

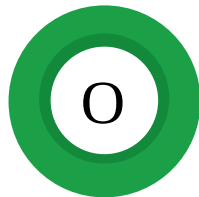
Non-credentialed staff members of the JWSC often times do not receive training other than on-the-job observation of their coworkers. These staff members typically hold positions that are customer facing. Soft skills training benefits all employees, not just those with customer facing positions. By selecting a cost effective learning management system, all JWSC employees will have the opportunity to develop their skills to further their careers. The employee will be able to select courses they want to take, and the employee's supervisor can assign each employee training classes that would be most beneficial to the employee and the JWSC. Employees with supervisory aspirations can take management training classes to provide them with skills they can use to demonstrate their value to the JWSC.



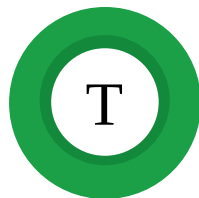
- Cost effective method for training
- Wide variety of content available from any electronic device
- Can be focused to the needs of individual employees
- Makes use of technological investments



- Not water industry specific
- Requires computer knowledge for use
- No guarantee of knowledge retention
- Requires oversight and diverts attention from operational tasks



- Increased employee satisfaction
- Helps with employee recruitment
- Improved customer service from all divisions
- Can focus on soft skill development



- Lack of employee buy-in
- Loss of employees due to recruitment from other agencies
- Funding is not guaranteed

Expected Outcomes

Training can be directed to improve necessary skill sets to increase efficiency and potentially level of service provided to our customers. Employee morale could improve as a result of employees feeling more valued by the organization due to the investment of training dollars. This will aid in future succession planning improvements. Training availability on soft skill abilities can have a positive impact on the customer experience and better employee interactions.

Key KPIs to Track

- Employee Job Satisfaction
- Training Hours Per Non-Licensed Employee
- % of Available Positions Filled with Internal Candidates
- % of Managerial Positions with Succession Plans

Safety Council Site Visits

Background

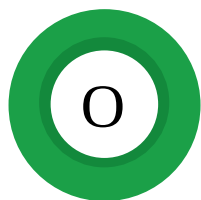
The Safety Council deals with issues for which many never see and never see the type of work being conducted which leads to accidents. Site visits are a means to better inform members of the Safety Council on the issues in the field which lead to accidents and which need to be managed to prevent accidents. Furthermore, the Safety Council will be able to identify safety needs on job sites to help field staff members know what situations to avoid in the future. These site visits will help create a culture of safety where coworkers are constantly on guard against poor habits.



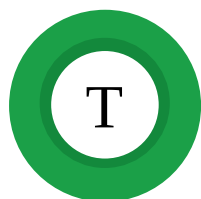
- Safety Council members gain greater understanding
- Improves safety practices
- Creates a self-policing environment for safety practices



- Time consuming for Council members
- Requires objectivity from members to point out issues
- Can be viewed negatively by other employees
- Not all Council members knowledgeable in other fields



- Reduction of worker's compensation costs
- Reduction in lost time due to injuries
- Improvement of safety guidelines
- Increased public awareness of safety procedures



- Lack of employee buy-in
- Knowledge of unsafe practices could lead to a decrease in productivity
- Potential of increased costs for safety equipment
- Exposure to liability

Expected Outcomes

Completion of this initiative should reduce the number of preventable work-related injuries. It will identify safety needs to improve employee work habits. The expansion of safety culture will translate to employee personal lives and lessen lost work time due to non-work accidents. Site visits will broaden the understanding and addressing of risks associated with different work groups.

Key KPIs to Track

- Number of Work-Related Injuries/Incidents
- Number of Recorded Near Misses
- Number of Days Lost to On-the-Job Injuries

Customer Database Audit and Analysis Program

Background

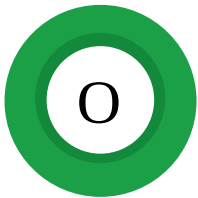
The JWSC customer database has a broad spectrum of demographics and account conditions for a number of reasons. If the JWSC can audit and analyze the database accurately, programs can be developed to minimize bad debt costs and improve services to the customers through a variety of program modifications. Two examples of areas of focus are on proper REU assignments for each commercial customer and an audit of services to ensure that each customer is billed properly. The database audit will also help with the sewer capacity map initiative as the correct REU assignments will determine the existing flow needs within each sewer basin.



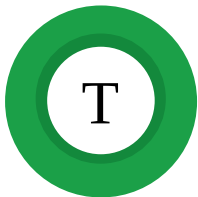
- Ensures consistency and accuracy in billing
- Enhanced accuracy in rate computation
- Improved accuracy of water audits
- Provides better data for decision making



- Time consuming of both technical and labor resources
- Difficult to apply consistently
- Audit implications on property valuations a concern



- Identify areas of need in customer base
- Potential for stabilization of rate adjustments
- Reduce staff time reviewing exception reports
- Improved revenue recovery



- Potential to game the system
- Customer resistance to changes
- Exposes potential problems which could impact public image

Expected Outcomes

Completion of this initiative will improve confidence in the billing procedures. The customers that have the greatest monthly burden should see the greatest benefit from auditing the customer database. Commercial entities can rest assured that the bill they receive reflect an equitable contribution based upon demand. A further understanding of the customer database will increase the BGJWSC's ability to forecast the impact of any rate adjustment

Key KPIs to Track

- Number of Inaccurate REU Assessments Identified and Corrected
- Number of Inaccurate Services Identified and Corrected
- Number of Sewer Basins with Availability
- Reduction in Non-Revenue Water

Galvanized Water Main Replacement Program

Background

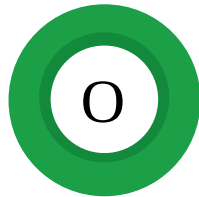
The JWSC has several miles of galvanized water lines in service. As with all water utilities who installed such pipe, this pipe has lasted beyond its expected life. Leakage and breaks have led to water losses and at times poor customer level of service. Emergency repairs are expensive and inconvenient. In addition, these lines are frequently insufficient to meet fire protection needs on top of normal service needs. From review of the boil water advisories, nearly 20% of boil water advisories caused by materials failures are on galvanized lines. Galvanized lines make up approximately 4% of the total length of pipe in the water system.



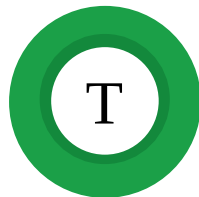
- Reduction in water losses and boil water advisories
- Increases pressure and fire protection
- Decreases discoloration complaints
- Proactive replacement reduces costs



- Funds not currently committed
- Complete inventory of galvanized piping not available
- Small portion of distribution system will limit positive impacts



- Reduce inventory of pipe fittings
- Improve level of service to customer base
- Increase estimated useful life of infrastructure
- Long-term reduction of costs to serve



- Potential damage to personal property through excavation
- Public response to widespread service outages
- Public perception of project outweighing benefit

Expected Outcomes

Completion of this objective will benefit the customer base in four ways. First, a reduction in boil water advisories should be expected as the aged water mains are replaced with newer material. Secondly, galvanized lines are susceptible to dirty water complaints because of the condition. Replacing these lines should decrease the number of dirty water complaints from the customer base. In addition, water loss should decrease as a result of fixing the lines which will decrease the cost to deliver water to the organization and ultimately the customers. Finally, replacing the galvanized lines will allow more consistent water pressure and greater volume to be provided. This aids in both fire protection and quality of life for those customers.

Key KPIs to Track

- Miles of Distribution System Replaced or Rehabilitated Annually
- Number of Dirty Water Complaints
- Number of Low Pressure Complaints
- Number of Water Main Breaks Not Caused by Contractor Interference

Pump Station Flow Meter Installations

Background

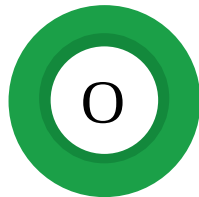
The JWSC operates 157 sewer pump stations throughout the three service districts. These lift stations each have a different required pumping rates, pump efficiencies, and gravity sewer service areas. One operational method to determine which pumps are functioning at the appropriate levels is to complete drawdown tests on each pump station. Currently, drawdown tests require three staff members to complete and have built in inaccuracies because they are based on manual measurement of wet well levels, manual timing of influent flows, and calculations from this data. For many stations, these inaccuracies do not create problems because of the relatively low flow characteristics of the station. On larger stations, a 5-10% inaccuracy level could be 250-500 gallons per minute of flow capacity. The easiest way to eliminate these inaccuracies is to install flow meters downstream of the pumps. This allows recording one number of what flow is actually passing through the discharge pipe rather than calculating this number for multiple inputs.



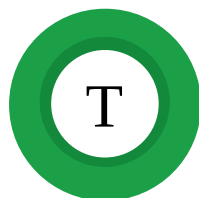
- Some flow meters already installed
- Several flow meters currently on-hand ready to be installed
- Staff knowledgeable enough to quickly interpret data



- Time consuming to complete installations
- Poor line documentation to facilitate quick installations



- Decreased time commitment to drawdowns
- Tie meters into SCADA for energy efficiency analysis
- Can help prioritize CCTV work for I&I inspections
- Can help proactively identify maintenance needs



- Failure to include in SCADA would limit success of program
- Improper installation and calibration could lead to incorrect data
- More issues could be found than funding is available to fix

Expected Outcomes

Completion of this objective will allow the organization to identify problem areas associated with sewer lift stations. This will manifest in two ways: pump inefficiencies can be proactively identified and areas with significant I&I will be easily identifiable. New development reviews will be expedited due to real time information being available for Planning & Construction to review available sewer capacity. Real time

information will reduce staffing obligations to determining areas of potential need and will allow those staff members to be tasked with more productive job assignments.

Key KPIs to Track

- Number of Meters Installed
- % of Pumping Stations with Flow Meters Installed
- % of Tier 1 Pumping Stations with Flow Meters Installed
- % of Flow Meters Tied to SCADA
- % of Total Wastewater Flow Metered

Value of Water Public Education Campaign

Background

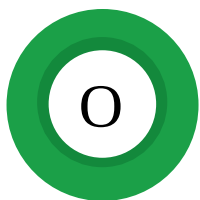
Certainly, there are many challenges in operating a water and sewer utility. Frequently there are issues that arise for either. Many of the solutions require investments to correct conditions and/or make improvements to facilitate change. The funds and rate structure required for raising those funds have to be run through customers. Public education about the value of the services they receive and enjoy is critical. The public's support of the overall programs being acted on is key to continued success. This can only come through an educational process that keeps the public informed about the many things that are ongoing to maintain and improve the level of service in the community.



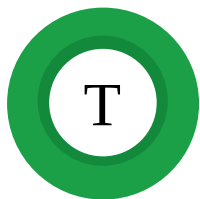
- Increases transparency
- Wealth of available resources for inspiration
- Answers questions relative to rate structure and potential rate adjustments



- Commission not always in support of perceived advertising
- Requires commitment of staff resources
- No medium reaches all customers



- Increased confidence in service quality
- Gathering of community input on importance
- Build community support for funding
- Make customers aware of potential insurance savings from fire protection



- Appearance of favoring new development over existing customer base
- Multiple public education campaigns could result in oversaturation
- Community input may be negative or counterproductive

Expected Outcomes

Completion of this objective will improve public trust with the utility by furthering the understanding of the value of water to the community. This should provide for a better understanding of the cost of production and distribution of water and the collection, conveyance, and treatment of wastewater. This will allow for more informed discussions concerning rate adjustments and infrastructure investments. While rate adjustments are never popular, a furthered understanding of the needs will allow for more acceptance of these adjustments.

Key KPIs to Track

- User Rates Compared to US EPA Affordability Criteria
- Number of Public Education Campaigns Completed
- Customer Satisfaction Surveys Completed

St. Simons Island Gravity Sewer Assessment Report

Background

For several years, the SP&M Assessment Division has been doing proactive CCTV inspections of all sanitary sewer gravity flow lines or collectors. Over 1,000 of the 2,328 vitrified clay gravity sewer lines on SSI have been CCTV inspected. The data collected on line conditions is being consolidated into a database for comparative analyses to set priorities for rehabilitation and repair.

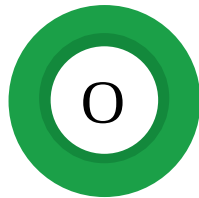
This report will calculate total business risk scores for the gravity mains on St. Simons Island, which will prioritize capital improvement projects for the rehabilitation or replacement of these lines. Utilizing asset management principles, prioritization of these projects can occur in an unbiased manner and allow for the capital funds to be spent where they will have the greatest impact.



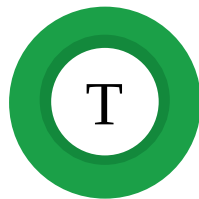
- Deficiencies and therefore liabilities are known
- Rehab priorities can be established
- I&I focus can be narrowed
- Provides tangible results of asset management program



- Lack of comprehensive asset inventory
- Labor intensive and time consuming to produce
- Continual update needed as situations change



- Reduction in I&I can increase available capacity at Dunbar Creek
- Focuses limited capital rehab funds
- Develop comparative database through long term continuation of project
- More accurate mapping will improve GIS reliability



- Poor implementation could lead to inaccurate or inconsistent assessments
- Costly to conduct assessments in the field
- Influence from outside variables may affect scoring

Expected Outcomes

Completion of this objective will generate multiple positive outcomes for the organization's asset management program. First, this will provide a complete asset register of the gravity mains on St. Simons Island. A complete asset register will contain pipe diameters, lengths, materials, and ages. This information will be uploaded into the JWSC's GIS system. Secondly, this objective will provide an unbiased, systematic approach to prioritizing capital improvement projects. Given the limited capital resources available, it is imperative that

those funds are spent in locations that provide the greatest impact. Finally, generation of this report will increase system knowledge and provide a tangible benefit of expanding the utility's asset management program.

Key KPIs to Track

- % of Asset Register Completed
- % of Critical Asset Register Completed
- % of Assets with CAP 1 Level Condition Assessments
- % of Assets Beyond Estimated Useful Life
- % of R&R Funds Allocated to Asset Management Predicted Projects
- Resource Utilization Cost for Completion

Warehouse Job Boxes

Background

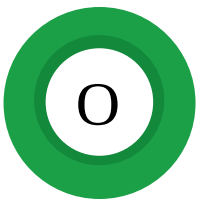
Currently material inventories for maintenance in the various operational areas are located at multiple sites. Those inventories will be consolidated at the Academy Creek WWTP warehouse eventually. This process is underway. With better weekly job planning and better inventory control, materials can be identified in advance for every work order. With this, warehouse staff can commence to pick materials for each work order the day before and have those materials in job boxes tied to the work order they go with. Maintenance personnel can then come by the warehouse at the beginning of the day to pick up job boxes for the work orders they have on schedule for the day. This saves time and improves staff efficiency and productivity in performing maintenance.



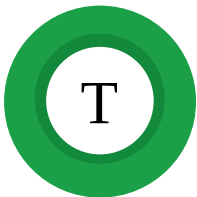
- Operations and warehouse staff become more efficient
- Easily understandable with tangible results
- Reduces stress for employees
- Improved public communication and awareness of service outages



- Requires behavioral changes
- Potential staff changes necessary to implement
- Reactive maintenance needs still take precedent



- Improved inventory controls and tracking
- Reduced inventory carrying values
- Improved ordering efficiencies
- Establishment of more consistent work habits



- Lack of employee buy-in
- Incorrect planning could increase inefficiencies
- Inventory availability could affect success

Expected Outcomes

Completion of this objective will improve the productivity of the maintenance staff as all materials will be on hand prior to the commencement of a planned task. Often times, staff members currently get to a job site and then determine what is necessary to complete the job. Then the staff member will go back to the warehouse or to a local supplier to get the parts necessary. By eliminating this step, this will increase the amount of available time to complete tasks. Eliminating unnecessary driving time allows more tasks to be completed.

This will also allow the inventory management staff to determine proper quantities to have on hand in the warehouse. This will lead to a reduction in parts on hand or a redistribution of the inventory values to parts that are more appropriate. Through this process, staff will identify items with long lead times that are critical to maintain in the warehouse.

Key KPIs to Track

- Number of Planned Maintenance Work Orders Not Completed on Schedule Due to Lack of Available Parts
- Longest Lead Time for Operationally Critical Parts Not On-Hand
- Inventory Turns Per Item
- Total Value of Inventory
- Inventory Obsolescence Rate

Updated Sewer Capacity Maps

Background

Economic Growth and development are the most direct means to higher quality of life in our community. Most economic growth is tied to availability of water and sanitary sewer capacity. Water supply systems are typically easier to facilitate. Sanitary sewer systems are more of a challenge and are more often the cause for delays in development. For this reason, it is critical the JWSC maintain a sewer capacity map that is up to date. The sewer capacity map will require Systems Pumping staff members to go to each pumping station to determine the capacity of that station. Planning & Construction staff members will catalog the information provided to determine the available capacity at each station. Once updated the maps will form the basis for Planning & Construction staff members to make quick determinations of available capacity when reviewing new development plans.



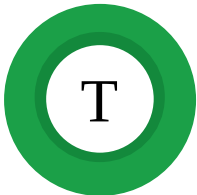
- Allows for accurate decisions on new connections to be made
- Corrects longstanding needs
- Improves overall system knowledge
- Provides better info for policy decisions



- Requires substantial effort for multiple divisions
- Requires real-time updates
- Training needed for proper draw down results
- Reliance on data from outside sources



- Benefits EDA in recruitment of new industries
- Improves capital planning
- Staff time for plan reviews will decrease
- Consistent information available to all stakeholders



- Threats of legal action depending on outcome
- Capital needs may be larger than available funding
- External political influences
- Community could use data to satisfy personal goals

Expected Outcomes

Completion of this objective will facilitate improved planning for both capital improvement and expansion projects. The customer base will be more aware of sewer availability to determine opportunity areas. Field staff will be able to reduce reactive maintenance to facilitate community development. Planning and Construction staff will be able to give a capacity determination without input from field staff in every situation. This will shorten the review process to enable development to move quicker, if necessary, to meet deadlines.

Outside of the organization, this data could be incorporated into decision-making processes with local governmental stakeholders. Economic Development Authority will have the ability to identify locations for economic development with assurances of sewer availability. Glynn County Community Development can shorten review times for planned developments with up-to-date information.

Key KPIs to Track

- % Completion of Tier I Inventory
- % Completion of Tier II Inventory
- % Completion of Tier III Inventory
- % Completion of Tier IV Inventory
- Number of Wastewater Lift Station Models Completed

Workflow Mapping Program

Background

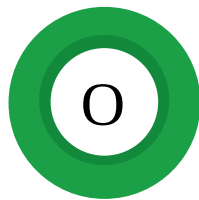
The JWSC must be ever conscious of the need to provide higher levels of service at a more efficient and lower cost manner. Workflow mapping offers the best path to understanding where the opportunities are to accomplish this. This initiative will most likely be a multi-year effort as documenting the work processes of an organization the size of the JWSC is very labor intensive. Once these processes are documented, current staff and new hires can be trained in the proper techniques to complete the given tasks. This will certainly aid in the onboarding process as new hires can be brought along quickly with quick reference guides to the day to day tasks of the given position.



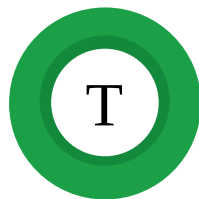
- Clarifies processes for staff and public
- Defines employees roles in workflow processes
- Training tool to increase knowledge retention
- Improves onboarding and training of new employees



- Time consuming to document processes
- Process often complex, changing, and intermingled
- Communication of processes could be challenging
- Too many processes to finish in one calendar year



- Streamlining of processes improves efficiency and productivity
- Elimination of duplication of efforts
- Promotion of continuity and consistency of work across multiple divisions
- Informs stakeholders of process steps



- Outside influences
- Easy to set aside if other perceived priorities arise
- Could be interpreted as bureaucracy
- Stakeholders may disagree with process steps

Expected Outcomes

Completion of this initiative will eliminate the duplication of efforts in completing tasks. This will streamline processes and free up employee to take on new assignments. Service quality and consistency will improve. Onboarding of new employees will take less time as tasks are already documented. The customer experience could improve due to a greater understanding of each process and elimination of confusion. This will help each employee to understand his or her fit into the bigger picture of the organization.

Furthermore, successful asset management requires a knowledge of workflow processes to determine scheduling needs for maintenance staff. Workflow mapping will be the basis for improving maintenance activities and expanding the Cityworks program throughout the organization. This will lead to a shift in organizational culture from reactive maintenance to planned and preventative maintenance.

Key KPIs to Track

- Number of Workflow Maps Created
- Number of Redundant Tasks Eliminated
- Number of Redundant Labor Hours Repurposed
- Number of Gaps Identified

Large Meter Testing Program

Background

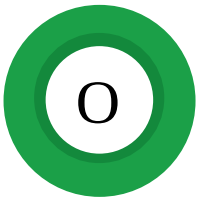
Large water meters represent the largest source of unbilled water that passes through meters. Testing large meters has proven extremely beneficial in all water utilities conducting such programs. Since this has not been done in the past at JWSC, this represents a huge revenue improvement opportunity. Large water meters are inherently less accurate at low flows than residential meters. As meters age, they become less accurate. Less accurate water meters read less water flowing through the meter than new water meters. By testing the large water meters, staff can determine which large meters need to be replaced to provide accurate billings to these customers.



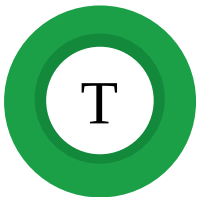
- Increased revenue recovery
- Better measures of non-revenue water
- More accurate billing to customer
- Relatively simple to conduct



- Costly to implement
- Service interruptions for testing non convenient in some locations
- Personnel require training and certification to implement
- Replacement inventory availability



- Technology upgrades can be incorporated
- WaterScope could be applied to provide large customers with detailed analysis
- Better understanding of customer usage trends
- Potential to identify systemic problems



- Customer pushback
- Calibration of testing equipment essential to performance
- Incorrect testing could impact bottom line

Expected Outcomes

Completion of this initiative will increase the accuracy of billings to large water users, which has a trickle-down effect to low volume users as the billings become equitable. This initiative will potentially provide the greatest short-term return of investment of any initiative proposed in this plan. This will aid in compliance requirements for the BGJWSC as the water loss audit will show less non-revenue water. For customers that identify or promote water conservation opportunities, this will provide them with more accurate data to determine the successfulness of their conservation initiatives.

Key KPIs to Track

- % Inaccuracy
- Projected Revenue Recovered
- Number of Meters Tested

Planned Capital Projects

Ongoing Capital Projects

Project	Budget
North Mainland Sewer Basin Re-Route – Phases II and III (SPLOST)	\$11,400,000
LS 4003 Station and Gravity Improvements (SPLOST)	\$3,300,000
FEMA Hazard Mitigation Grant	\$3,188,000
Magnolia Park Transite Water System Improvements	\$1,150,000
Academy Creek Oxygen Supply Safety Upgrades	\$650,000
L Street Transite Water System Improvements	\$650,000
Dunbar Creek Inflow and Infiltration Study – Phase II	\$150,000
Combined Project Budgets	\$20,488,000

Fiscal Year 2019 Capital Projects

Project	Budget
Water Meter Replacements	\$700,000
SSI Galvanized Water Main Replacements – Phase I	\$400,000
Academy Creek Inflow and Infiltration Study – Phase I	\$325,000
Fall Protection Brackets for Pump Stations	\$320,000
Academy Creek Inflow and Infiltration Study – Phase II	\$320,000
SSI Village Area Water and Sewer Improvements – Phase I	\$160,000
State Road 27 Paving (Grade Adjustment for GDOT)	\$80,000
Combined Project Budgets	\$2,305,000

Fiscal Year 2020 Capital Projects

Project	Budget
Water Meter Replacements	\$1,300,000
Sea Palms Water Main Rehab – Phase I	\$1,300,000
Odor/Corrosion Control at Pump Stations – Phase I	\$840,000
SSI Elevated Storage Tank Modifications	\$650,000
Lift Station SCADA Improvements – Phase I	\$600,000
Brunswick Area Galvanized Water Main Replacements	\$400,000
Brailsford Street EST Interior Painting	\$115,000
Combined Project Budgets	\$5,205,000

Fiscal Year 2021 Capital Projects

Project	Budget
Sea Palms Water Main Rehab – Phase II	\$2,000,000
Mallery Street EST	\$2,000,000
Water Meter Replacements	\$1,300,000
Lift Station SCADA Improvements – Phase II	\$600,000
SSI Galvanized Water Main Replacements – Phase II	\$300,000
Perry Park EST Interior Painting	\$115,000
Combined Project Budgets	\$6,315,000

Fiscal Year 2022 Capital Projects

Project	Budget
Sea Palms Water Main Rehab – Phase III	\$1,300,000
Water Meter Replacements	\$1,000,000
Lift Station SCADA Improvements – Phase III	\$600,000
Prince Street EST Interior and Exterior Painting	\$500,000
Mall EST Interior and Exterior Painting	\$400,000
Odor/Corrosion Control at Pump Stations – Phase II	\$280,000
Combined Project Budgets	\$4,080,000

Fiscal Year 2023 Capital Projects

Project	Budget
LS 4039 Force Main Reroute	\$1,800,000
Water Meter Replacements	\$1,100,000
Lift Station SCADA Improvements – Phase IV	\$600,000
Odor/Corrosion Control at Pump Stations – Phase III	\$560,000
Combined Project Budgets	\$4,060,000

GEFA Loan Payments for Five Year Period	\$2,147,128
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Financial Snapshot

Operating Revenues	2015	2016	2017	2018	2019*
Sewer Revenue	11,207,806	11,578,296	13,593,385	14,790,991	15,886,950
Water Revenue	4,653,950	4,905,722	6,086,550	5,968,076	6,394,000
Debt Charges	3,722,512	3,831,963	3,740,289	3,845,022	3,522,500
Administrative Fees	2,669,294	2,764,916	3,619,087	4,585,137	4,521,900
Capital Improvement Fees	403,589	1,201,888	3,706,279	1,316,712	N/A**
Other Income	1,582,686	1,513,696	2,570,710	3,096,215	1,788,100
Total Revenues***	24,239,837	25,796,481	33,321,300	33,602,153	32,113,450
Operating Expenses	2015	2016	2017	2018	2019
Governing Body Expenses	291,337	354,941	340,164	309,214	346,000
Personnel Expenses	7,496,645	8,517,466	9,703,905	10,929,800	11,317,550
Operating Expenses	7,931,640	9,110,272	11,049,014	10,308,789	11,029,800
Capital Costs	0	0	17,227	159,396	224,200
Debt Expenses	2,437,661	4,264,690	4,797,009	3,249,227	3,636,000
Reserve Transfers	0	3,300,000	3,799,992	6,033,660	5,559,900
Total Expenses	18,157,283	25,547,369	29,707,311	30,990,086	32,113,450
Net Revenues	\$6,082,554	\$249,110	\$3,613,989	\$2,612,067	\$-

* 2019 Data from Approved Budget ** CIFs are not budgeted *** Does not include SPLOST funds