



# The Department of Environmental Services 2<sup>nd</sup> Quarter Report FY2023-24



*"Committed every day to building a better community through reliable infrastructure and exceptional service."*

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**Randy J. Coslow, P.E.**  
**City Engineer & Director of Environmental Services**

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# PUBLIC WORKS ACTIVITIES AND PROJECTS

## Stormwater Maintenance Activities

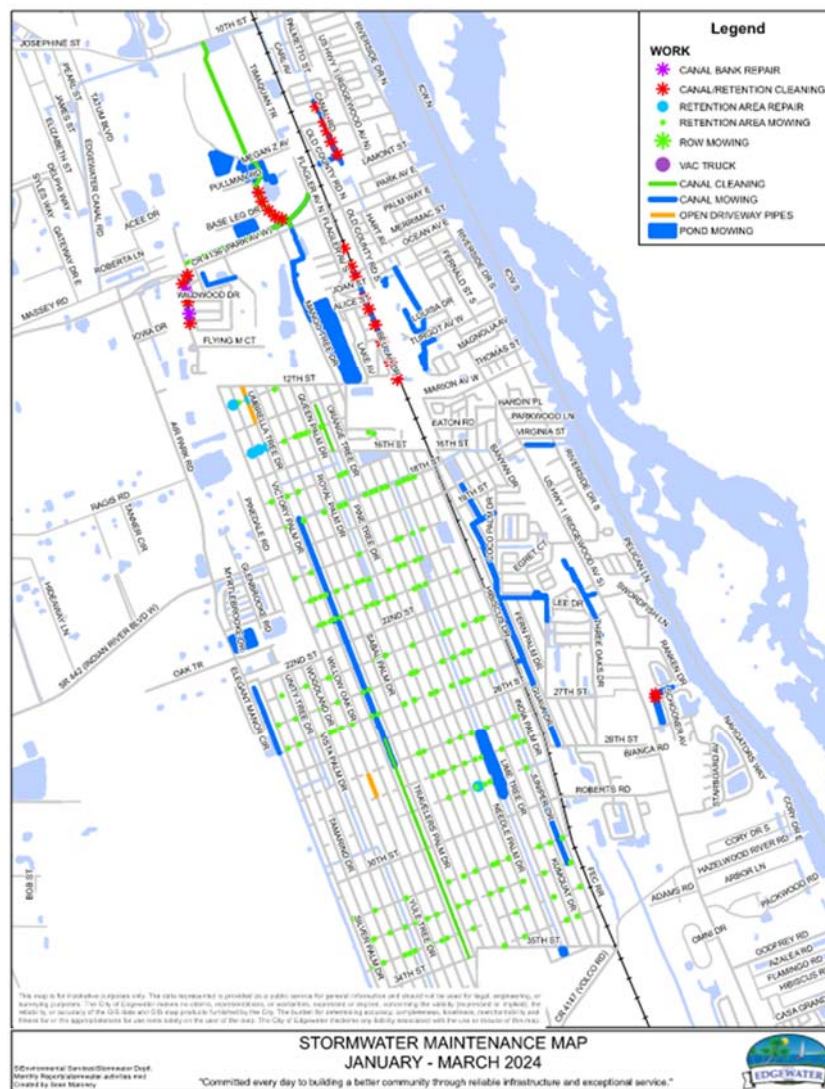
### Background

The City of Edgewater is home to a complex network of canals that serve as a vital component of the drainage system for the community. Proper canal maintenance is essential to ensure the waterways remain safe and functional.

Canals are an essential component of Edgewater's infrastructure. They provide an efficient means of managing stormwater runoff, which is especially important in Florida's wet climate. By directing excess water away from residential areas and roads, canals help prevent flooding and reduce the risk of property damage.

The maintenance activities represented below were completed by the Public Works Division in the Second Quarter of FY2023-24. Included in these activities were the cleaning of five (5) miles of canal, the mowing of 9.4 miles of canal and 269 stormwater retention areas, as well as other stormwater maintenance activities. This is shown in Figure-1.

Figures-1  
Stormwater Maintenance Effort



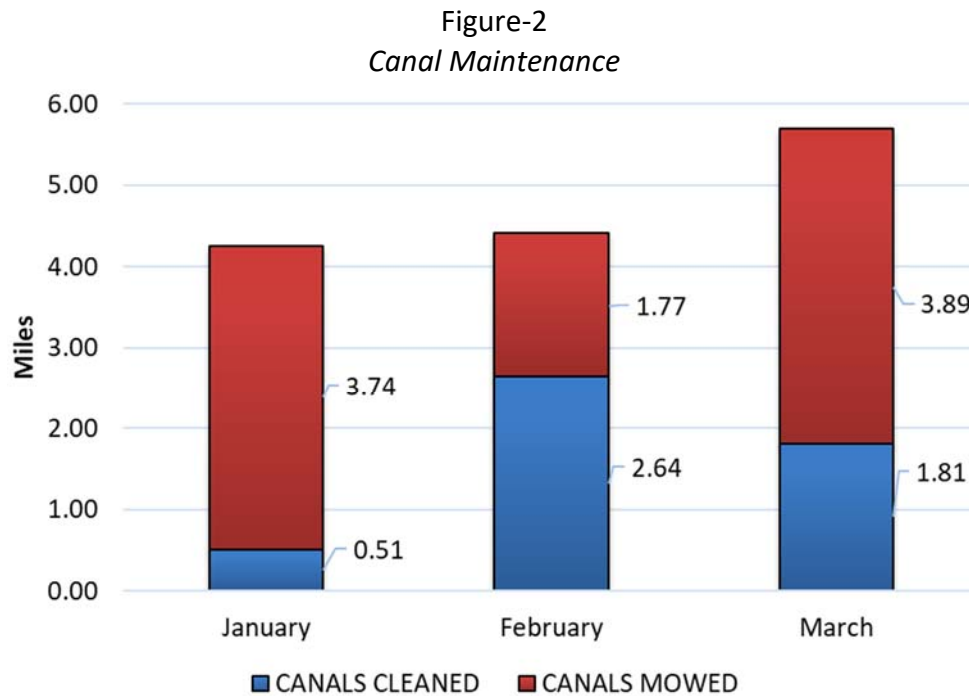
**Key Performance Indicators (KPI)**

KPIs or key performance indicators, are quantifiable measures of performance over time for a specific objective to pursue continuous improvement. Our specific KPIs provide targets for our teams to shoot for, milestones to gauge progress, and insights that help us make better operational decisions.

This Quarter’s KPIs concentrate on the following maintenance and operational activities.

***Stormwater***

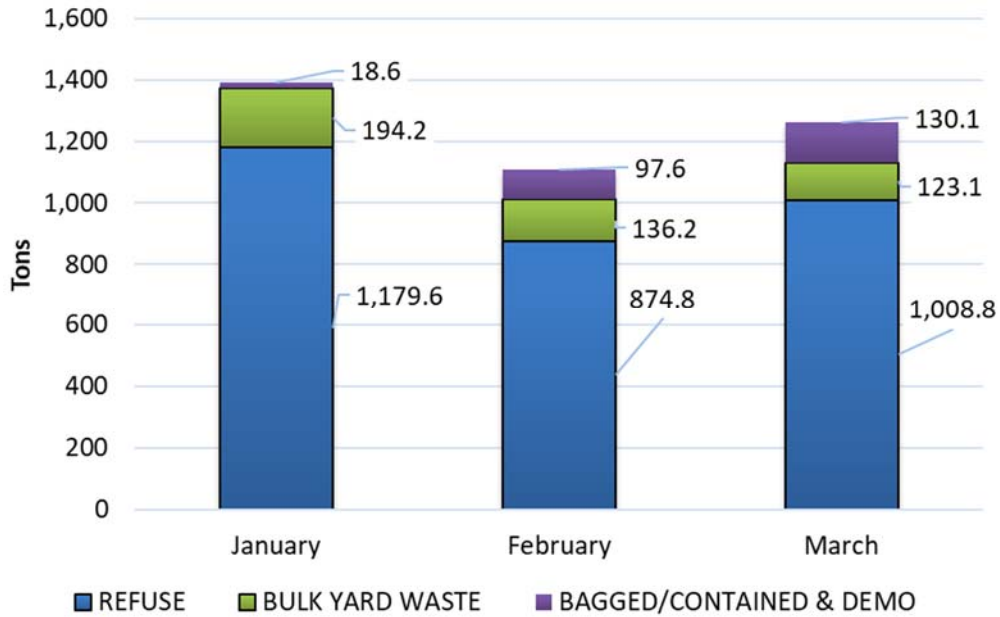
Figure-2 shows the canal cleaning and canal mowing in miles for the Quarter. The Stormwater Division mowed 9.4 miles and cleaned five (5) miles.



***Solid Waste***

Figure-3 shows the KPI values of solid waste collection during the Quarter. The Division collected 3,063 tons of Refuse, 454 tons of Bulk Yard Waste, and 246 tons of Bagged/Contained. The City’s recycling contractor collected 640 tons of recyclable materials or approximately 22% of the total solid waste collected for the Quarter.

Figure-3  
Collected Solid Waste



**Fleet Maintenance**

The Fleet Maintenance Division accomplished 260 repair orders during the Quarter. Applying a Prato analysis to the total repair orders, Police, Refuse, Stormwater, Field Operations, Fire, and Parks & Rec contributed 83% of the total or 219 repair orders. This is shown in Figure- 4. Figure-5 also shows the total fleet repair orders for each group.

Figure-4  
Prato Analysis of Repair Orders

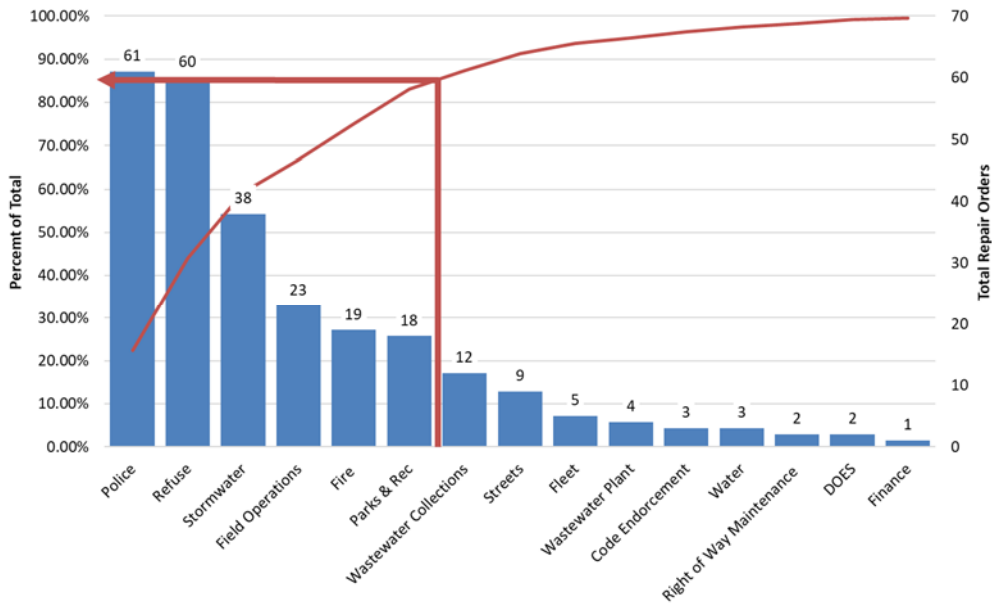
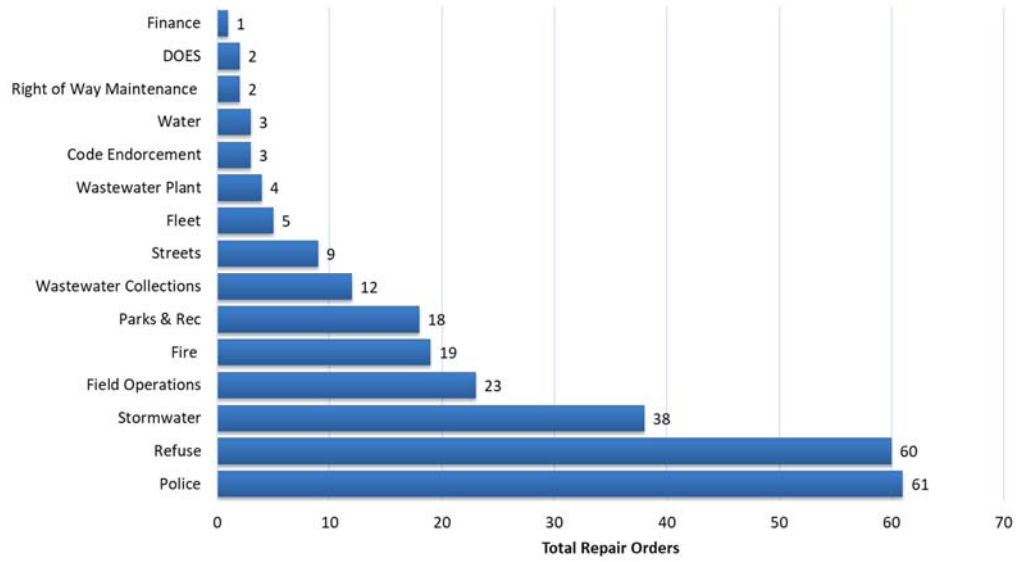


Figure-5  
Repair Orders



**Public Works Projects**

**Resurfacing and Dirt Road Reduction**

The Public Works Division employs several pavement preservation strategies. These include overlay, mill & overlay, micro-surfacing, and asphalt rejuvenation. During the Second Quarter of Fiscal Year 2023-24, the Division milled & overlaid approximately .9 miles of Willow Oak Dr. from 12<sup>th</sup> Street to S.R.- 442, Boston Road from S. Ridgewood Ave. to S. Riverside Dr., and a portion of Mariners Gate Dr., as shown in Figures-6 & 7.

Further, to continue the Council’s effort to reduce the City’s unpaved roads and in turn reoccurring maintenance costs, the Division also provided oversight of the application of an alternative surface treatment, called chip-seal. This surface was applied to approximately 1.08 miles of unpaved roadway during the second Quarter of FY23-24. This is shown in Figure-8.

Figure-6  
Resurfacing- Willow Oak Dr.



Figure-7  
Resurfacing- Boston Rd. & Mariners Gate Ct.

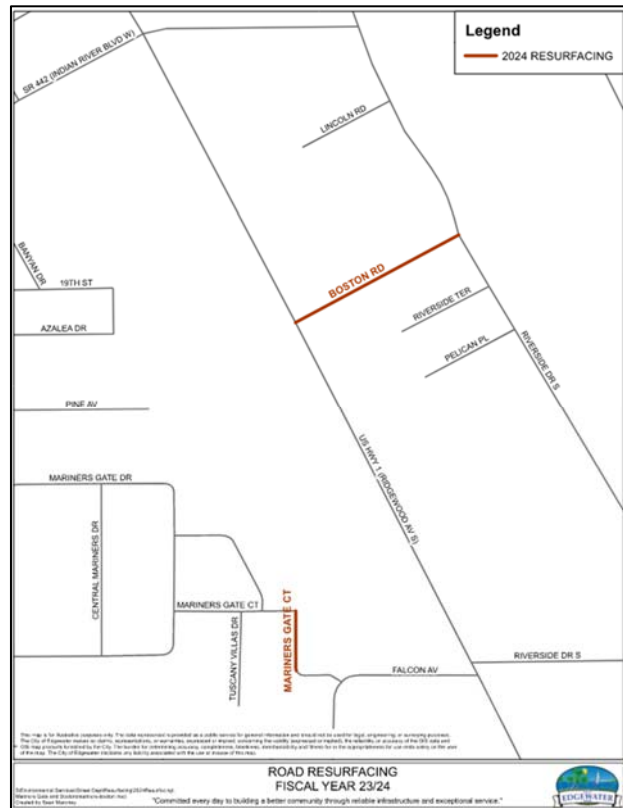


Figure-8  
Dirt Road Reduction



**G-2 and G-11 Canal Improvements Project**

The G-2 and G-11 canal drainage basin comprises around 350 acres of low-lying urban areas that are susceptible to flooding. When hurricanes occur, accompanied by heavy rainfall and a significant tidal surge, the Gabordy Canal's backflow from the Indian River hinders the proper functioning of the G-2 and G-11 canals in preventing flooding in the service area. This results in water damage to houses and increases the risk of permanent housing loss when the canals cannot adequately drain the area. This type of damage was witnessed recently in Hurricanes Ian and Nicole in September and November of 2022.

The Florida Department of Economic Opportunity (FDEO) opened up a second cycle of the Community Development Block Grant Disaster Recovery (CDBG-DR) program for infrastructure improvements related to damages from Hurricane Irma.

On June 30, 2020, the City applied for \$14.7 million grant funding for a project to 1) prevent storm surges from the Indian River from traveling back up the canal and flooding homes, 2) construct stormwater pump stations to reduce flood stages between US-1 and the railroad tracks between 10th Street and Marion Avenue, and 3) construct additional stormwater storage ponds along the G-2 and G-11 canals.

**Financial**

- Mead & Hunt - Conceptual Design for DEO Application - \$12,944

- Notice of Intent to Award letter was received from DEO on January 22, 2021, for \$14,697,665

### **Status and Accomplishments**

- At the February 5<sup>th</sup> City Council meeting, staff presented an overview of the preliminary findings of the collected data and hydraulic modeling.
- Milestones:
  - Formalize selected alternatives with City Staff (thru April 2024)
  - Final design/permitting (April 2024 – December 2024)
  - Property acquisition (thru July 2024)
  - Bidding (November 2024 – March 2025)
  - Construction (January 2025 – April 2026)

### **Travelers-Umbrella and Unity-Vista Canal Armoring Project**

In April of 2022, the City Council approved a design proposal from ECT, Inc. to design canal bank armoring solutions for two segments of the Florida Shores canal network. In the course of initial project meetings, including a pre-application meeting with St Johns River Water Management District, additional areas were added to the design and more in-depth analysis was determined needed for a sustainable design.

The two segments of the Florida Shores Canal system:

1. Travelers-Umbrella Canal from S.R.-442 to 1800 Travelers Palm Dr. (+/- 800 LF)
2. Unity-Vista Canal from 22nd Street to 2623 Unity Tree Dr (+/-3,000 LF)

### **Financial**

- ETC Inc., Design Engineering and Construction Document Preparation - \$159,220

### **Status and Accomplishments**

- On November 15<sup>th</sup>, staff met with the City's selected design engineer, ETC, Inc. for the review of the 75% project plans.
- ECT, Inc. is currently working on the project's construction cost estimates and finalizing the bid package for its advertisement.
- The City has received 100% plans and a bid package. The department is waiting on further construction funding. \$300,000 is budgeted each year towards the \$1 million project.

### **Duck Lake Outfall Project**

In June of 2023, City staff requested a proposal from the engineering firm Halff, Inc. under the terms of the City's continuing services contract for the engineering design, permitting, and construction documents preparation for stormwater drainage improvements. The proposal is to design a new control structure and outfall pipe along Lime Tree Drive. This project will require permitting through the St Johns River Water Management District and potentially other regulatory agencies.

### **Financial**

- Halff Inc. - Engineering design, permitting, and construction documents preparation - \$137,100

### **Status and Accomplishments**

- City staff has received and reviewed the 60% plans from our consultant, Halff Engineering.
- During the Second Quarter of the fiscal year, a meeting was held between staff and the design



engineer (DE) to discuss design progress and seek feedback. The DE continues to explore alternatives to addressing stormwater value in the area of Duck Lake.

- Staff anticipates project design will be finalized during the latter portion of the Third Quarter.

## UTILITIES ACTIVITIES AND PROJECTS

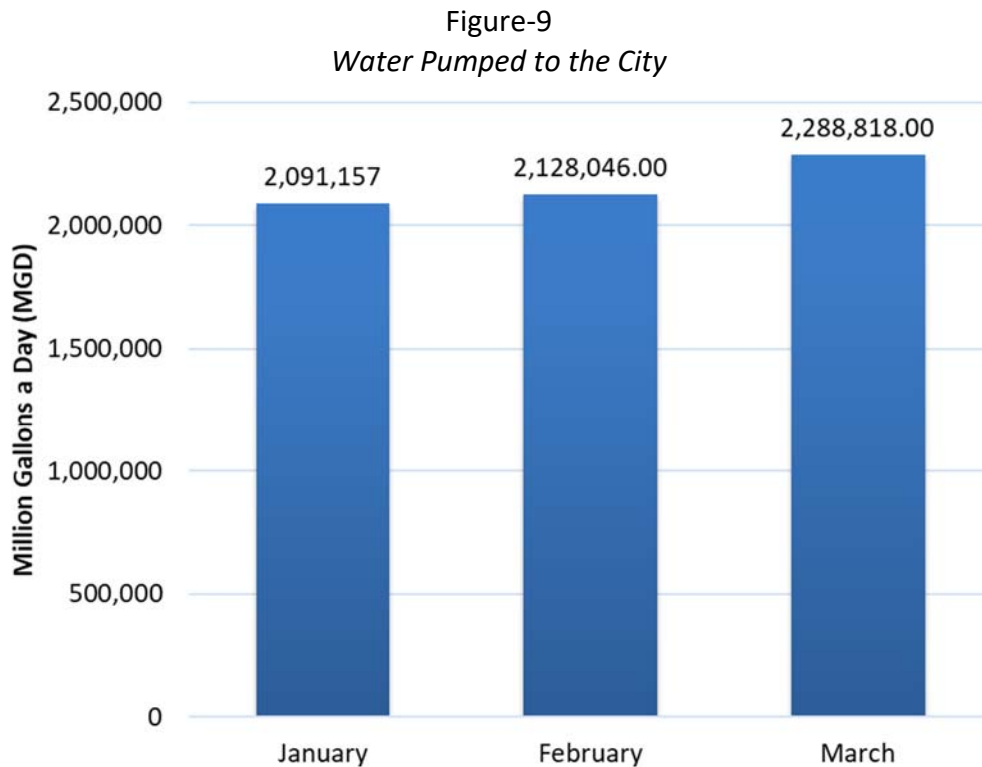
### Key Performance Indicators (KPI)

KPIs are quantifiable measures of performance over time for a specific objective to pursue continuous improvement within the Utility Division. Specific KPIs provide targets for our utility and plant teams to achieve, milestones to gauge progress, and insights that help us make better operational decisions.

This quarter's KPIs concentrate on the following maintenance and operational activities.

#### **Water Treatment**

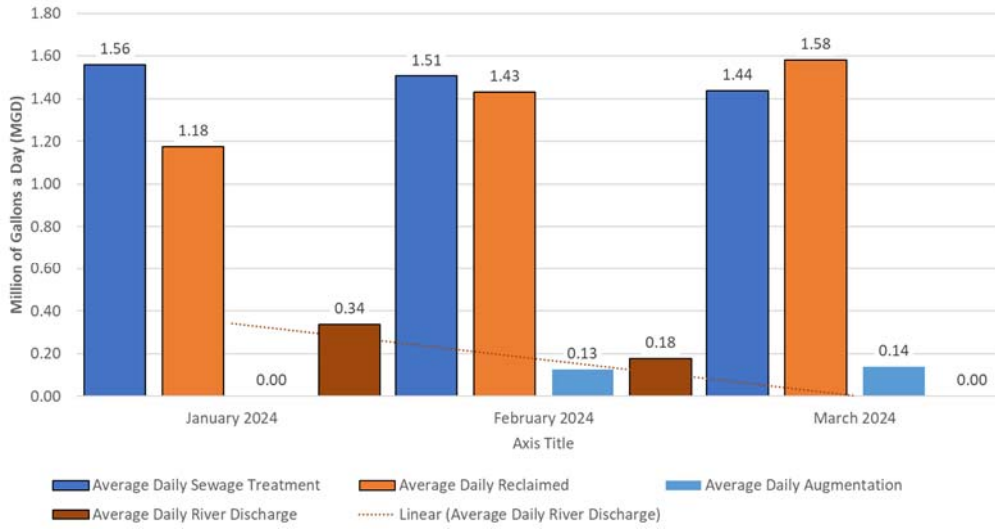
During the Quarter, the Water Treatment Plant pumped a reported 197,492,590 gallons of finished water to the City. This is an average of 65,830,863 gallons per month, or 2,169,340 a day. Figure-9 shows the water pumped to the City by month for the Quarter.



#### **Wastewater Treatment**

Figure-10 shows the daily averages of several KPIs associated with the Wastewater Treatment Division for the Quarter, by month. The division averaged 1.50 million gallons a day of sewage treated, 1.40 million gallons a day of daily reclaimed processed, 0.09 million gallons a day of reclaim augmentation, and 0.17 million gallons a day of river discharge. In comparison, the first Quarter saw a river discharge of approximately 30.34 million gallons and the Second Quarter saw a 15.6-million-gallon discharge. This equates to a reduction of 14.74 million gallons or a 48.58% decrease. Additionally, the division saw a 38% decrease in dates of river discharge.

Figure-10  
Wastewater Treatment & Reclaimed



### Field Operations

During the Quarter, Field Operations responded to 2,609 Service Calls or an average of 870 per month. This calculates to roughly 200 a week.

Figure-11 also shows several other KPIs. These include 79 new water connections, 61 reclaimed water connections, and 78 new sewer connections. The Division completed 393 water meter change-outs, this is more than three times the number accomplished during the first Quarter of this year. During the Quarter, the Division also tested 320 backflow devices, an increase of 9% over the previous Quarter. Figure-12 shows the monthly totals for water meter change-outs and Figure-13 shows the monthly totals for backflow devices tested.

Figure-11  
New Connections

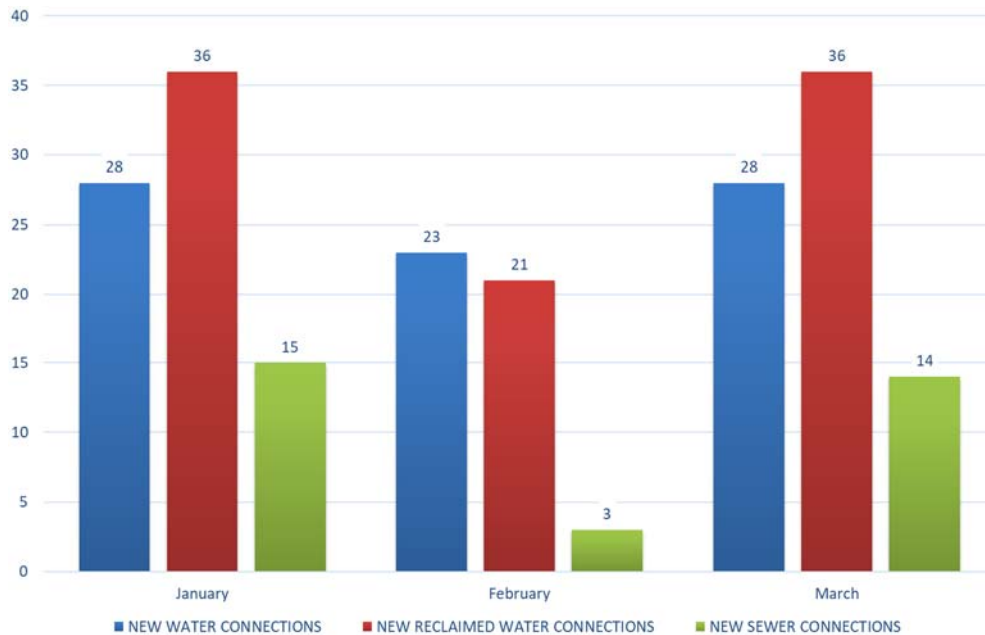


Figure-12  
*Water Meter Change-Outs*

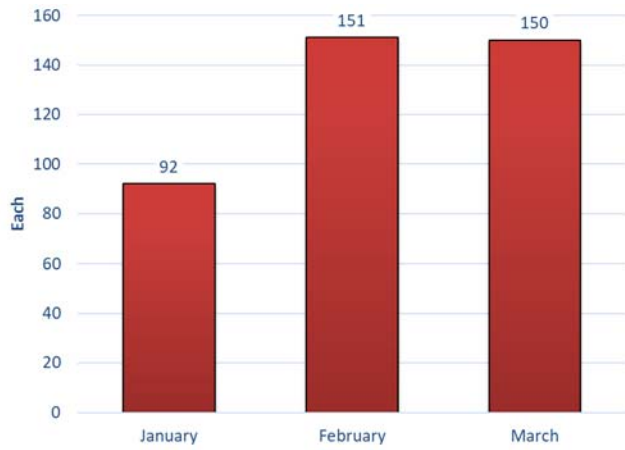


Figure-13  
*Backflow Devices Tested*



## **Utility Projects**

### **Lead Service Line Inventory (LSLI) Initiative**

On November 30, 2023, the U.S. Environmental Protection Agency (EPA) released a proposed rule establishing National Primary Drinking Water Regulations for Lead and Copper: Improvements (LCRI). In summary, all Community Water Systems (CWS) and Non-Transient Non-Community Water Systems (NTNCWS) in the United States must inventory their potable water service lines, including the identification of service line material classification...(40 CFR § 141.84(a))

In compliance with this mandate, the Department's leadership developed a methodology and process for performing the inventory and documenting the material type of all water service lines installed before January 18, 1989, for approximately 6,633 services. Leadership has dedicated staff on Fridays during normal working hours from each Division towards the completion of this challenge.

The full inventory and results will be submitted to the Department of Environmental Protection before the October 16, 2024 deadline.

### **Status and Accomplishments**

The initiative began with staff training on March 22<sup>nd</sup>, property owner notification by mail the week of March 25<sup>th</sup>, and initial fieldwork performed through eleven (11) teams of 3-4 employees per team began on March 29<sup>th</sup>. In the first week, the Department identified and inventoried 463 services, or just over thirteen (13) services per staff participating in performing the survey.

It is estimated the inventory portion of the project will be accomplished in twelve (12) weeks, with weekly realized efficiencies

### **Lift Station Rehabilitation**

#### **Lift Station #11 (serving the Wildwood Subdivision on West Park Avenue)**

The construction of Lift Station #11, situated at 3 Wildwood Dr., dates back to the late 1970s. Although some of its components and the pump have been replaced over the past six decades, the station has surpassed its expected lifespan, making it necessary to undergo a complete refurbishment. As part of this renovation, a diesel-driven bypass pump will be installed to ensure uninterrupted station operation during power outages.

### **Financial**

- Mead & Hunt – Design Engineer - \$55,153
- Estimated Construction cost - \$472,450

### **Status and Accomplishments**

- The City has received 100% Design drawings and they have been reviewed by City staff.
- Construction documents are prepared and the associated solicitation was advertised in December, with the bids opened on January 10<sup>th</sup>.
- The project was awarded to Clearwater Solutions, with a COI and performance bond received from the contractor.
- The project's pre-construction meeting will be held during the Third Quarter.

#### **Lift Station #14 (Shangri La Circle - Serving the Shangri La Village subdivision)**

Through a routine infrastructure assessment process, the Division annually evaluates the condition of its lift stations. Lift Station #14, has been identified as requiring rehabilitation due to the age and condition of the station's equipment. This station was constructed and installed in 1981 and is at the end of its useful life.

The rehabilitation of this station will make upgrades to meet current standards while updating the station's equipment to sustain its reliability for the community of Shangri La Village.

Agenda 1/8/2024

- A PO for this project has been issued to Danus Utilities and Hydra Services
- The design has been approved, and the manufacturing of the equipment and its electrical panel is ongoing.
- Danus Utilities will perform the station rehabilitation once all materials have been secured.

*Lift Station #19 (Pyramid Park- Serving the Pyramid Park mobile home community)*

Through a routine infrastructure assessment process, the Division annually evaluates the condition of its lift stations. Lift Station #19 has been identified as requiring rehabilitation due to the age and condition of the station's equipment.

This station was constructed and installed in 1960 and is at the end of its useful life. The rehabilitation of this station will make upgrades to meet current standards while updating the station's equipment to sustain its reliability for the community of Pyramid Park.

**Status and Accomplishments**

- On January 8, 2024, a motion was made and approved for the purchase of necessary components to accomplish the rehabilitation.
- A PO for this project has been issued to Danus Utilities and Hydra Services
- The design has been approved, and the manufacturing of the equipment and its electrical panel is ongoing.
- Danus Utilities will perform the station rehabilitation once all materials have been secured.

**Park Avenue Booster Pump Station**

The objective of this project is to enhance the existing Park Avenue Booster pump station, which is situated at the site of the former Park Avenue Water Treatment Plant (WTP) in the City of Edgewater. This new pump station will be a replacement for the current high-service pump station, which is the only functional component of the old Park Ave WTP that remains in use after the current water treatment plant was constructed in 1993. The plan for this project involves demolishing all existing WTP buildings and their components situated to the east of the storage tank. A new pump station building will be installed directly west of the existing storage tank, featuring three (3) high-service pumps. Once the new pump station is fully operational, the old pump station will be taken offline and the buildings demolished. The outcome of this project will be a new and improved pump station while also creating open space to the east of the ground storage tank for the future needs of the Department.

**Financial**

- Mead & Hunt - Design Engineer Cost - \$183,873

**Status and Accomplishments**

- The City has received 90% Design drawings and reviewed them with a few comments. They have been resubmitted to the design engineering firm for final changes.
- The Department anticipates receiving bid-ready plans and documents to be delivered from the consultant in the first Quarter of FY23-24.
- Due to the recent rise in construction costs, the engineer will be assisting the City in acquiring an SRF loan for the construction of this project.

**Park Ave Water Main Relocation**

Kimley-Horn and Associates have been hired by the City of Edgewater to provide design services for the replacement of the 6-inch water main along the western ROW of US-1 at the Park Avenue intersection. The intersection of Park Avenue and US-1 is the location of a roadway expansion project being undertaken by the Florida Department of Transportation (FDOT), where the existing 6-inch water main and two corresponding valves conflict with the proposed FDOT infrastructure. Kimley-Horn's responsibility is to design the removal and replacement of the current 6-inch water main and valves located in the intersection and along US-1.

Upon further investigation, it was determined most appropriate to expand the scope to relocate all water mains away from the US-1 right-of-way at the Park Avenue intersection, replacing them with a new 12-inch water main installed along Whetzel Street, Western Avenue, and Wilkinson Avenue.

**Financial**

- Kimley-Horn and Associates, Inc. - Design Engineer Cost - \$18,500
- Kimley-Horn and Associates, Inc. - Additional Engineering - \$55,000
- GPS Civil Construction, Inc. - Construction Cost - \$664,550

**Status and Accomplishments**

- The Preconstruction meeting was held at City Hall on 09/11/23 with GPS Civil and Kimley-Horn.
- Construction continues, with completion anticipated for the latter portion of the third Quarter.

**Meter Replacement Program**

In 2005, all of the City’s existing water meters were replaced at one time, replacing the previous manual-read meters with drive-by radio read transmitters. This batch of meters has exceeded their useful life. To avoid repeated large expenses, Staff has organized an ongoing meter replacement program, with the new meters being connected to a continuous remote monitoring network. This multi-year project provides real-time data for staff and ultimately customers to view consumption and find leaks promptly.

**Status and Accomplishments**

- New IPERL water meters and transmitters will be installed over the next several years.
- The areas of focus for new IPERL and VFLEX AMI upgrades are first associated with “dead” or non-reading meters, then two-inch galvanized water line upgrade and Hart Avenue Project areas when switching service lines to the newly installed water mains.
- Over 5,672 (46.95%) accounts are now fully integrated into the Sensus AMI system. There are another 2,900 IPERL meters that have been installed over the years using the drive-by radios which will need to have their transmitters replaced to fully integrate them to remote read capability.

While this is very time-consuming, staff has determined that the best route to take is to continue using in-house staff to retrofit these water connections.

- Supply chain issues for microchips have eased but there are continued delays in the delivery of meters and MXU Transmitters. This is an industry-wide issue and is not unique to only this vendor and supplier.



## ADMINISTRATIVE PROJECTS/ACTIVITIES

### **Public Works Facility**

#### **Background**

The City acquired property at the north end of Dale Street in the Parktowne Industrial Park for \$1,200,000 on January 16, 2015. The City sold 16.88 acres to Northwest Lineman College for \$381,488.00 on June 28, 2016.

FDOT funded the construction of a segment of the SunTrail network along the western and northern property lines of this City parcel in 2016, being a part of the Coast-to-Coast Connector network and the St. Johns River-to-Sea Loop network of Showcase Trails.

A 2-acre reclaimed water storage pond was constructed in 2020 to reduce reliance on the City's River discharge.

#### **Financial**

- Schenkel Shultz Architecture
  - \$350,000 – Phase I – Planning and Schematic Design
  - \$1,640,000 – Phase 2 – Architectural, interior design, civil, structural, landscape, irrigation, land surveying, environmental engineering, mechanical electrical, plumbing, fire protection, security and communications, and grant coordination

#### **Status and Accomplishments**

- Department staff in cooperation with the project's design engineer has crafted a phased project strategy. Phase I addresses current critical operational needs which will occupy approximately 25% of the total project. Phase II will address the remainder of the project's proposed operational needs.
- City staff continues to coordinate and work with the design consultant toward the development of 100% plans for Phase I. All appropriate permits were filed with FDEP and the SJRWMD.
- Through the FY23-24 City budget ratification, the City Council authorized financing the first construction phase of the Public Works Complex to be built off of Dale St.
- Solicitation for the Project's Construction Manager at Risk (CMAR) has been accomplished with the ranked firms being presented to the City Council in May for proposal ranking approval and moving forward with negotiations.

### **Trail – Oak Hill to West Park Avenue**

FDOT has completed a Project Development & Environment (PD&E) Study for a St. Johns River to Sea Loop trail route from US 1 and Kennedy Parkway to Dale Street. The City has hired a consultant engineer to design the trail from Roberts Road and US 1 to Dale Street which will tie in with the existing trail near Rotary Park.

#### **Financial**

- FDOT has provided funding of \$2,349,000 for this design work.

#### **Status and Accomplishments**

- On October 27<sup>th</sup>, 2023, plans were submitted to FDOT.

- FDOT is proposing splitting the project into two construction phases, The first phase being from Dale Street to SR-442 and the second phase being then from SR-442 to 30<sup>th</sup> Street. The first phase would include the pedestrian crossing at SR-442.

### **Southeastern Utility Service Area Agreement with County**

Departmental staff met with Volusia County Utilities staff to discuss mutual goals and how to interact with the increasing development interest of our ISBA and the County.

This agreement outlines the Utility Service Areas of the County and City. Some of these areas currently overlap and the intent is to mutually agree on boundaries for retail services in Southeast Volusia. The County and City staff have revised the agreement and associated documents several times over several years.

### **Status and Accomplishments**

- The Environmental Services Director has met with the Director of Water Resources and Utilities for Volusia County to begin drafting a new Interlocal Agreement for Utilities. One core feature of the new agreement will be a clear line of demarcation between Edgewater and Volusia County utility service areas in the vicinity of Ariel Road.
- In November 2023, the Environmental Services Director created and submitted a draft Interlocal Agreement to the TRC, seeking comments and feedback. The received comments were integrated into the draft and readied for review by the City Manager, before progressing further.
- No further status is available.

### **Stormwater Master Plan**

The City of Edgewater is responsible for the maintenance and repair of approximately 14.6 miles of stormwater pipe, 170 detention/retention ponds, 1,000 catch basins, and 25 miles of canals. The stormwater infrastructure is primarily located within the City's right-of-way, except for some being located in drainage easements within the City. Stormwater outfalls include the Gabordy and 18th Street Canals, as well as other indirect discharges such as the Ariel Canal which is unincorporated in Volusia County, and the Turnbull Hammock. There are approx. 1,300 properties adjacent to canals in the Florida Shores portion of the City.

### **Status and Accomplishments**

- On November 30, 2023, a request for qualifications was published.
- On January 7, 2024, five (5) firms submitted proposals and were deemed responsive and responsible.
- On February 7, 2024, the evaluation committee met and ranked the firms based on the published evaluation criteria.
- On March 3, 2024, a motion was made and approved to authorize the City Manager to enter into negotiations with Jones Edmunds & Associates, the top-ranked firm.
- The original scoping meeting will be held during the Third Quarter.

## NEW EMPLOYEES, CERTIFICATIONS, LICENSES, TRAINING, MEETINGS, & WEBINARS

### New Employees

Environmental Services welcomed the following new employees for the Quarter:

- Chanon Caruthers-Refuse Equipment Operator 01/02/2024
- Brian Jasniewski-FOPS Distribution Systems Operator Recruit 02/05/2024
- David Pieropan-WWC Maintenance Tech Recruit 02/12/2024
- Russell Hall-FOPS Distribution Systems Operator Recruit 02/12/2024
- Christopher Hodgkinson-Refuse Equipment Operator 03/11/2024

### Promotions and Transfers

- Derrick Perry-WW Maint Tech to FOPS Distribution System Operator Recruit 02/04/2024
- Shannon Parker-Transfer from Distribution System Operator Recruit to Wastewater Plant Operator Recruit 02/18/2024

### Certification, Licenses, Training, Meetings, & Webinars

- Paul Reid-Bucket Truck Certification, Electrical Hazard Awareness Program (EHAP) Certification, and CPR Certification
- Toni Henry-Bucket Truck Certification, Electrical Hazard Awareness Program (EHAP) Certification, and CPR Certification

## EDUCATIONAL OUTREACH (RESIDENTS & EMPLOYEES)

- “Scoop the Poop” educational program-provided educational items and/or flyers:
  - Pet Palozza – EdgeFest Event 02/24/2024
  - Pens and pencils were provided to City Hall and Environmental Services Front Office
- Provided Environmental giveaways (bags, pencils, pens, key rings, waterbottles, folders, coasters, sticky notes, Frisbees, hand sanitizer, etc.) to the following:
  - Pet Palozza – EdgeFest Event 02/24/2024
  - Pens and pencils were provided to City Hall and Environmental Services Front Office
- Community On the Edge – provided environmental articles/holiday schedules, etc.
- Newsletter – provided environmental articles/holiday schedules, etc.

### Departmental Safety Meetings

- January – General Safety/Cleanliness
- February – Cell Phones-A Work Distraction
- March – Fighting Fatigue in the Workplace