



**The Department of Environmental Services  
State of Maintenance & Operations  
3<sup>rd</sup> Quarter Report  
FY2023-24**



*"Committed daily 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

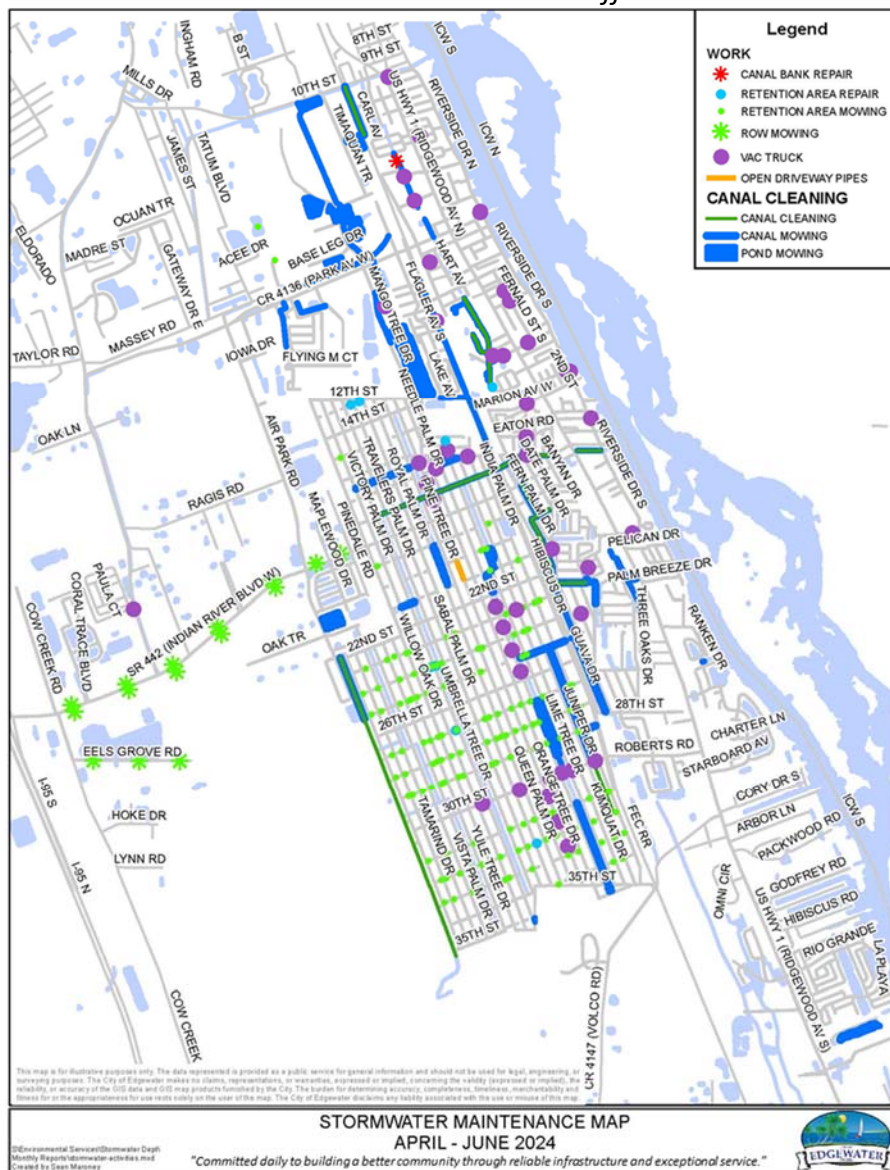
## Stormwater Maintenance Activities

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 Third Quarter of FY2023-24. Included in these activities were the cleaning of ~5.5 miles of canal, the mowing of 5.2 miles of canal and 196 stormwater retention areas, and other stormwater maintenance activities. This is shown in Figure-1.

Figures-1  
*Stormwater Maintenance Effort*



**Key Performance Indicators (KPI)**

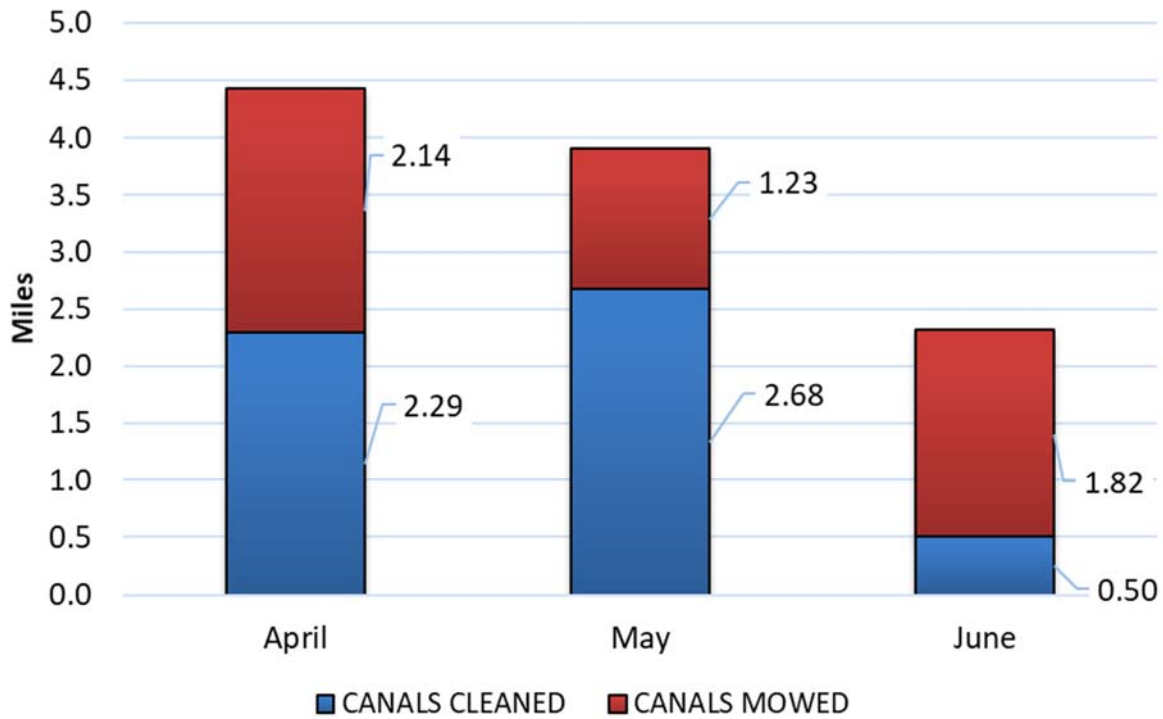
KPIs or key performance indicators, are quantifiable measures of performance over time for a specific objective to pursue continuous improvement. Our specific KPIs provide targets for our teams to shoot for, milestones to gauge progress, and insights that help us make better operational decisions.

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 cleaned ~5.5 miles of canal and mowed 5.2 miles.

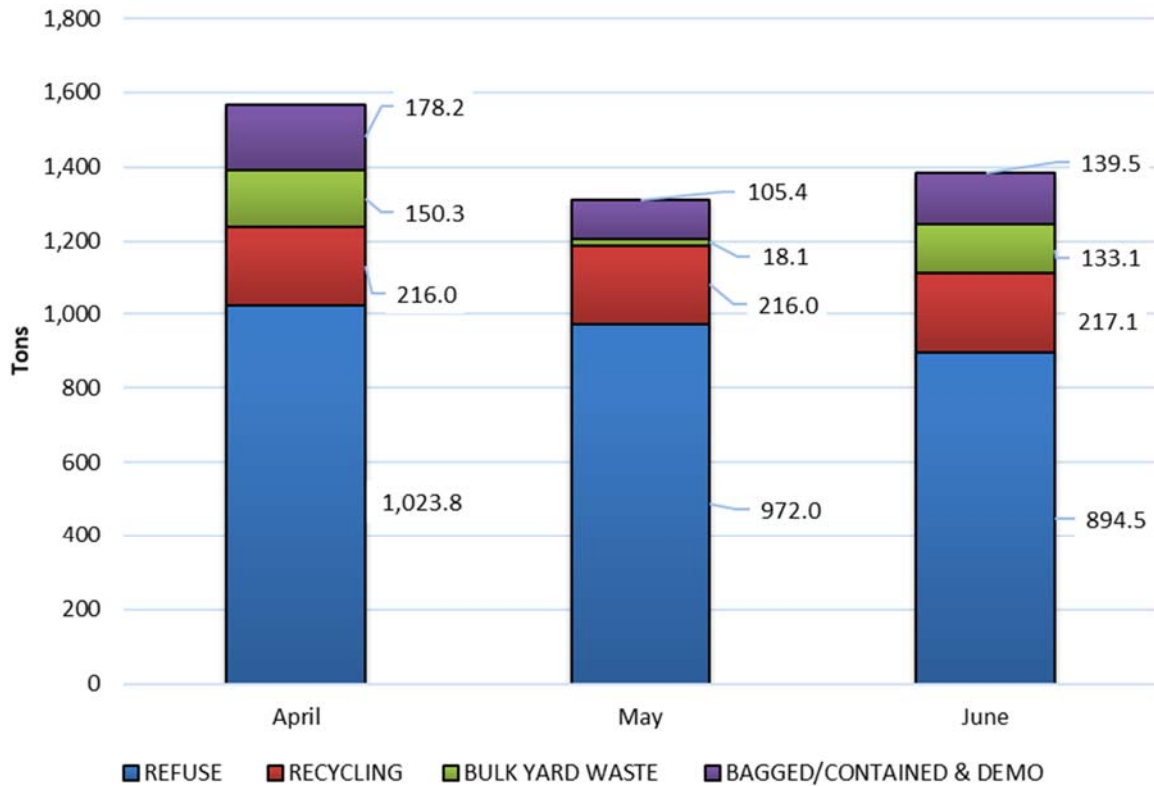
Figure-2  
Canal Maintenance



**Solid Waste**

Figure-3 shows the KPI values of solid waste collection during the Quarter. The Division collected 2,890 tons of Refuse, 301 tons of Bulk Yard Waste, and 423 tons of Bagged/Contained. The City’s recycling contractor collected 649 tons of recyclable materials or approximately 15% of the total solid waste collected in the Quarter.

Figure-3  
Collected Solid Waste

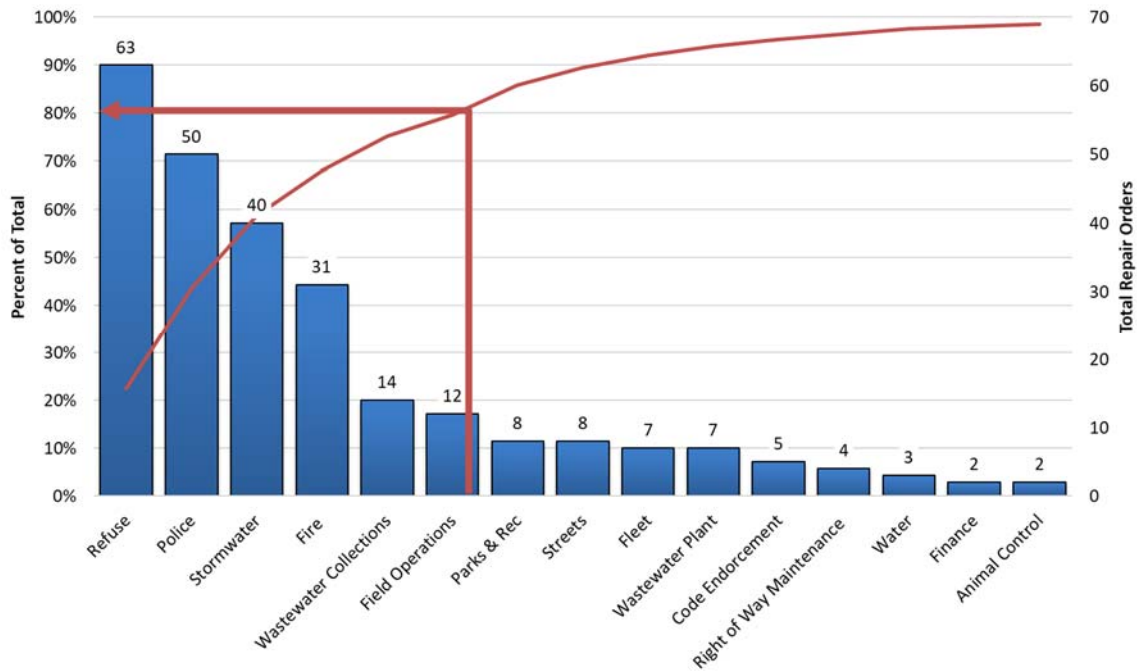




## Fleet Maintenance

The Fleet Maintenance Division accomplished 262 repair orders during the Quarter. Applying a Prato analysis to the total repair orders, Refuse, Police, Stormwater, Fire, Wastewater Collections and Field Operations contributed 210 repair orders or ~80% of the total. This is shown in Figure- 4. The figure also shows the total fleet repair orders for each group.

Figure-4  
Prato Analysis of Repair Orders



## **Public Works Projects**

### **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 a second cycle of the Community Development Block Grant Disaster Recovery (CDBG-DR) program for infrastructure improvements related to damages from Hurricane Irma.

#### **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
- Mead & Hunt – Group A Improvements – Design and Permitting – \$355,582

#### **Status and Accomplishments**

On June 3, 2024, the City Council approved Mead & Hunt's Scope and fee for the design and associated permitting for Group A Improvements. Group A Improvements will utilize the City's owned or soon-to-be-acquired lands to maximize conveyance and storage, addressing existing inefficiencies and limited formal basin storage. The focus of the Group A projects is the relative speed by which they can be installed and begin providing benefits to the residents and businesses in the G-2 / G-11 basin.

After beginning the detailed design of Group A, the consultant is expected to submit a proposal for the detailed design of Group B projects. Group B projects are those that will further improve stormwater conveyance in the G-2 / G-11 basin but require more complex coordination among various units of government and permitting agencies. Accordingly, Group B projects are expected to require an extended timeframe for construction completion relative to the Group A projects.

### **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**

- The City has received 100% plans and a bid package. The department continues to wait on further construction funding. \$300,000 is budgeted each year towards this multi-million dollar project.
- The City is pursuing a \$4,150,000 award through the Transform 386 Community Development Block Grant Disaster Recovery (CDBG-DR) infrastructure grant program.
  - To achieve the most competitively viable application, the City must budget for a 26% match, which amounts to \$1,079,000 of the estimated construction cost. To meet this requirement, Staff has identified \$300,000 from the current FY23-24 Stormwater budget allocations with the remaining balance to be supplied by an internal loan from the General Fund.

### **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 (SJWMD) and potentially other regulatory agencies.

### **Financial**

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

### **Status and Accomplishments**

- 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.
- During the Third Quarter, staff continued to coordinate design options with the engineering consultant. Departmental staff has also sought and is awaiting approval from the SJWMD.

## UTILITIES ACTIVITIES AND PROJECTS

### Key Performance Indicators (KPI)

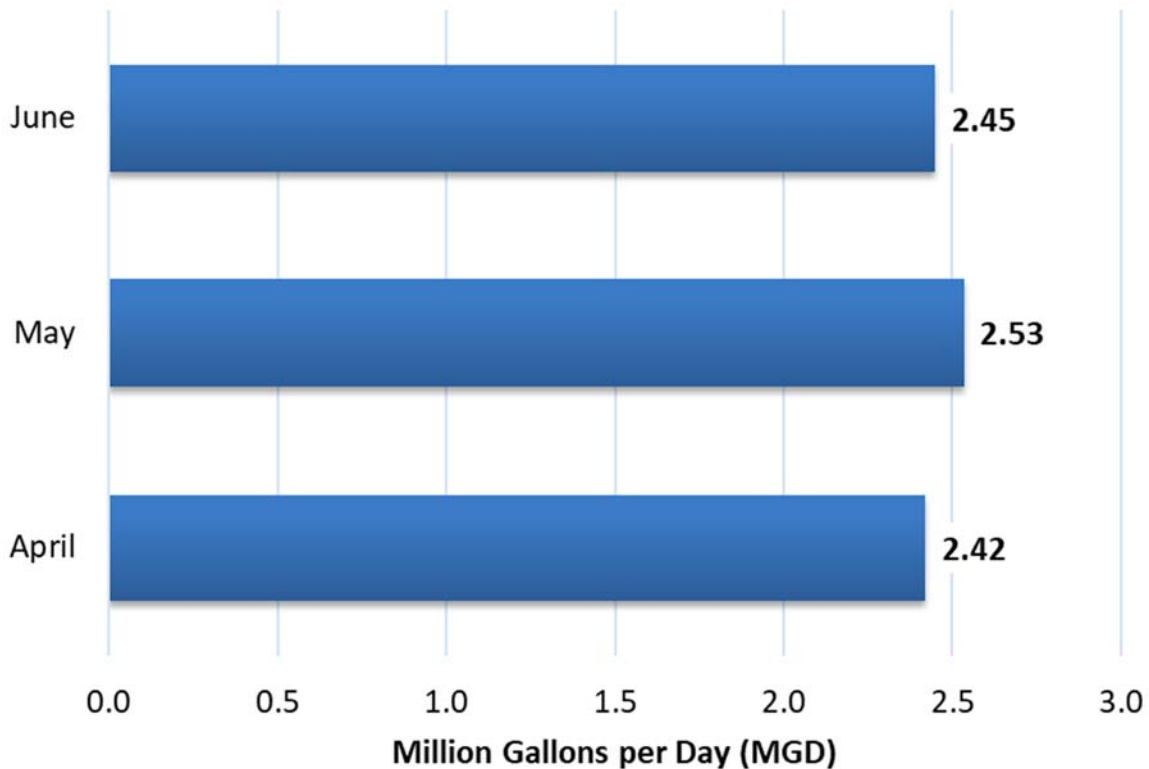
KPIs are quantifiable measures of performance over time for a specific objective to pursue continuous improvement within the Utility Division. Specific KPIs provide targets for our utility and plant teams to achieve, milestones to gauge progress, and insights that help us make better operational decisions.

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

#### **Water Treatment**

During the Quarter, the Water Treatment Plant pumped a reported 197.5 million gallons of finished water to the City, an increase of ~14% over the previous quarter. This is an average of 74.9 million gallons per month or 2.47 million gallons per day. Figure-5 shows the water pumped to the City by month for the Quarter.

Figure-5  
*Finished Water Pumped to the City*

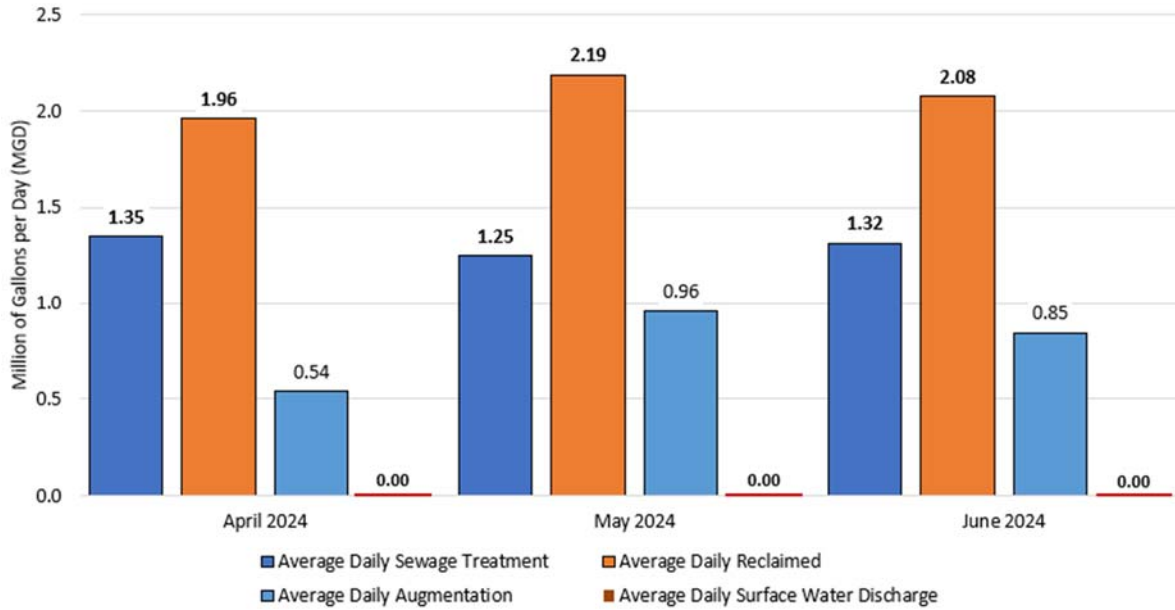




## Wastewater Treatment

Figure-6 shows the daily averages of several KPIs associated with the Wastewater Treatment Division for the Quarter, by month. The division averaged 1.31 million gallons per day of sewage treated, and 2.07 million gallons per day of daily reclaimed processing, including 0.78 million gallons per day of reclaim augmentation. There was no surface water discharge during the quarter. In comparison, the previous Quarter saw a surface water discharge of approximately 0.17 million gallons a day.

Figure-6  
Wastewater Treatment & Reclaimed



**Field Operations**

During the Quarter, Field Operations responded to 3,015 Service Calls, or an average of 1,005 per month. This further calculates to roughly 77 a week.

Figure-7 also shows several other KPIs. These include 95 new water connections, 55 new reclaimed water connections, and 91 new sewer connections. The Division completed 575 water meter change-outs, this is a 46% increase in the number of change-outs as compared to the previous Quarter of this year. During the Quarter, the Division also tested 235 backflow devices. Figure-8 shows the monthly totals for water meter change-outs and Figure-9 shows the monthly totals for backflow devices tested.

Figure-7  
New Connections

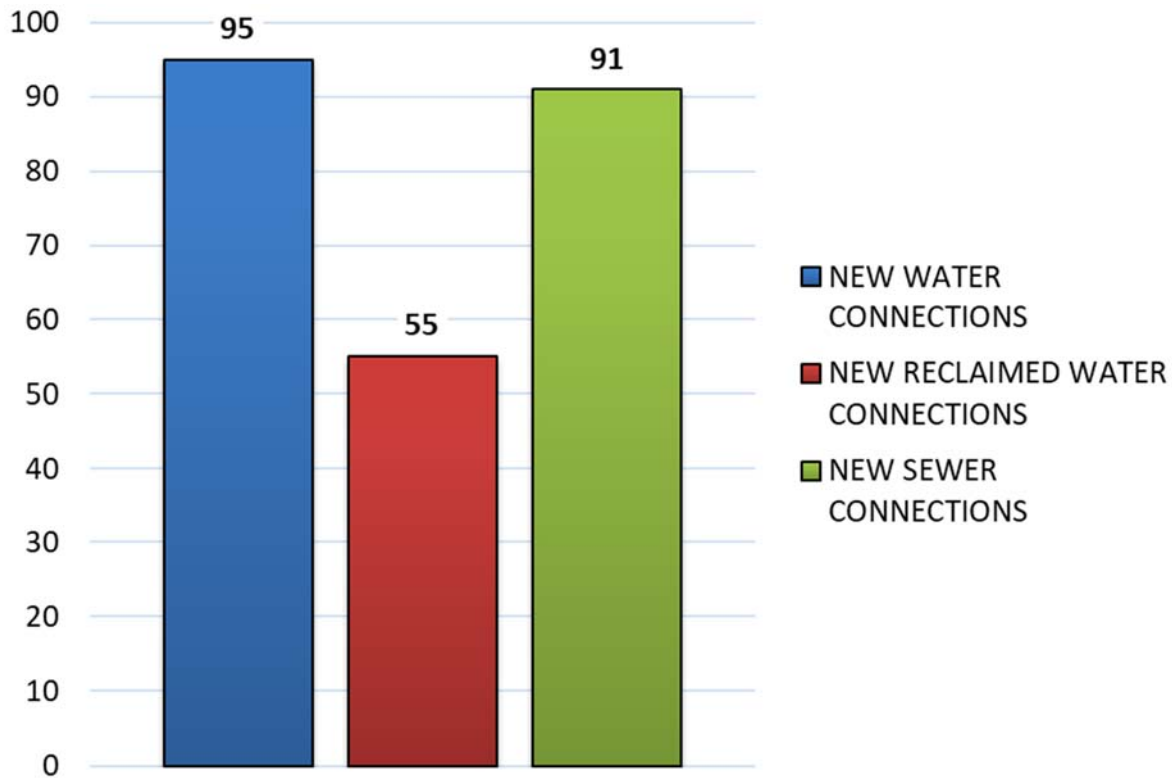


Figure-8  
Water Meter Change-Outs

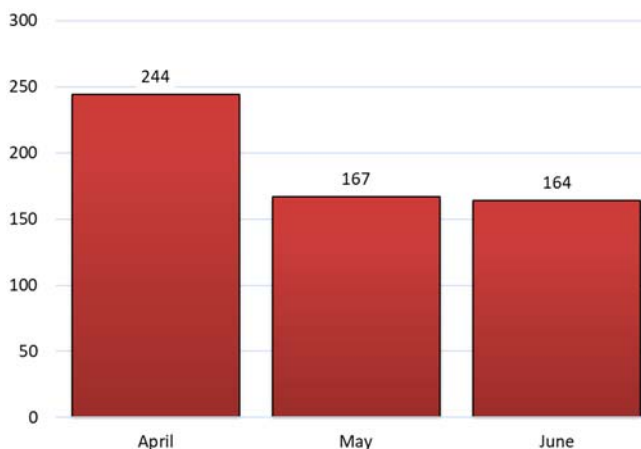
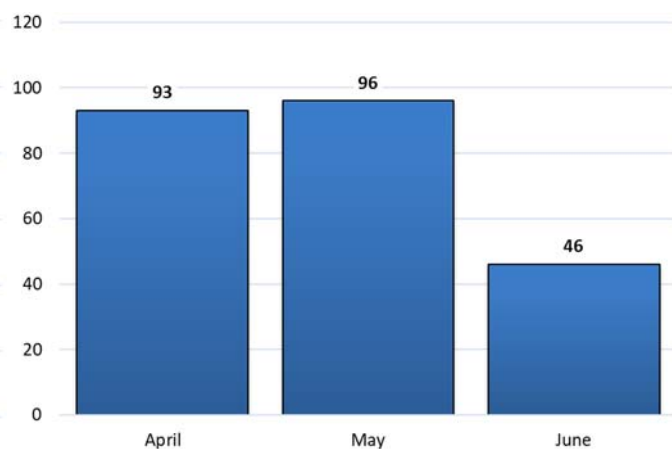


Figure-9  
Backflow Devices Tested



## 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) 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, representing approximately 6,633 services. Leadership 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 (DEP) 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>.

Project teams completed the majority of fieldwork in eleven (11) weeks, identifying the waterline on both the City side and customer side for roughly 4,500 services.

After the weekly field survey portion of the project was well underway, the City Clerk's office discovered sufficient documentation whereby the City of Edgewater prohibited the use of new lead pipe installation post-November 1975. Thus, the reducing the number of connections to be inspected reduced significantly. Since the commencement of our field initiative, two local utilities have visited the Department to discuss our success in completing our inventory.

During the project, mission-critical services were not negatively impacted. The Department anticipates the submission of the final report will be made to the DEP well before the October 16, 2024 deadline.

### **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
- Mead & Hunt – Construction Engineering & Inspection (CEI) Services - \$70,692

### **Status and Accomplishments**

- The project was awarded to Clearwater Solutions, with a COI and performance bond received from the contractor.
- On May 6, 2024, the City Council approved Mead & Hunt's Four (4) Phase/Task proposal for Construction Engineering & Inspection (CEI) Services of the lift station.
- The project's pre-construction meeting will be held during the final Quarter of FY24-25.

#### **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.

### **Status and Accomplishments**

- 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**

- 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 Project has been completed.

**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 areas when switching service lines to

the newly installed water mains.

- Over 6,453 (53%) accounts are now fully integrated into the Sensus AMI system. There are another 2,600 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.



## 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.
- \$35,112 – Review and update project documents to ensure compliance with the current regulatory codes and standards and to coordinate constructability recommendations.

##### *Wharton-Smith, Inc.*

- \$110,390 – Professional construction management/general contracting services.

#### Status and Accomplishments

- 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.
- On May 6, 2024, the City Council accepted the qualifications-based ranking of respondents to the competitive solicitation RFQ 24-ES-01 "Professional Construction Management/General Contracting Services (CMAR) for a new Public Works Facility" and authorized the City Manager to begin negotiations with the top-ranked firm, Wharton-Smith, Inc., regarding Scope & Fee for Part A Pre-Construction Services.
- On June 6, 2024, Wharton-Smith, Inc. offered a proposal for CMAR pre-construction services which includes:
  - Pre-Construction Management, Coordination, and Meetings
  - Budget Verification
  - Design and Constructability Review
  - Value Engineering
  - Schedule Development
  - Bidding, Procurement, and Guaranteed Maximum Price (GMP) Development
- The proposal is slated to go before City Council on July 1, 2024, for approval.

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

In June 2019, the Florida Department of Transportation (FDOT) completed a Preliminary Engineering Report to evaluate building a 13-mile-long shared-use non-motorized Trail (aka SUN Trail) in southeast Volusia County from Rotary Park through Florida Shores, then south along US-1 to Kennedy Parkway south of Oak Hill as part of the multi-county regional St Johns River to Sea Loop Trail system. A copy of this Preliminary Engineering Report is attached.

The northern 4.5-mile segment of this trail, from near Park Avenue at Dale Street to US-1 at Roberts Road was selected as the first portion to be designed and constructed. Since this segment is primarily along City of Edgewater streets, it was identified that the City of Edgewater would manage the design process with reimbursement funding provided by FDOT.

The City 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**

- 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.
- A project status presented by the Stanley Group, the hired design engineer is slated to be given to City Council on August 1, 2024.

### **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.

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.

#### **Status and Accomplishments**

- 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.
- The Environmental Services Director is in continued negotiations with Volusia County Utilities and Public Works staff.

## **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 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.
- On May 15, 2024, Jones Edmunds & Associates submitted a proposal for the project. The proposal includes eleven (11) tasks, which include the following:
  1. Kickoff Meeting, Project Management, and Coordination
  2. Data Collection
  3. H&H Model Schematic Development
  4. H&H Model Field Data Collection
  5. H&H Model Development
  6. Flood Protection Level-Of-Service Analysis (Fplos) and Problem Area Identification
  7. Surface Water Resource Assessment
  8. Improvement Alternatives and 20-Year Stormwater Capital Improvement Plan
  9. Operations and Maintenance (O&M) Review and Condition Assessment Criteria
  10. Draft and Final Stormwater Master Plan
  11. H&H Model Maintenance
- The proposal is slated to go before City Council on July 1, 2024, for approval.

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

### New Employees

- Asher Bell-FOPS Distribution Systems Operator Recruit 04/15/2024
- Christopher B Goodman-Refuse Equipment Operator 04/22/2024
- Steven Farina-Water Plant Recruit 05/20/2024
- Louis Jacobs Jr.-Refuse Equipment Operator 05/20/2024
- Elijah Roberts-Water Plant Recruit 06/03/2024
- Jacob Dietrich-Wastewater Collections Maintenance Tech 06/10/2024
- Kendal Wilson-FOPS Distribution Systems Operator Recruit 06/17/2024
- Troy Brunson-Refuse Equipment Operator 06/17/2024
- Daniel Worl-Utility Division Manager 06/24/2024
- Scott McLane-Refuse Equipment Operator 06/24/2024

### Promotions and Transfers

- Katie Williams-Transfer from Wastewater Collections Tech to Planning Tech 04/15/2024
- John Daye-Transfer from FOPS Lead Operator to Water Quality Technician 04/21/2024
- Katlyn Newell- Transfer from Distribution System Operator 3 to WWC Main Tech 05/13/2024
- Tanner Redd-Promoted from Cross Connection Reclaim Water Inspector to FOPS Lead Operator 05/13/2024

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

- Katlyn Newell- Distribution Class C Course
- Todd Schneider- Distribution Class C Course
- Calvin Oldham- Distribution Class C Course
- Tom Hartman- Distribution Class C Course
- John Daye-Water Distribution 2 Course
- Calvin Oldham- Water Distribution 2 Course
- APWA Conference
  - Rodeo participants: Geoff Hall, Pat Cameron, & Dan Hovorka
  - Attendees to Vendor Hall: Tommy Smith & Dicy Hall
  - Attendees: Randy Coslow, Jeff Thurman, & Sean Maroney

### **EDUCATIONAL OUTREACH (RESIDENTS & EMPLOYEES)**

- "Scoop the Poop" educational program-provided educational items and/or flyers:
  - Earth Day Event – EdgeFest Event 04/27/2024
  - 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:
  - Earth Day Event – EdgeFest Event 04/27/2024
  - 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**

- April – Working in the HEAT
- May – Eye Safety
- June– Hurricane Prep for Home and Work