



FY23 ANNUAL REPORT

Building Our Future



SPRINGFIELD WATER AND SEWER COMMISSION

JOSEPH J. SUPERNEAU OPERATIONS CENTER



MISSION STATEMENT

Our mission is to provide an uninterrupted, high-quality supply of water to our customers, to collect and treat wastewater, and return clean water to the environment.

While fulfilling our mission, we strive to:

- 1 Conserve and protect our reliable, high-quality water supply for present and future generations
- 2 Meet or surpass public health standards, environmental standards, and support fire protection
- 3 Operate, maintain, improve and manage our water and wastewater infrastructure in a cost-efficient manner
- 4 Manage finances to support Commission needs and maintain stable and affordable water and wastewater rates
- 5 Maintain an accountable, safe and professional workforce
- 6 Understand and respond to customers' expectations for service

An aerial photograph of a river winding through a forest with vibrant autumn foliage. The river is dark blue and reflects the sky. The forest is a mix of green, yellow, and orange trees. The sky is blue with some white clouds.

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MESSAGE FROM THE COMMISSIONERS

In FY22 the Commission celebrated the start of the Water and Wastewater Infrastructure Renewal Program, a portfolio of over 20 critical water and wastewater upgrade projects. In FY23 the work on this ambitious and generational-scale program advanced significantly. Design of the new West Parish Water Treatment Plant progressed from 30% to 60%; construction of the new Backwash Facility at West Parish – Phase 1 of the new plant – proceeded full-pace; and the Connecticut River Crossing portion of the new York Street Pump Station project

concluded, while the new pump station itself began to undergo operational tests.

These proactive investments are necessary to enhance the resiliency and reliability of our infrastructure for the decades ahead, and to avoid the increasing risk posed by climate change and aging infrastructure that is no longer able to keep pace with 21st century regulations.

But key to this effort is also an investment in our people and community. Safe, clean drinking water and sewer service is a public good that provides a wide breadth of career

opportunities, yet the water workforce is in need of replenishment as it experiences a wave of retirements. The Pipeline Program, a unique experiential learning program for Springfield high schoolers, launched at the end of FY23 and represents the Board's commitment to cultivating the next generation of water professionals to steward this new water infrastructure, serve their community, and protect the environment.

From left to right: Commissioner Matthew Donnellan, Commissioner Vanessa Otero, and FY23 Chairman Daniel Rodriguez.



MESSAGE FROM THE EXECUTIVE DIRECTOR

It is always satisfying to see a project that existed on paper for years become a concrete reality, and also to watch it become integrated into the larger system. FY23 was notable as it featured two such projects, the new Backwash Facility at West Parish Filters, and the new York Street Pump Station and Connecticut River Crossing Project, both of which were conceived approximately 10 years ago. The new Backwash Facility moved towards completion with a busy year of construction, and the new York Street Pump Station began to receive flows when testing began during a very wet summer.

Perhaps most satisfying about these milestones, however, was observing the teamwork Commission staff developed to begin to integrate these projects into our system. For example, the Backwash Facility was connected to the existing West Parish Filters Water Treatment Plant in the fall of 2022, triggering an immense preparation and coordination effort among staff, construction crews, and engineers. The ultimate goal was to ensure continual water treatment during the connection process, which required switching to backup filters while the main filters were shut down during the connection. West Parish staff began preparing months in advance,

including planning for potential scenarios and ensuring contingencies were in place. The connection was successful, and the new Backwash Facility will allow for water treatment to continue during construction of the new plant, to which it will then also be connected.

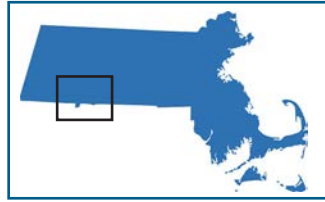
Teamwork was also strong in preparation for the launch of the Pipeline Program, where we welcomed Springfield high schoolers for a summer experiencing the wide range of job and career options at our utility. Commission staff collaborated on ways to integrate the Pipeline interns into their workdays, demonstrating their responsibilities and also providing mentorship and advisement. I was moved by the pride on display by our staff, particularly in their knowledge of our system and its importance to the region. I look forward to more opportunities to see our staff rise to the occasion as we continue to advance our generational re-investment in our infrastructure and our people.

Joshua D. Schimmel
Executive Director

If you have any questions about the content of this report, please contact the Commission at 413-452-1300 or email info@waterandsewer.org.

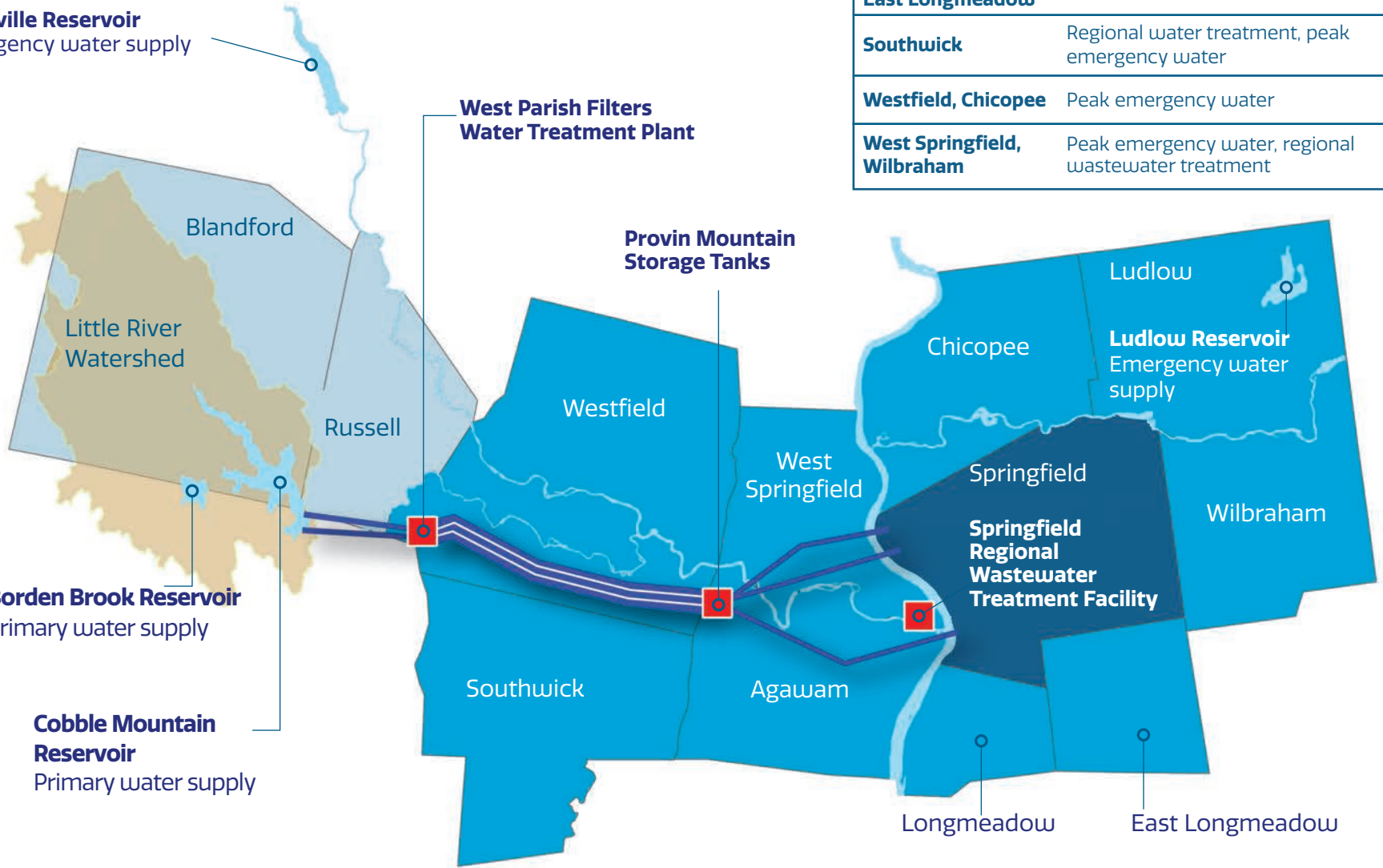
SWSC System Map

Service Area and Major System Components



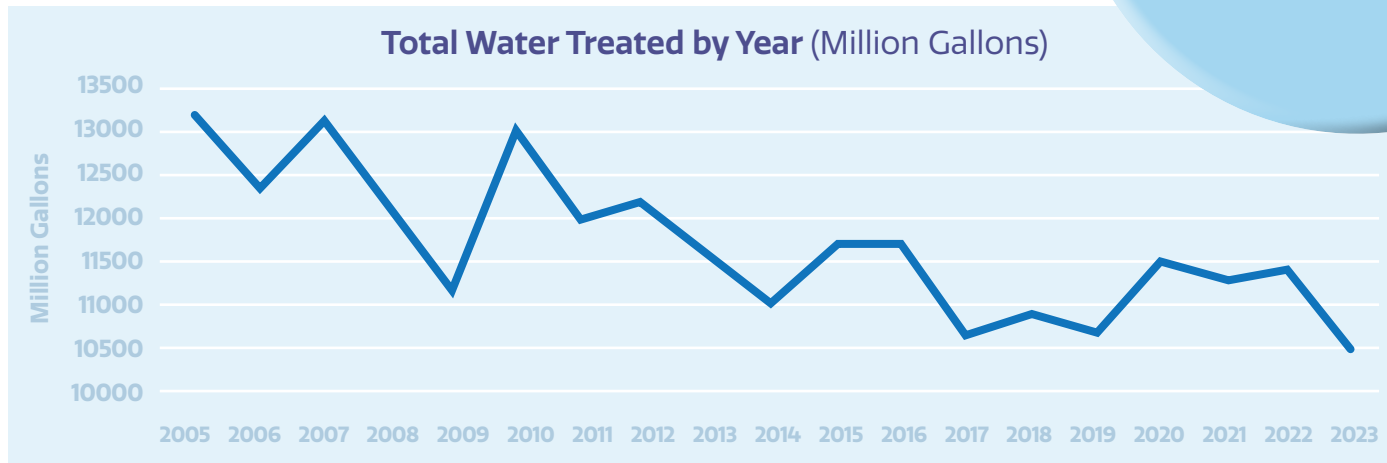
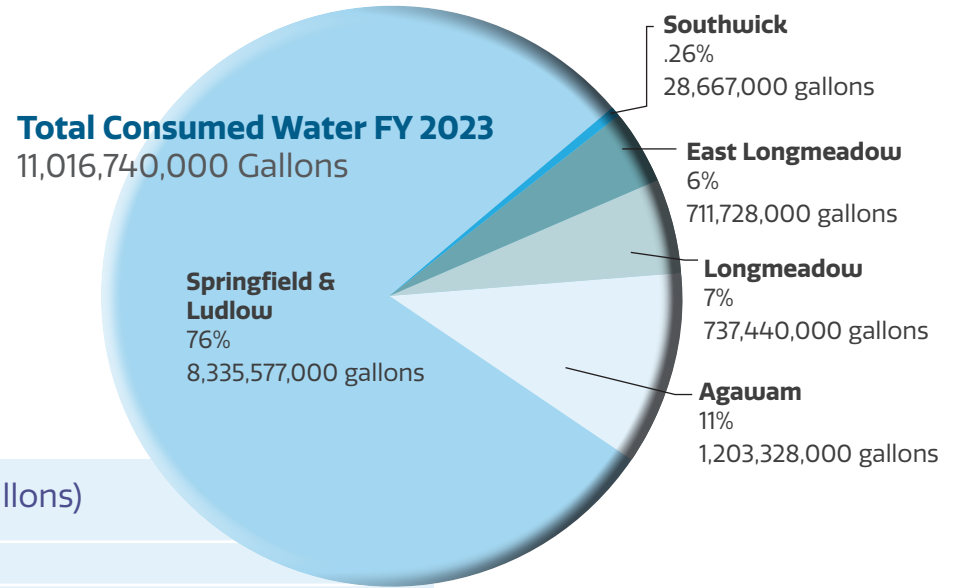
Service Categories	
Springfield (main customer)	Retail water and wastewater service
Ludlow	Retail water service and regional wastewater treatment
Agawam, Longmeadow, East Longmeadow	Regional water and wastewater treatment
Southwick	Regional water treatment, peak emergency water
Westfield, Chicopee	Peak emergency water
West Springfield, Wilbraham	Peak emergency water, regional wastewater treatment

Littleville Reservoir
Emergency water supply



WATER SUPPLY & CONSUMPTION

The Commission provides drinking water to approximately 250,000 people in the lower Pioneer Valley. This includes retail customers in Springfield and Ludlow (as well as small portions of Chicopee and Wilbraham), and regional customers in Agawam, Longmeadow, and East Longmeadow. The Commission also provides emergency and peak drinking water supply to Southwick, Westfield, West Springfield, Chicopee, and Wilbraham. In FY23, the output from West Parish Filters Water Treatment Plant was approximately 11 billion gallons among all Commission customers.



REGIONAL WATER TREATMENT CONSUMPTION (MILLION GALLONS, MG)

Yearly Usage (mg)	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	3-Year Average
Agawam	1,100	1,238	1,378	1,149	1,203	1,243
East Longmeadow	625	726	759	634	712	702
Longmeadow	626	709	820	645	737	734
Southwick	18	29	36	25	29	30
Springfield and Ludlow	8,208	8,508	8,520	8,9523	8,336	8,503
West Parish Output	10,577	11,210	11,513	11,405	11,017	11,312



A rendering of the new West Parish Water Treatment Plant at the 30% Design Phase – January 2023

INFRASTRUCTURE RENEWAL



The Commission made substantial progress during the first full fiscal year of its Water & Wastewater Infrastructure Renewal Program (WWIRP) in FY23, during which one of its cornerstone projects achieved substantial completion. The generational-scale WWIRP portfolio launched during FY22 and features nearly 30 water and wastewater infrastructure projects supported in part by EPA's \$250 million Water Infrastructure Finance and Innovation Act (WIFIA) award and the Massachusetts Clean Water Trust State Revolving Fund (SRF). These funds will help support the implementation of these essential projects over the next five years. A majority of the projects covered in the following pages are financed by WIFIA and

SRF, with some financing provided by other sources. One of the cornerstone WWIRP projects is the new West Parish Water Treatment Plant.

New West Parish Water Treatment Plant

The largest-scale project in the WWIRP is the new West Parish Water Treatment Plant. In FY23 planning and design advanced to 60% completion. The design, permitting, and peer review are to be completed early in FY24, followed by the bidding process. Construction is slated to begin in the second half of 2024 (FY25).

Originally built in 1909, with subsequent upgrades in the 1920s, 1960s, and 1974, West Parish Filters is located in Westfield. The existing plant uses 1974 rapid sand filters and 1920s & 1960s slow sand filters to filter raw water from Cobble Mountain Reservoir before the water is disinfected and treated for corrosion control. The new plant will improve water quality to meet 21st-century drinking water regulations, particularly in regards to disinfection byproducts. The new plant will also reduce the risk of failure posed by aging infrastructure, be more resilient to climate change impacts, and ensure that customers receive reliable, clean, safe drinking water every time they turn on the tap for decades to come.

The future plant will feature a new treatment process called dissolved air flotation (DAF), which will remove more natural organic matter from the water and reduce the formation of disinfection byproducts. The new plant also includes “green” features such as a new residuals management system that recycles water used in the treatment process and collects the solid residuals; and the elimination of fossil fuels for heating/cooling the plant.

Other drinking water treatment projects at West Parish Filters include the planning and peer review for the removal of existing residuals from the Upper Lagoon. Design and permitting for the removal and disposal of the accumulating residuals will begin next fiscal year. Dam No. 2 forms the Upper Lagoon.

New West Parish Water Treatment Plant

60% Design Phase Rendering – June 2023



FY23 STATUS (AS OF JUNE 30, 2023)

DESIGN	60%
CONSTRUCTION	0%

PLANNED FY24 ACTIVITY

DATE	TASK
October 2023	90% Design Submission
January 2024	100% Design Submission
February 2024	Bid Advertisement

BUDGETED COST	BUDGET SPENT THROUGH FY23
\$325,261,000	\$4,630,435

REMAINING BUDGET	PERCENT COMPLETE
\$320,630,565	1.42%

Clearwell & Backwash Pump Station Replacement Project (“Backwash Facility”)



FY23 STATUS (AS OF JUNE 30, 2023)

DESIGN	100%
CONSTRUCTION	66%

PLANNED FY24 ACTIVITY

DATE	TASK
November 2023	Project Complete

BUDGETED COST	BUDGET SPENT THROUGH FY23
\$26,573,681	\$19,923,837

REMAINING BUDGET	PERCENT COMPLETE
\$23,391,385	74.98%

Clearwell and Backwash Pump Station

The construction of the new “Backwash Facility” is slated to end in FY24. In FY23 the new facility was connected to the existing West Parish plant; electrical wiring was finished; and operations were tested. Replacement of the 1970s-era backwash pumps will improve the plant’s system redundancy, avoid the risk of failure associated with the old pumps. The new Backwash Facility will eventually be connected to the new treatment plant, and will enable continued water treatment during the new plant’s construction as well.

Bulk Chemical and Chlorine Room Upgrades

Water is treated with gaseous chlorine after filtration to prevent waterborne illness caused by pathogens. This project improved deficiencies in the existing chlorine storage and feed system and upgraded a new bulk chemical storage system for the primary coagulant. The new storage facility also has improved safety measures including sprinkler and fire protections. This work was initiated in fiscal year 2022 and completed in FY23.

Cobble Mountain Hydropower Station Improvements

An alternative analysis and master plan were completed for the Cobble Mountain Hydropower Station, including the existing penstocks. Proposed improvements include the restoration of Unit No. 3 turbine-generator and upgrades to modernize the hydropower station to allow for reliable, long-term operation into the future. Conceptual design is anticipated to be completed in FY24. The station is a critical conveyance pathway from Cobble Mountain Reservoir to the treatment plant that generates green power as water flows through by gravity.



DID YOU KNOW?

Filtered water for cleaning the filters is stored in a clearwell and pumped up through rapid sand filters to remove accumulated suspended solids in a process called a “backwash” approximately every 24 hours.

42-inch Pipeline Design Project

The design for the 2-mile-long, 42-inch-diameter Raw Water Conveyance (RWC) pipe and control valve system and new dissipation valve facility continued in FY23. Design and permitting are anticipated to be completed in 2023, with bidding taking place next fiscal year. The pipeline is a critical redundant pathway for raw water from Cobble Mountain Reservoir to West Parish Filters Water Treatment Plant. This redundancy ensures service during severe weather events or during routine maintenance activities.

Additional FY23 Drinking Water Supply/Treatment Projects

- Completion of repairs to Filter No. 6 at the West Parish Filters Water Treatment Plant and replacement of filter underdrain nozzles in the remaining filters.
- Completion of Potential Failure Mode Analysis exercise for the Cobble Mountain Dam, which identified viable measures to minimize risks.
- Installation of new ventilation hood system at the Cobble Mountain Diversion Gates.
- Rehabilitation of effluent valve for Slow Sand Filter No. 17.
- Design improvements for manhole risers and liners on storage tanks 3 and 4 at the Provin Mountain facility.
- Safety improvements including installation of a new fall protection system at the ICS chamber and new ladders at Slow Sand Filters 15-18 Control Building.
- Initiation of source water quality optimization study to help optimize the existing monitoring program in Cobble Mountain Reservoir.
- Completed design for Phase 1 and 2 repairs to the Provin Mountain Water Storage Tanks 3 and 4. Bidding and construction are anticipated to begin next fiscal year. The storage tanks are where treated chlorinated water is stored before flowing by gravity through transmission mains to the distribution system.

42" Transmission Main Energy Dissipation Valve & Raw Water Conveyance Redesign & Reconstruction



FY23 STATUS (AS OF JUNE 30, 2023)

DESIGN	90%
CONSTRUCTION	0%

PLANNED FY24 ACTIVITY

DATE	TASK
July 2023	90% Design Submission
October 2023	100% Design Submission
January 2023	Start of Construction
BUDGETED COST	BUDGET SPENT THROUGH FY23
\$24,989,624	\$1,598,239
REMAINING BUDGET	PERCENT COMPLETE
\$23,391,385	6.85%

York Street Pump Station and Connecticut River Crossing Project



FY23 STATUS (AS OF JUNE 30, 2023)

DESIGN	100%
CONSTRUCTION	85%

PLANNED FY24 ACTIVITY

DATE	TASK
July 2023	Pump Startup/Testing Completion
August 2023	Completion of Manhole 6 Rehab
November 2023	Final Completion

BUDGETED COST **\$137,585,000** BUDGET SPENT THROUGH FY23 **\$122,236,300**

REMAINING BUDGET **\$15,348,700** PERCENT COMPLETE **88.84%**

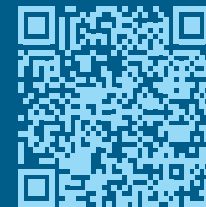
York Street Pump Station and Connecticut River Crossing Project

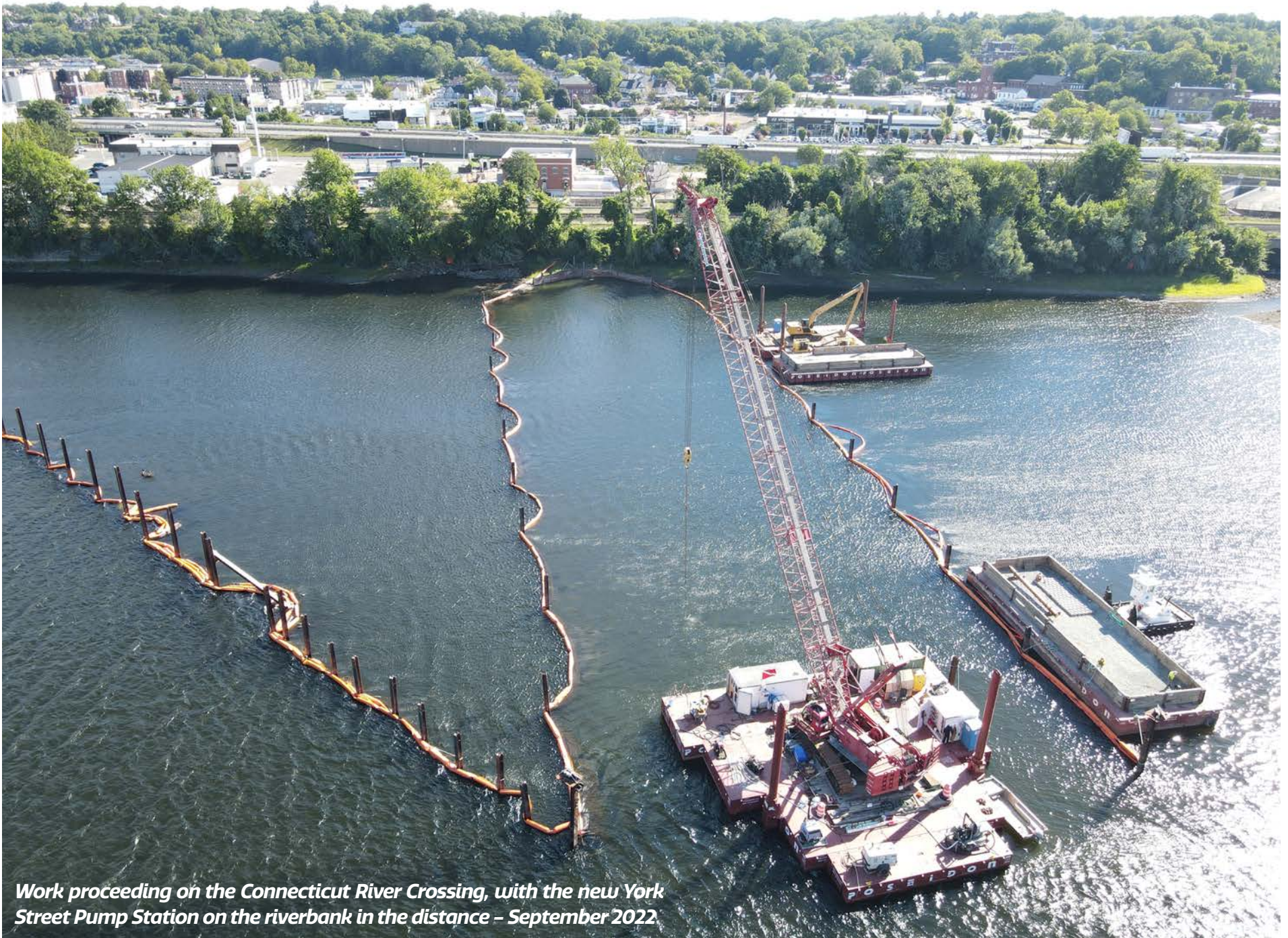
In FY23, the York Street Pump Station project was substantially completed. This project is a cornerstone of the Commission's 2014 Integrated Wastewater Plan. In addition to upgrading undersized and outdated infrastructure, the new pump station will reduce CSO discharge into the Connecticut River by over 100 million gallons in the typical rainfall year. Three new pipes crossing beneath the bed of the Connecticut River to the Springfield Regional Wastewater Treatment Facility (SRWTF) on Bondi's Island were also installed to increase system redundancy. The activation of the six pumps in May 2023 marked the beginning of a comprehensive 30-day testing phase, ensuring proper functionality and controls. Following the successful testing, the pumps transitioned to full operation in June.

Once river pipe was laid, concrete armor revetment mats were installed to safeguard the pipes before the river bottom was restored to pre-construction conditions. Temporary fish protection materials were removed, and a construction trestle was dismantled. Granite blocks were reinstalled on the Bondi's Island levee to restore permanent flood protection at SRWTF.

At the new pump station in FY23, the electrical and mechanical systems, including a 1.2-Megawatt generator for backup power, were also finalized. An odor protection system, using activated carbon, was installed to deodorize foul air before release through the roof. Finally, site work, including reconstruction of abutting streets, landscaping, and architectural enhancements, was also undertaken to improve the overall appearance of the existing 1938 pump station and new York Street Pump Station.

To view more information about the Commission's Water and Wastewater Infrastructure Renewal Program, [click here online](#) or scan the QR code





Work proceeding on the Connecticut River Crossing, with the new York Street Pump Station on the riverbank in the distance – September 2022

Locust Transfer Structure



FY23 STATUS (AS OF JUNE 30, 2023)

DESIGN	100%
CONSTRUCTION	4%

PLANNED FY24 ACTIVITY

DATE	TASK
September 2023	Start Locust Street Sewer Replacement
October 2023	MIS Transfer Pipeline Connection
January 2024	Substantial Completion

BUDGETED COST
\$32,500,375

BUDGET SPENT THROUGH FY23
\$5,246,584

REMAINING BUDGET
\$27,020,493

PERCENT COMPLETE
16.14%

Locust Transfer & Flow Optimization Project

Construction of the Locust Transfer and Flow Optimization project upgrades began and will continue into next fiscal year. The improvements address three objectives: redundancy of critical infrastructure, operational flexibility, and combined sewer overflow (CSO) abatement. The improvements are part of the Commission's Integrated Wastewater Plan and Phase 3 Workplan.

Springfield Regional Wastewater Treatment Facility Upgrades

The Springfield Regional Wastewater Treatment Facility serves seven communities in the lower Pioneer Valley. Initially constructed in the late 1930s and last modernized in the 1970s, the facility is currently undergoing substantial upgrades as part of the WWIRP. The design and bidding process for a new grit removal system at the plant began in FY23 and is slated for completion in FY24. In addition, design was completed and construction began for aeration and electrical system upgrades at the facility. The upgrades will improve nutrient removal during the secondary treatment process, and new electrical equipment and HVAC upgrades will make the plant more resilient and efficient.

Grit Removal System and Primary Clarifier Upgrades

This project will help further the Commission's efforts to strengthen the SRWTF's efficiency, flexibility, and tolerance to the changing climate. Work will begin in FY24 and is expected to be completed in August 2025. Veolia, the contracted operator of the SRWTF, is responsible for designing and building the project to ensure seamless coordination while process operations continue through construction.

Wastewater Treatment Operations Contract

When Veolia took over operation of the SRWTF in FY22, they assumed responsibility for overseeing multiple processes, including biological treatment, disinfection, and chlorination of the wastewater. They also inherited the Initial Capital Investments (ICI) plan that was developed and included the following four projects that were at various levels of completion in FY23:

- ICI #1: Electrical upgrades – 56% complete
- ICI #2: Ventilation system in the grit screening room – 34% complete
- ICI #3: Replace diffused aeration distribution system – 58% complete
- ICI #4: Hybrid biological nutrient removal, mixed liquor recycle pump – 74% complete

Overall, the ICI program was 66% complete in FY23.



FY23 STATUS (AS OF JUNE 30, 2023)

DESIGN	100%
CONSTRUCTION	0%

PLANNED FY24 ACTIVITY

DATE	TASK
July 2023	Construction Notice to Proceed
August 2023	Preconstruction Meeting
July 2025	Substantial Completion
BUDGETED COST	BUDGET SPENT THROUGH FY23
\$28,724,307	\$1,692,713
REMAINING BUDGET	PERCENT COMPLETE
\$27,031,594	5.89%



Distribution and Collection System Upgrades

Nearly half of the Commission's water and sewer mains are more than seven decades old. Every year, the Commission examines and prioritizes water distribution and sewer collection system projects for design followed by construction. Several improvements and upgrades have been made to the distribution and collection system this fiscal year.

A Water Distribution System Optimization Study was completed to evaluate distribution system hydraulics and make operational and capital improvement recommendations to optimize system water age, water quality, available fire flow, and redundancy. The study suggested the replacement of water mains, which will begin at St. James Avenue in FY24; Sumner Avenue near Dickenson Street and Belmont Avenue, "the X," with bidding in FY24; and Westford Circle, Dover Street, and Wilbraham Road, with bidding slated for fiscal year 2025.

Due to a recent pipe failure, emergency repairs were conducted on the 36-inch PCCP Northeast Trunk Main near the Birnie Avenue Valve Chamber. The design for water main repair/replacement to reduce system risk and provide sustainability is slated for completion in FY24.

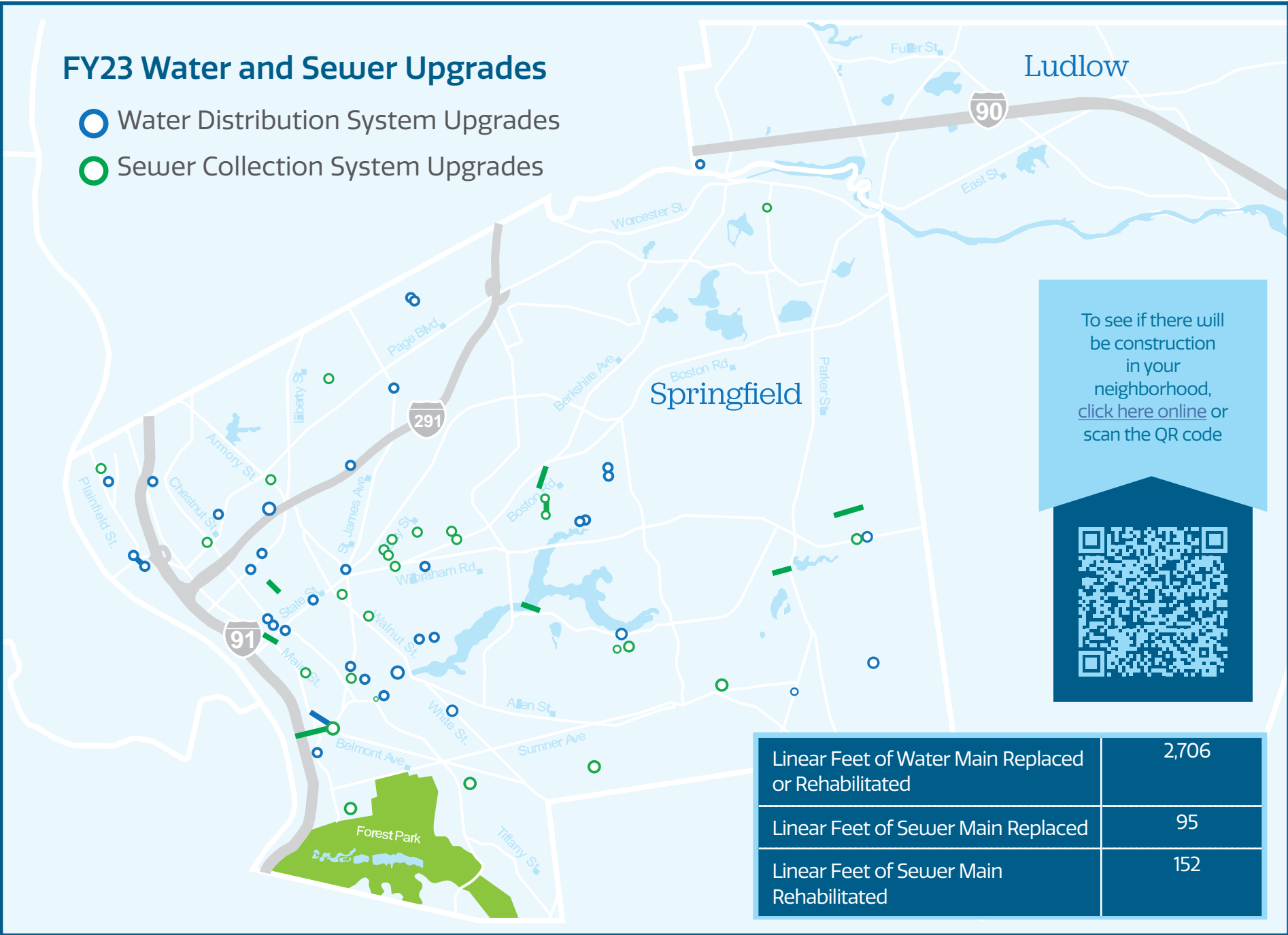
Additional improvement projects this year included:

- Completion of leak detection and smart meters technology study. Three selected technologies are planned to be piloted next fiscal year.
- Completion of closeout activities for fiscal year 2019–2020 sewer main replacement projects, including CCTV inspections, pavement restoration, and record plan development.
- Completion of design and bidding of this fiscal year's Sanitary Sewer Infrastructure Improvements. Project includes sprayed-in-place pipe lining of egg-shaped brick sewer pipelines on Main Street in the Court Square area, from Court Street to State Street.

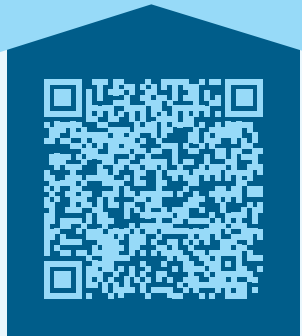
The Commission's Engineering Department is also responsible for inspecting new connections to the water distribution or wastewater collection systems. In FY23 there were 151 water and 162 wastewater inspections conducted.

FY23 Water and Sewer Upgrades

- Water Distribution System Upgrades
- Sewer Collection System Upgrades

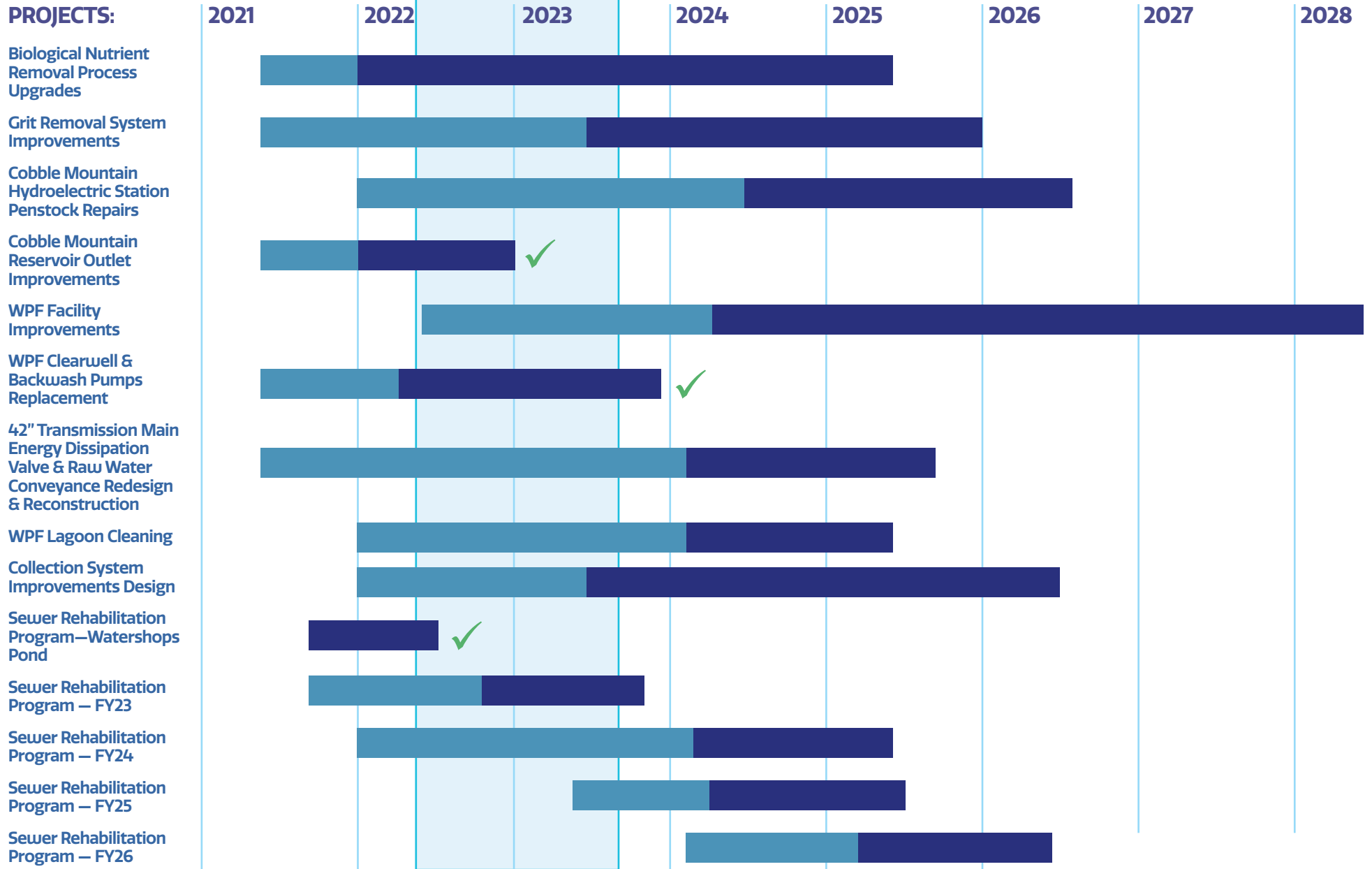


To see if there will be construction in your neighborhood, [click here online](#) or scan the QR code



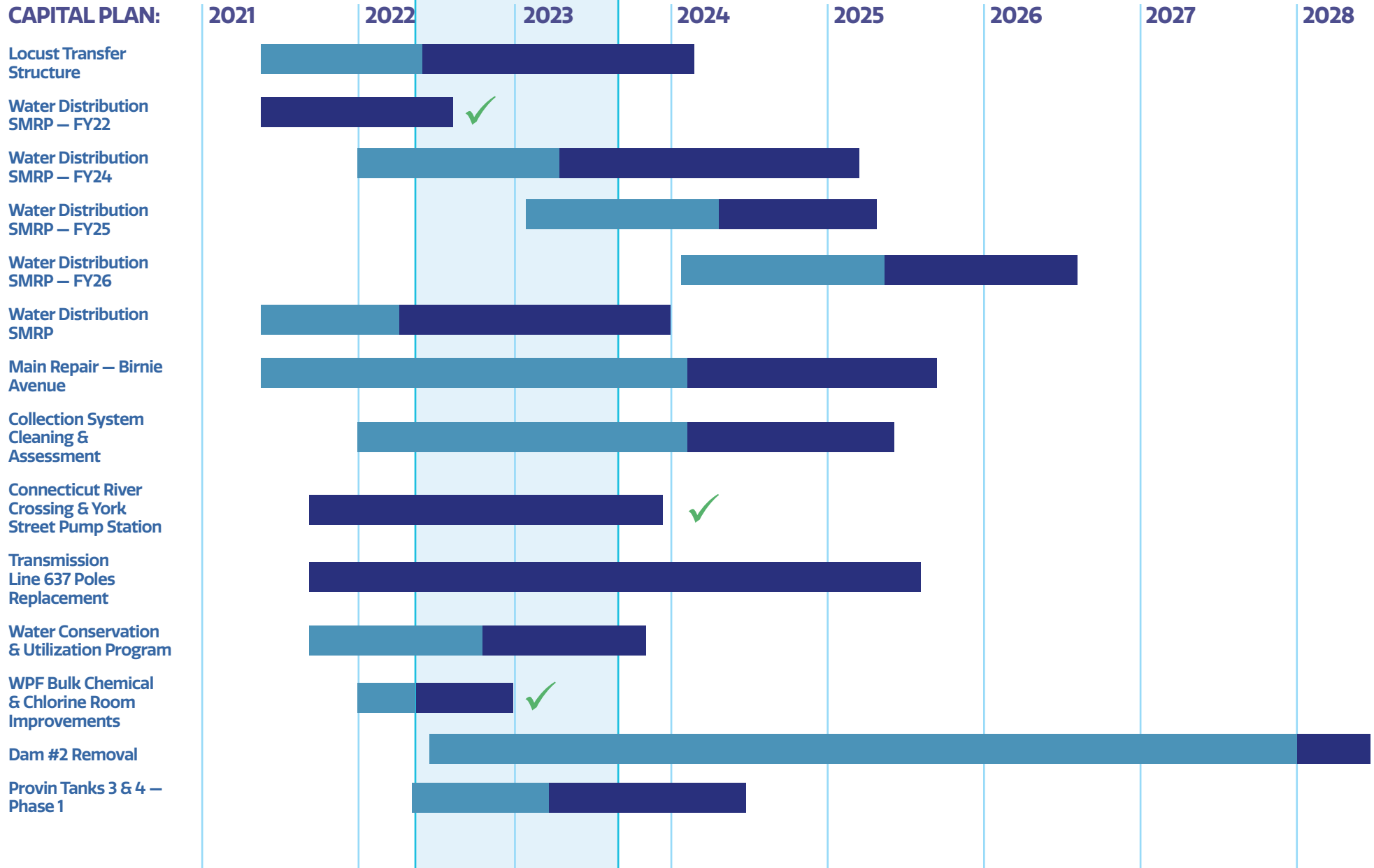
Linear Feet of Water Main Replaced or Rehabilitated	2,706
Linear Feet of Sewer Main Replaced	95
Linear Feet of Sewer Main Rehabilitated	152

CAPITAL PROJECTS SCHEDULE



Design
 Construction
 Completed
 FY23
 *Schedule subject to change

CAPITAL PLAN:



Design Construction Completed FY23

**Schedule subject to change*



Construction Activity at West Parish Filters Water Treatment Plant

DRINKING WATER TREATMENT

The team's effort during the November 2022 shutdown of the Rapid Sand Filter Plant to tie in the new piping was a significant undertaking. Operations staff also worked diligently to maintain disinfection of the drinking water as the Bulk Chemical Storage and Chlorine improvements project was completed.

- Christina Jones, Deputy Dir. of Water Operations

The Water Operations group is responsible for a critical mission of the Commission: ensuring the delivery of safe and reliable drinking water. Due to increasing complexity of Water Operations and ongoing capital improvements in FY23, a reorganization took place that included the addition of a Chief Operator and a Water Operations Manager.

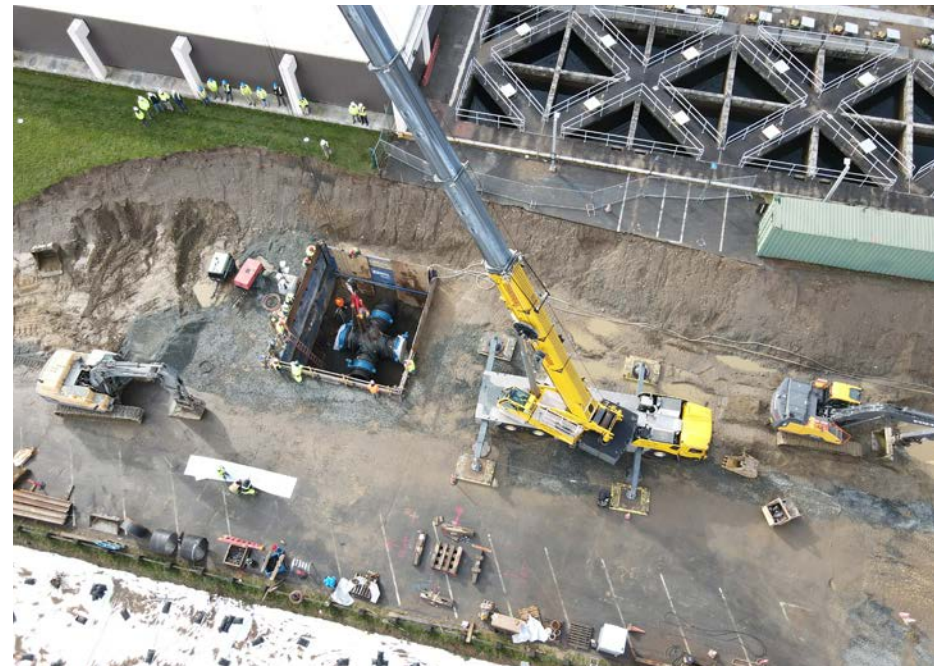
Clearwell/Backwash Pump Station Project Tie-in

The construction of the new Backwash Facility (see page 10) continued in FY23. The facility consists of two clearwell tanks with a backwash pump station situated on top. Building this new

Backwash Facility required close collaboration among Water Operations, Engineering, the Owner's Project manager, and the Design Build Team. The project involved multiple tie-ins to existing piping and infrastructure, requiring meticulous planning to ensure the continuous operation of the plant and the fulfillment of the Commission's commitment to deliver an uninterrupted supply of drinking water to customers.

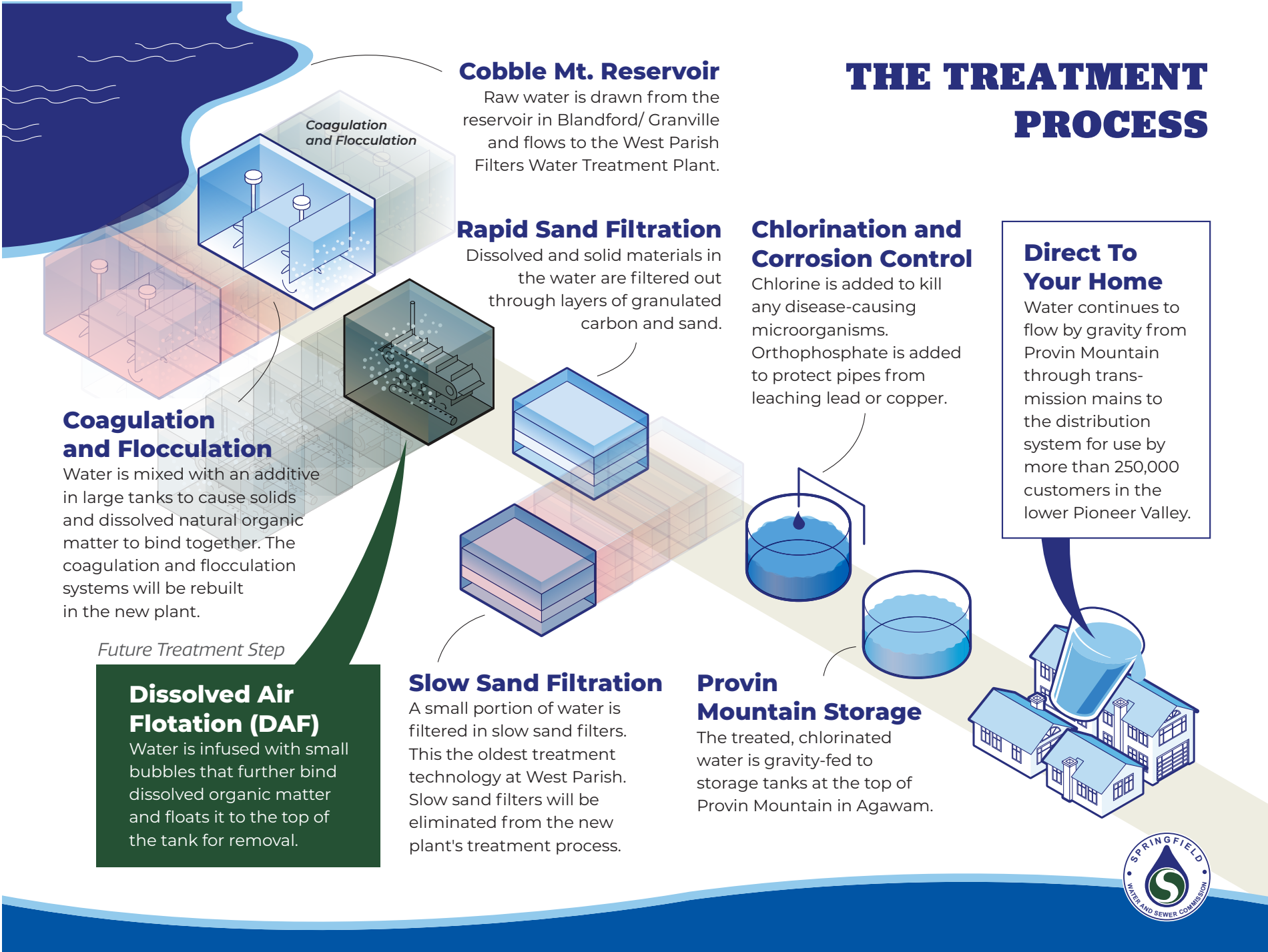
The most significant operational challenge was establishing a connection to the single plant effluent line – a 48-inch steel pipe responsible for transporting all water from the rapid sand filter plant into the clearwell and then out to the system. To allow the contractor to make this connection, Water Operations staff developed and implemented a complex plan in November 2022 to shut down the rapid sand filter plant to complete the tie-in of new piping for the facility. This was the first time the rapid sand filters were completely shut down since they went into operation in 1974.

Over this three-day shutdown, the system relied solely on the 1920s and 1960s slow sand filters. Auxiliary chemical systems were constructed in-house to provide treatment for the slow sand filters in the absence of the plant. Water Operations staff worked around-the-clock for several days to ensure smooth operation of this auxiliary system. Once the tie-in was completed, the rapid sand filter plant was successfully brought back online.



*Top: The connection pipe for the new Backwash Facility before it is placed into position. The old clearwell is located under the tarp just beyond.
Bottom: The connection pipe being placed into position.*

THE TREATMENT PROCESS



Cobble Mt. Reservoir

Raw water is drawn from the reservoir in Blandford/ Granville and flows to the West Parish Filters Water Treatment Plant.

Coagulation and Flocculation

Coagulation and Flocculation

Water is mixed with an additive in large tanks to cause solids and dissolved natural organic matter to bind together. The coagulation and flocculation systems will be rebuilt in the new plant.

Future Treatment Step

Dissolved Air Flotation (DAF)

Water is infused with small bubbles that further bind dissolved organic matter and floats it to the top of the tank for removal.

Rapid Sand Filtration

Dissolved and solid materials in the water are filtered out through layers of granulated carbon and sand.

Slow Sand Filtration

A small portion of water is filtered in slow sand filters. This the oldest treatment technology at West Parish. Slow sand filters will be eliminated from the new plant's treatment process.

Chlorination and Corrosion Control

Chlorine is added to kill any disease-causing microorganisms. Orthophosphate is added to protect pipes from leaching lead or copper.

Provin Mountain Storage

The treated, chlorinated water is gravity-fed to storage tanks at the top of Provin Mountain in Agawam.

Direct To Your Home

Water continues to flow by gravity from Provin Mountain through transmission mains to the distribution system for use by more than 250,000 customers in the lower Pioneer Valley.





Rapid Sand Filters Repair

The repair of the rapid sand filters involved the installation of a new underdrain system in filter #6, replacing the original system that malfunctioned in January 2022. As the slow sand filters serve as backup or supplemental filtration, the Water Operations team cleaned all 10 slow sand filters in FY23 to ensure their readiness to supplement plant capacity during rapid sand filter repairs and preparedness for the November 2022 shutdown. Cleaning slow sand filters is labor-intensive, involving shoveling and moving large amounts of sand.

Additionally, the Water Operations staff conducted in-house rehabilitation on the other rapid sand filters. This work included the replacement of nozzles in the underdrain system, minor concrete repairs, and the installation of air releases. These enhancements aim to reduce the risk of filter failures until the new plant becomes operational.

New Water Treatment Plant Design

In FY23, the Water Operations staff played a critical role in advancing the Water Treatment Plant Design Plan by actively participating in regular workshops and design meetings. They reviewed 286 preliminary design drawings and provided valuable feedback on an alternatives analysis for critical components.

Hazen and Sawyer, a water engineering firm that is designing the project, produced a 30% design that encompassed preliminary plans for various aspects of the new plant, including site design, piping, treatment processes, electrical systems, architectural features, and overall site layout. To enhance cost-effectiveness, the Commission enlisted outside engineering firms to conduct a Value Engineering study to review the design, aiming to identify potential savings for the project.

In May, Hazen and Sawyer submitted the 60% design report. The Water Operations staff participated in a day-long workshop as well as a peer-review process to review the project.

Dam #2

The Commission continues to evaluate options for managing Dam #2 after it suffered substantial storm damage in 2021. Temporary repairs were made in the immediate aftermath of the partial slope failure, but more permanent repairs would be necessary to ensure Dam #2 is protected against future failure. The Commission is working with an on-call dam consultant engineer to assess alternatives for addressing the issues.



DID YOU KNOW?

In November 2022 the rapid sand filters were shut down completely for the first time since their construction in 1974 to install a connection to the new Backwash Facility.

Laboratory and Source Water Quality Programs

The Commission collects and analyzes water quality samples seven days a week, throughout the year, from various locations within the distribution system in Springfield, Ludlow, and the watershed.

In FY23, the laboratory underwent several upgrades aimed at enhancing data management. The lab adopted an upgraded version of YSI Sonde, the monitoring probe for source water collection, improving the efficiency of source water monitoring. Collaborating with Hazen and Sawyer, the Commission developed a water quality dashboard to streamline management of the Source Water Program and data visualization.

Furthermore, the Commission enhanced its lab staff by adding an Environmental Analyst position, dedicated to overseeing and advancing the source water quality monitoring program.

Transmission System Maintenance

Treated water from the West Parish Filters Water Treatment Plant is stored in three reservoirs located at Provin Mountain in Agawam. Each of these tanks has a capacity ranging from 12 to 17 million gallons and serves the dual purpose of maintaining pressure and providing emergency water supply. The water is transported through three transmission mains that traverse Westfield, Agawam, and West Springfield. Staff continuously monitors the transmission mains for any signs of leaks, encroachments, and excessive vegetation growth.

A Look Ahead

Fiscal Year 2024 will bring the design of the new water plant to conclusion, followed by bidding for construction. Design is also wrapping up on the plan to rehabilitate the 42-inch transmission pipe, which is a critical path of water from the reservoir to the plant, and construct the energy dissipating valve facility. There are also plans to install a buoy in Cobble Mountain Reservoir to conduct daily water quality monitoring.



SPRINGFIELD WATER AND SEWER COMMISSION





WASTEWATER COLLECTION & TREATMENT

The Division successfully completed the Connecticut River Crossing Project and put the new York Street Pump Station in service to begin performance tests, which proved to be invaluable during a rainy summer.

- Steve Frederick, Director of Wastewater Operations

Wastewater Collection & Treatment

The Springfield Regional Wastewater Treatment Facility (SRWTF) on Bondi's Island in Agawam serves as the wastewater destination for seven communities in the lower Pioneer Valley: Agawam, East Longmeadow, Longmeadow, Ludlow, Wilbraham, West Springfield, and part of Chicopee. Roughly 473 miles of collection pipe, some close to 150 years old, carry wastewater from buildings and homes to the treatment facility.

The SRWTF is owned by the Commission and operated by Veolia. Veolia is responsible for managing both the treatment of the

wastewater and its return to the Connecticut River. The Commission's Sewer Division addresses sewer backups, conducts repairs, and oversees inspections of the system. Meanwhile, Veolia maintains the 33 pump stations, 24 combined sewer outfalls, and the extensive transmission pipes linked to the collection system.

In FY23, the SRWTF spent \$15,760,000 treating 12.8 billion gallons of wastewater. The team continues to collaborate with the Commission, Veolia North America, LLC, and a group of consultants to maintain sound capital planning, implement corrective and preventive maintenance, and engage in more advanced project planning.

York Street Pump Station

Construction for the new York Street Pump Station and Connecticut River Crossing project was wrapping up at the close of FY23. Closeout and other construction activities are to be completed in FY24. Wastewater Operations oversaw the testing process from May-June, which benefited from a wet summer. The new pump performed well, and testing data was used to refine controlled flows to the SRWTF to maximize treatment.

The new pump station replaces the original pump station built in 1938, which will be repurposed to serve as flood control for the City of Springfield. The new station includes three newly laid 1,200-foot pipes that cross the Connecticut River. These pipes provide system redundancy and allow for regular maintenance, something that was not possible with only two continuously operating pipes.



DID YOU KNOW?

SRWTF processed 12.8 billion gallons of wastewater in FY 2023. That's equivalent to 72 Olympic-sized pools per day.



Left and top: Views of the SRWTF, including the secondary treatment aeration basins undergoing rehabilitation (left), and the restored riverbank (top) from the river crossing work.
Bottom: The new York Street Pump Station nearing completion.

CSO Notification System

The combined sewer overflow alert systems notify the public when an overloaded system discharges untreated or partially treated sewer into surrounding waterways. The Commission established this notification system in May 2022 to comply with a new state law. In FY23, the CSO notification system received a website upgrade to provide a better user experience. The technical side of the signal and meter devices also received maintenance to ensure reliability and accuracy. In FY23, there were 384 CSO events.

Number of CSO Events	384
Millions of Gallons Discharged Reported	449
Millions of Gallons Discharged Verified	335

Asset Management and Maintenance Program (AMMP)

The Asset Management and Maintenance program was developed in 2008 and involves the cleaning and inspection of the sewer system, which in turn enables the identification and prioritization of rehabilitation projects. The program is structured so that the entire system is proactively addressed over the span of 10 years.

In FY23, the Commission assessed and cleaned 89,042 feet (16.86 miles of pipe). There were 7 sanitary sewer overflows (SSOs) reported in FY23, an increase compared to last year, but still a significant decrease from previous years – down 50% from FY21 and down 95% from when the program began in 2008. This reduction in reported events indicates that the AMMP's proactive approach to cleaning and repair is working.

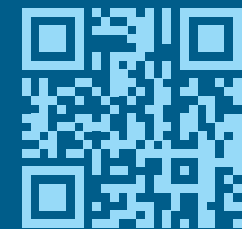
In FY23, Veolia adopted a new system – Vueworks – to manage its assets, maintenance activities, costs, and crew efforts. The Commission is actively working on integrating pump station data into its own Vueworks system, enabling other departments to access information about the flow rates at these stations.

Nitrogen Monitoring

The team is working to reconstruct the aeration beds that help oxygenate the wastewater and manage nitrogen levels. While there is not enough data yet for analysis, the nitrogen monitoring instrumentation installed last fiscal year that automatically adjusts settings to match real-time oxygen demands and reduce nitrogen loads discharged into the Connecticut River is revealing results that show success in the instrumentation efforts.



To view the CSO notification system, [click here](#) online or scan the QR code



An aerial view of SRWTF.



A Look Ahead

The Wastewater Operations team is working to close out the York Street Pump Station and Connecticut River Crossing project in FY24. While the project is considered substantially complete, there are several items to turn over to Veolia for management, including warranties, spare parts, as-builts, equipment manuals, and more.

The Initial Capital Investments projects (see page 15) will be close to completion in FY24, providing another level of process control with more efficiency and a reduction in costs. The electrical system at the SRWTF will have increased redundancy and better control for the power company and contract operator. In addition, the ventilation control system at the station will help reduce odors within the grit screening room and serve as an environmental upgrade.

Once these projects are completed, the team will review the effectiveness of the system and adjust the service contract accordingly.



Top to bottom: The new York Street Pump Station pumps and screening room.



WATERSHED PROTECTION

“I am proud of the collaboration among not only the Water Resources department, but various other departments that work to protect the Commission’s source water resources through active and regular stewardship, monitoring, maintenance, conservation, and positive public relations within the watershed.” - Water Resources Manager Nicole Sanford

The Watershed Management Department plays a crucial role in advancing the Commission’s efforts: safeguarding the vibrant forests and adjacent areas that serve as the origin of the region’s drinking water. The Department continuously monitors the watershed property for water quality threats and works to preserve the safety, health, and longevity of this natural filtration system of source water.

The Department’s stewardship includes:

- Maintaining watershed roads and culverts to prevent erosion and sedimentation issues



A land steward monitoring watershed property.

- Advancing initiatives derived from the various forest management plans to maintain a diverse and resilient forest
- Seeking ways to acquire or designate additional conservation land in the watershed

Land Conservation

Nearly 50% of the forested land in the Little River Watershed is owned by the Commission and an additional 9% is protected by public or non-profit land protection organizations. The Commission is in frequent talks with private property owners who are interested in placing Conservation Restrictions on their land with the hope of expanding conservation land in the future.



The protection and vitality of the watershed are critical to the Commission's efforts.



This slash wall will help foster new forest growth.

Watershed Maintenance and Monitoring

In FY23 the Commission's team of Land Stewards diligently monitored 6,086 acres of watershed property, maintaining 36 miles of boundaries. They inspected 185 culverts to identify blockages, erosion, and other issues. As a result, two culverts at Borden Brook and Cobble Mountain reservoirs were designed and permitted to reduce erosion and sedimentation.

Land Stewards provide regular monitoring of reservoir shorelines and wildlife, while paying particular attention to invasive species, unauthorized use, and illegal dumping. They update watershed assets through GIS and Viewworks and collaborate with municipalities and law enforcement to remove debris and prevent further illegal dumping. Land Stewards at Ludlow Reservoir are also responsible for continual maintenance of more than 7 miles of canals that are older than 100 years old. Ludlow land stewards also closely monitor Cherry Valley and Knight's Pond dams and spillways for potential hazards, particularly after heavy precipitation events.

This year, the Commission also assisted with funding to rehabilitate an existing bridge owned by the Town of Granville that traverses Alder Brook, a perennial tributary to the Borden Brook Reservoir. Repair of this bridge was necessary for both safety and water quality.

The Borden Brook Maintenance Team also completed roadwork on Julius Hall Road in Blandford. Work included the removal of woody and organic material from roadside drainage ditches, reshaping and reseeding of drainage ditches and regrading and resurfacing the road with stone.

Forest Management Activities

In FY23, the Water Resources Team focused on identification and removal of invasive tree species and protection of regeneration areas from wildlife. In Blandford, timber was marked in preparation for silvicultural harvests. Silviculture involves the sustainable management of the growth, composition, health, and quality of forests and woodlands. Construction was planned for a slash wall, or a large brush pile, that will exclude deer and moose from this area. Another recently harvested area will be fenced off to allow for regeneration.



Land Stewards actively monitor the watershed, looking for signs of invasive species, dumping, erosion, or other threats to water quality.



Land Stewards monitored more than 6,000 acres of watershed property in FY23.

Recommendations resulting from the Pond Brook Stewardship Plan were also completed this year, including non-harvest timber stand improvements. These improvements involved promoting growth of red spruce and black gum trees by girdling surrounding invasive trees, depleting their nutrients, and causing them to die off.

Forest Management Planning

Several key planning initiatives were advanced in FY23, including finalizing the Blair Pond Forest Stewardship Plan. This comprehensive plan is dedicated to safeguarding 1,437 acres of watershed forest,



Non-harvest timber stand improvements were conducted to promote growth of new trees.

To learn more about public access in the watershed, including interactive maps, scan the QR code



including numerous streams that flow into Blair Pond, which serves as headwater for Pond Brook, a major tributary to Cobble Mountain Reservoir.

Substantial progress was also made on The Forest Vision, an internal document serving as a centralized location for essential concepts, objectives, research findings, and data relevant to the condition and management of the watershed forest. Additionally, Hiram Blair Invasive Plant Management Plan was completed in FY23, identifying six invasive plants and detailing plans and cost estimates for their removal.

Source Water Protection

The Commission continues to follow its Source Water Protection Program, which includes a plan that identifies, evaluates, and proposes mitigation strategies for potential threats to water quality in the Little River Watershed.

Public Access

Ludlow Reservoir welcomed 27,983 visitors in FY23. Several access area improvements helped make these visits possible. New gates with informational signs were installed at the public access and watershed areas. The road atop Cherry Valley Dam was repaired and additional stone was added to the Knight's Pond Dam Spillway to allow for easier travel. There are also preliminary design plans and permit applications in place for the repair of failing culverts on the Public Access Path.

A Look Ahead

In fiscal year 2024, the Water Resources Team intends to use mechanical removal methods outlined in the Hiram Blair Road Invasive Species Management Plan. Once design and permitting are completed, construction will begin on the culvert replacement project near the Borden Brook Facility and the culvert removal project near Cobble Mountain Reservoir.



Knight's Pond Dam Spillway.



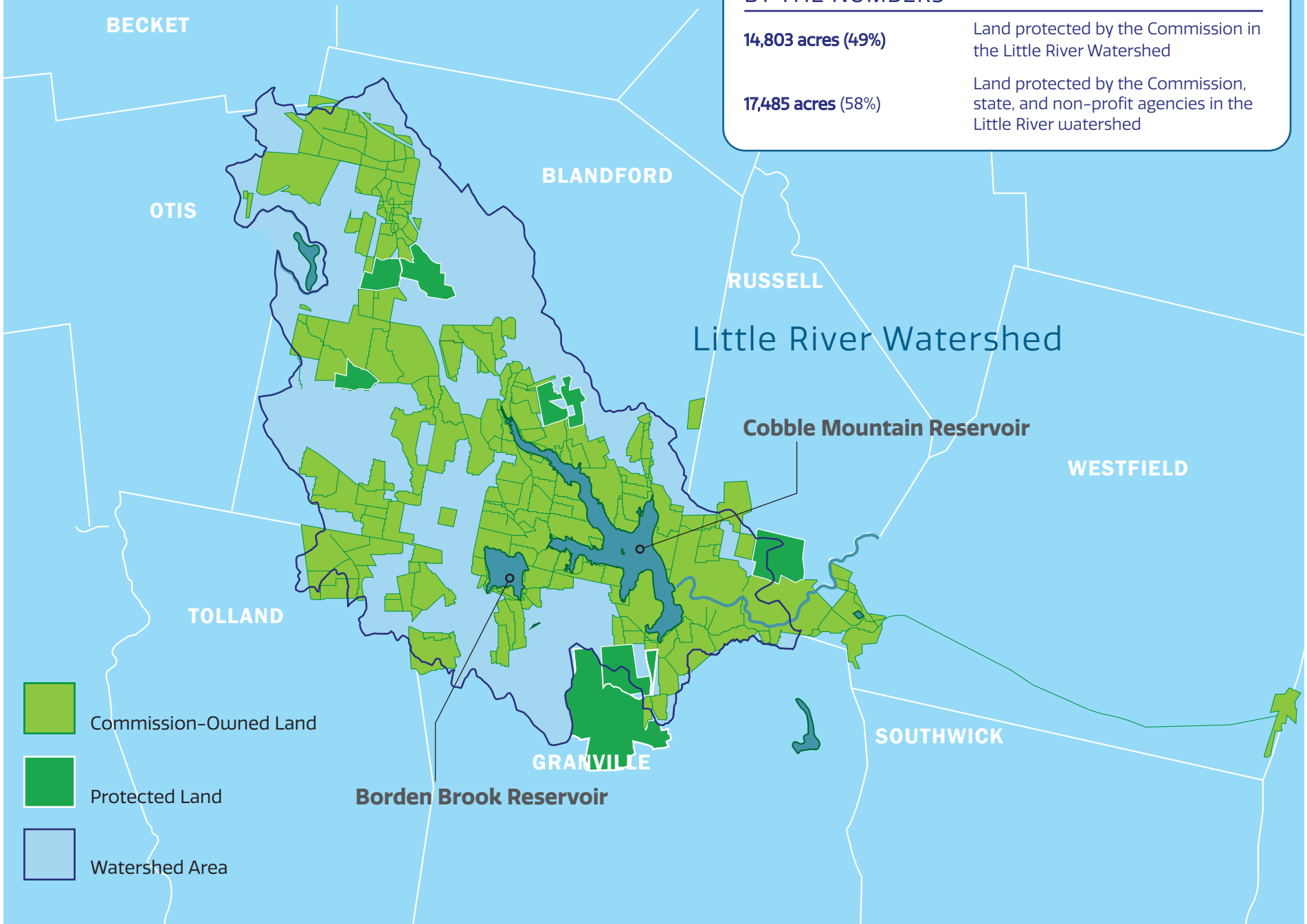
Left and right pages: Wildlife and nature abound in the watershed.



Watershed Lands

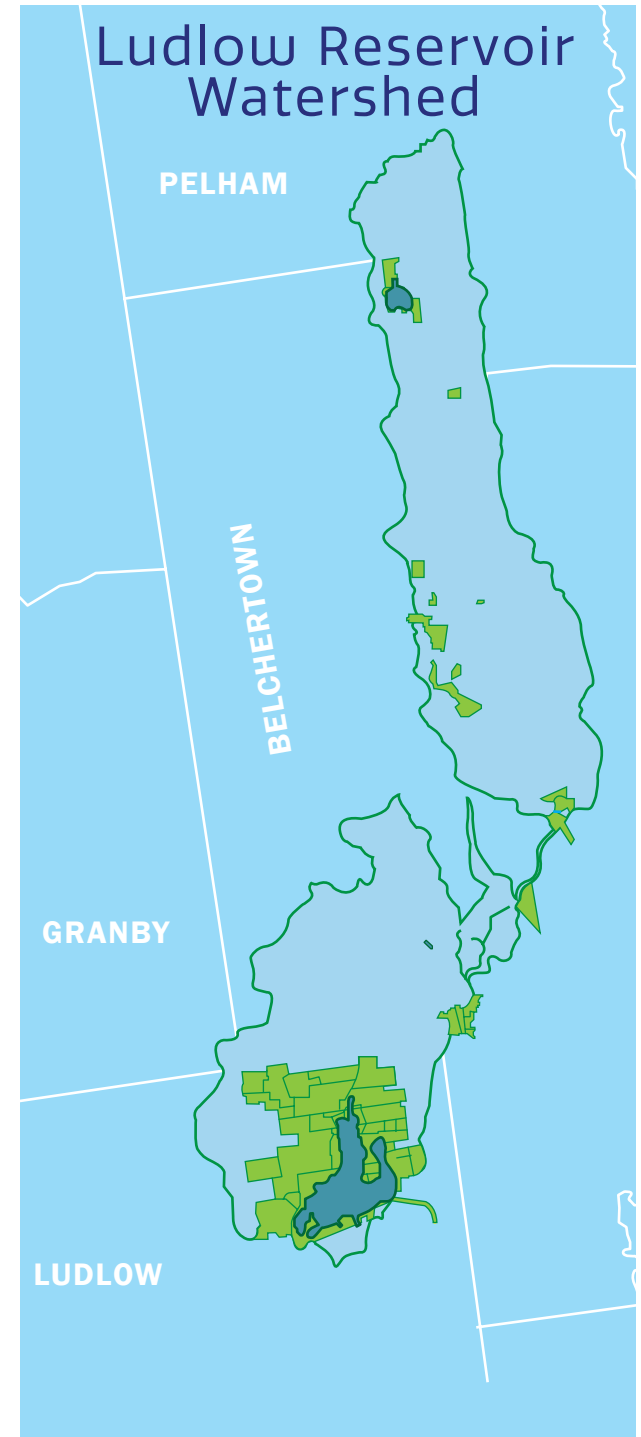
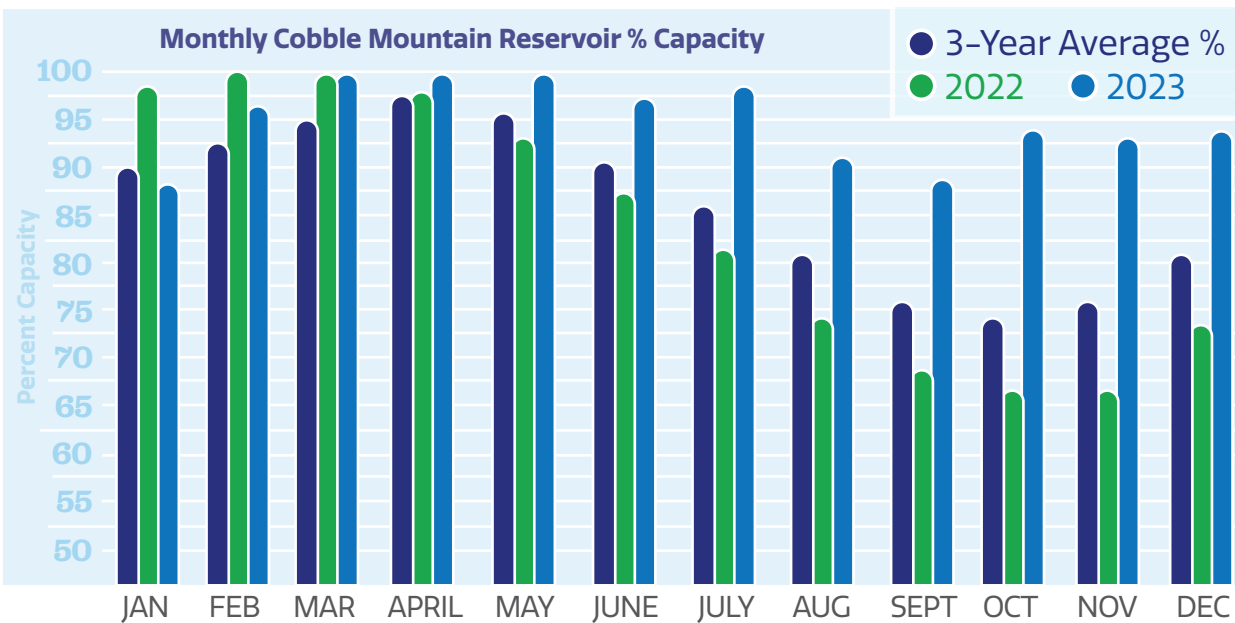
Little River Watershed Protection BY THE NUMBERS

14,803 acres (49%)	Land protected by the Commission in the Little River Watershed
17,485 acres (58%)	Land protected by the Commission, state, and non-profit agencies in the Little River watershed





Additional stone was added to Knight's Pond Spillway to allow for easier public access and travel.





FIELD SERVICES

“Field Services continues to provide excellent response time to emergencies and customers while maintaining the entire distribution and collection system.”

- Ryan Wingerter, Director of Field Services

The Commission's Field Services Division is responsible for maintaining hundreds of miles of water and sewer pipes that run beneath the City's streets, and surface assets, like valves and hydrants, too. This Division is the frontline of customer support – providing installations, repairs and replacements of water and sewer residential service lines as well as managing water consumption surveys and performing water quality checks. The activities of the Division are funded through the Commission's operations budget.

This year, the Asset Management branch of Field Services was more involved with facility planning and maintenance than ever before.



The Commission regularly flushes its distribution system to address water age and clear pipes of sediment.



A Field Services crew member changes a water meter at a customer's property.



DID YOU KNOW?

The Division responded to 15 water main breaks this year and fixed more than 400 service lines.

The growth of this group means more proactive maintenance of the Commission's facilities and assets.

Water Quality Protection

The Water Quality Group (WQG) routinely examines valves and hydrants and flushes them to maintain appropriate chlorine levels and water age across the entire system. The Unidirectional Flushing (UDF) Program, done in collaboration with engineers and operators at West Parish Filters, enhances water flow by effectively clearing sediment. In FY23, nearly 100 miles of pipe were flushed.

Water Infrastructure Maintenance and Upgrades

The Water Construction Group (WCG) is the first team that responds to main breaks, replacing aging water mains, rebuilding hydrants, and performing other routine or emergency repairs. The team is ready to respond to emergencies 24 hours a day, seven days a week.

In FY23, the Field Services Division responded to 15 main breaks and repaired or replaced more than 400 service lines. The Division also completed the replacement of the water main on Avocado Street. Replacement of the associated service lines will continue through next fiscal year.

Water Consumption Tracking and Assessment

Monitoring water consumption is an important task of the Commission's Meter and Field Services Group (MFSG). Consumption data is collected and tracked monthly and can help homeowners identify leaks and assess household water use.

In FY23, the MFSG upgraded 2,730 meters to smart meters. These meters, enabled by Advanced Metering Infrastructure, now

Galvanized Service Line Inventory

Total # of Known or Suspected	707
Total # Replaced FY23	319
Total # Replaced to Date	651
Total # of Known or Suspected Remaining	56



represent almost one quarter of all water meters in the system. Customers with a smart meter have access to a free consumer web portal that shows hourly water use. Customers can more quickly respond to leaks or unusual usage and can better understand their water use patterns. Smart meters also support water conservation.

Galvanized Service Line Replacement Program

New updates to the Environmental Protection Agency regulations, which require identification and removal of all service lines made of galvanized steel, are set to go into effect in 2024. The Commission has been proactively contacting all properties with known galvanized lines and scheduling them for replacement with pipe material that aligns with these new regulations. In FY23, 319 galvanized steel service lines were replaced. All remaining service lines will be replaced by the end of FY24, keeping the Commission in compliance with the new regulations. In addition, the Commission has already removed all known lead service lines as of 2005.

Wastewater Collection System Operations

The sewer system transports wastewater under the Connecticut River to the Springfield Regional Wastewater Treatment Facility on Bondi's Island. The Sewer Group is responsible for the upkeep of the sewer system in the city, performing tasks such as jetting (cleaning) sewer mains and syphons, repairing sewer mains and services, and cleaning/repairing manholes.

Operating around the clock, seven days a week throughout the entire year, the Sewer Group is always available to address emergency situations, such as sewer backups. In FY23, the Sewer Group responded to 598 sewer backups and helped 68 customers with repairs to their sewer service lines.

Cross Connection Control Program

This program ensures regular inspections in buildings throughout Springfield and Ludlow to ensure backflow prevention devices are connected and working, especially when connected to equipment or other systems potentially containing chemicals or water of questionable quality. In FY23, the program conducted 4,671 backflow inspections at 864 facilities.

Field Services Statistics and Activities FY23

Water and Sewer System

Miles of Water Main	597
Number of Valves	19,869
Number of Hydrants	6,251
Number of Meters	46,969
Miles of Wastewater Mains	475
Number of Wastewater Manholes	11,553
Number of Wastewater Pump Stations	27

Water Quality Group

Hydrants Inspected	3,069
Hydrants Repaired/Rebuilt	131
Valves Exercised	4,007
Miles of Mains Flushed (UDF Program)	99.16

Water Construction Group

New Hydrants Installed	6
Hydrants Replaced	30
Water Main Breaks Repaired	15
Water Service Replacements	405
New Valves Installed	58
Valves Replaced	9

Meter and Field Services Group

Meters Installed (Primary and Auxiliary)	3,137
Water Consumption Assessments	485

Sewer Group

Manholes Cleaned	200
Sewer Jetted (feet)	960,255
Sewer Backup Responses	598
Sewer System Repairs	18
Cave In Responses	30
Residential Service Line Repairs	68

A Look Ahead

Unaccounted Water is a performance standard used by MassDEP for public water systems. In fiscal year 2024, plans are in place to prioritize efforts to enhance, upgrade, and further develop system-wide leak detection programs to help limit unaccounted water in the system.

Additionally, over the next three years, the Commission's MFSG plans to upgrade 4,000 meters a year to smart meters. This will be funded through the Capital Funding Project. This upgrade effort will allow more customers to manage water use and identify water leaks earlier, saving money and capacity.

The Commission will invest time with consultants in FY24 to help prioritize areas for reinvestment in Springfield's aging system. Next fiscal year will also bring the completion of upgrades to security at Joseph J. Superneau Operations Center.





TECHNOLOGY INFRASTRUCTURE

“In FY23, the IT team moved forward with initiatives that included a major cybersecurity vulnerability assessment conducted in partnership with the federal Cybersecurity and Infrastructure Security Agency (CISA) and the commencement of the design of technology infrastructure for the new West Parish facility.”

– IT Director Rick Gomez

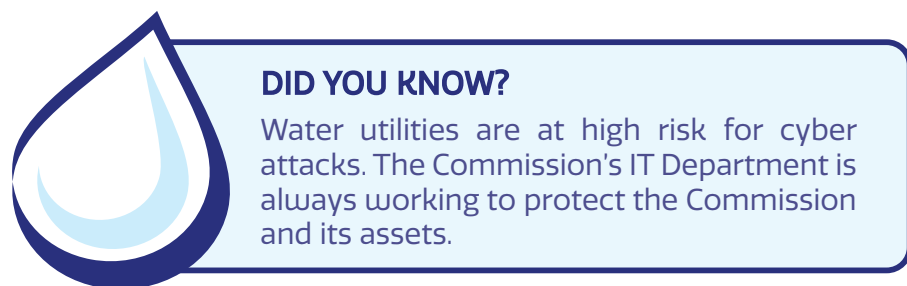
Providing an uninterrupted, high-quality of service to all customers requires significant investment in safeguarding the Commission's complex digital infrastructure. The IT Department is responsible for keeping the Commission's systems safe from cyber attacks and for ensuring continuity of essential services.

Cybersecurity Protection

Despite the persistent cyber threats faced by water utilities, the IT Department is always working to ensure the system is protected. This involves addressing vulnerabilities through system patching, implementing firewall policies, enhancing email and endpoint

protection, deploying intrusion detection systems, conducting network monitoring, enforcing network segregation, and providing comprehensive employee awareness training. This vigilant and multi-pronged approach to protection ensures the Commission is protected from threats.

To further enhance security in FY23, the IT Department partnered with the Federal Government's Cybersecurity & Infrastructure Security Agency (CISA) to conduct a cybersecurity vulnerability assessment, which includes ongoing weekly/monthly cybersecurity scans.



Geographic Information System (GIS) & CMMS Efforts

The Computerized Maintenance Management System (CMMS) team continued to modernize the Commission's approach to data analytics through the use of Business Intelligence tools, developing more than a dozen new business intelligence reports that serve more than eight Commission departments.

The CMMS & GIS teams focused significant effort into support of the Commission's ongoing Galvanized Service Line Replacement effort. By the end of FY23, more than 1,300 service line record revisions were completed, resolving service records that had incomplete or missing information about service line material.

GIS Drone Program

The Commission's GIS team completed 98 drone flights, totaling approximately 116 hours of flight time in FY23. Flights were conducted at nearly all the Commission's sites and projects. The GIS team completed FY23 with three licensed drone pilots on staff.

In March 2023, the Commission augmented its drone fleet with a professional-grade drone, enhancing the efficiency of its drone operations. The team has programmed the new drone with 46 automated flight paths that can all be repeated, making it easier to detect changes to the condition of inspected infrastructure, while also introducing the ability to create time-lapse footage. The integrated high-accuracy real-time kinematic GPS unit allows for more accurate ortho imagery and 3D products.

In addition to annual drone-based vent stack inspections at dams, regularly scheduled drone-based dam inspections were established during FY23. These inspections provide a baseline of dam infrastructure conditions.

IT leadership began the process of revising the Department's organizational structure during FY23, with the goal of implementing changes in FY24. To integrate new technology capabilities and accommodate capital project needs, the Commission enhanced its GIS and systems administrator staffing. It also created a new Business Intelligence unit to continue meeting expanding demand for data analytics and real-time data monitoring to support more efficient and informed operations.

A Look Ahead

The next fiscal year will bring a complete upgrade of the Commission's server and networking hardware to meet growing demand, security, and support requirements.

IT will play an important role in producing the Commission's EPA-mandated Water Service Line Inventory, which is due October 2024.



CUSTOMER SERVICE

“The Customer Service Group’s dedication is immense and can be seen in the group’s ability to continually adapt to changes in programs while keeping customers up-to-date; the patience and compassion shown to customers on a daily basis; the drive to resolve any issue a customer may be facing; and willingness to volunteer in community outreach programs.” - Anne Kulig, Customer Service Manager

The Customer Service Group (CSG) is essential to the Commission’s mission of providing responsive and engaging customer service. As the largest public water utility in the region with roughly 43,000 service points, quality customer service is a critical part of building and maintaining trust and successfully serving more than 175,000 retail customers.

Supporting Customers

The responsive and experienced customer service representatives (CSRs) make up two areas of the Commission’s CSG: billing/accounts, and field operations. The billing and accounts team is ready to answer

questions and provide solutions to billing inquiries and account management, while the field operations team is prepared to handle water and sewer emergencies, and schedule service appointments and inspections.

Customer Assistance Programs

Keeping customers current on bills and getting them help when needed is key to providing the Commission's services to the community. This fiscal year, the CSG stepped up outreach efforts to make all customers aware of the Customer Assistance Program (CAP) and other supports when managing their account balances. These outreach efforts resulted in an overall reduction of the number of past-due balances. CAP provides low-income homeowners that qualify for heating fuel assistance with a water/sewer bill credit up to \$250. In FY23 CAP received more than 1,000 applications with nearly 650 approvals.

In FY23, the group:

- Worked closely with Valley Opportunity Council to include CAP flyers and applications in every Massachusetts Home Energy Assistance Program (LIHEAP) approval letter.
- Developed a relationship with Way Finders, a local housing and employment service provider. This partnership supports customers facing shut-offs by ushering them through the CAP application process and restoring their accounts as soon as possible.
- Leveraged local news and radio to promote CAP.
- Informed customers of the CAP program when they called in asking for any type of assistance.

Updated Practices and Programs

This year, the CSG increased outreach to customers regarding payment plans. The group began adding payment plan information to advisory letters in January 2023. In just one month, the group processed more than 300 payment plans, getting customers back on track with payments and avoiding service interruptions.



Leak Detection Program

A key function of the Customer Service Group is identifying customers with unusual water usage and helping them figure out why there was a sudden drop or spike in the amount of water they used. By monitoring usage, the CSG can identify properties where water needs to be turned off due to vacancy or unsafe conditions. When unusual usage is identified the CSG will reach out to the customer to coordinate installation of a smart meter, which allows for the customer to self-monitor consumption in real-time and notice patterns of use. This ultimately helps save ratepayer money and reduce water consumption waste. The team upgraded 2,730 accounts to smart meters in FY 2023. Of those, 1,280 (46%) resulted from Commission-initiated usage investigations.

A Look Ahead

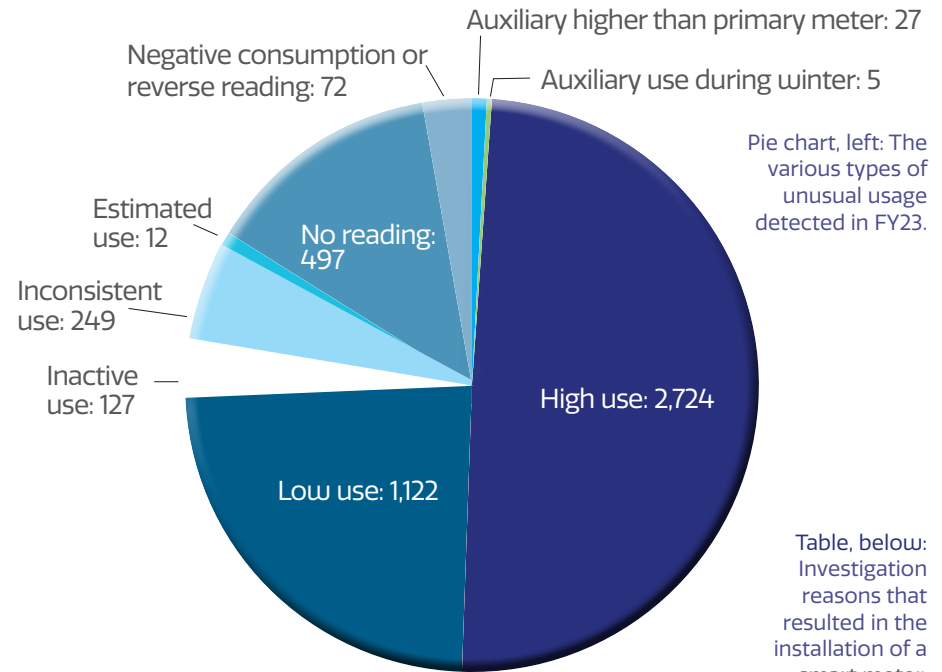
In FY24, the group will focus on several initiatives to improve the customer service experience and resolve outstanding debts. One of these initiatives is "First Call Resolution," which aims to resolve issues and questions in the first attempt, reducing repeat calls, limiting customer frustration, and increasing customer satisfaction. An additional focus is striking the right balance between human and automated interactions with customers. By automating payment plan applications, customers will be able to easily sign up online and submit necessary information.

Field applications, SWSC Approved Contractors, Fire Flow and New Service Applications will all be streamlined next fiscal year, helping to bridge the gap between infrastructure and customer service. The Collections Department will also implement a more proactive approach for resolving inactive meters and high outstanding balances with a focus on clearing court-ordered payments.



DID YOU KNOW?

Almost half of the smart meters installed in FY23 were the result of the Commission's proactive leak detection outreach.



FY23 Usage Investigations

Usage Investigation Reason	# of Smart Meters Installed as a Result of Usage Investigation
Estimated Usage	19
High Usage	463
Inactive Meter with No Read	43
Inconsistent Usage	70
Low Usage	189
No Read	279
Zero Usage	217

Table, below: Investigation reasons that resulted in the installation of a smart meter.





EDUCATION AND COMMUNITY

As the Commission seeks to further invest in water and wastewater systems, it is crucial for both the public and local legislators to understand the vital role water and the Commission plays in supporting the needs of the community. Outreach efforts in FY23 focused on:

- Promoting the water sector to local students as a viable career path.
- Using the Water Station and visits to neighborhood meetings to connect with and educate the community.
- Engaging with local legislators to keep them updated on projects and garner support for continued investments.



PIPELINE PROGRAM

Pipeline Program

In June 2023, The Commission launched its "Pipeline Program," a summer program in collaboration with the Massachusetts Water Works Association (MWWA), Veolia, and Springfield Public Schools School-to-Career Program. The program aims to promote the water sector as a viable career path for students. Recognizing the impending shortage of workers in the water sector due to retirements, the initiative seeks to invest in the future workforce needed to manage and maintain new infrastructure. In addition, interns also gain valuable job experience that supports their community for whatever career path they end up choosing.

Twelve paid interns from Springfield high schools were selected from a competitive pool of around 40 applicants. The program provides local students with exposure to diverse careers within the Commission and the water sector, including water operations/lab, watershed protection, information technology/GIS, engineering, and field services. Interns visited other area utilities to understand the wide range of system types and sizes as well. They also completed the "Introduction to Becoming a Public Water System Operator" course provided by MWWA, which positions them to sit for the Massachusetts Grade 1 Treatment and Distribution Water Operator Examinations.



*Top: Staff at Veolia provide a tour of the SRWTF to Pipeline Program interns.
Bottom: Pipeline interns visit West Parish Filters Water Treatment Plant.*



Top: Attendees visited the water station during the pancake breakfast in May 2023.

Water Station

In FY23 the Commission actively participated in 14 community events with its water station, distributing a total of 9,225 bottles. The water station serves as a platform for customers to engage with staff and ask questions about their water and customer services. The water station gives the Commission an opportunity to contribute to various community events, such as the Pancake Breakfast, Star Spangled Springfield, and Jazz Fest, and highlight the importance of water to everyday life. This year's redesigned water bottle showcased the Commission's pristine water supply from Cobble Mountain Reservoir.



Top: Commission staff work on a video explaining the Commission's essential work.
Bottom: A legislative breakfast for the Springfield regional delegation was held in January 2023.

Legislative Outreach

The Commission engaged with regional and state delegations to provide them with project updates and advocate for public investment in water systems. In January, the Commission hosted a “Legislator Breakfast” at the Field Services Operations Center to provide a comprehensive update on the progress of the new water plant, funding initiatives, and other pertinent regional water issues. The Commission also participated in the Massachusetts Water Works Association’s “Water’s Worth It Day” at the statehouse, emphasizing the critical need for funding in water infrastructure and sharing the implications of various legislation on both operations and ratepayers.

Congressman Richard Neal joined the Commission for the “Imagine a Day Without Water” event in October. This event included a visit to Cobble Mountain Reservoir and Cobble Mountain Hydroelectric Power Station. Additionally, the Commission hosted staff from the offices of Sen. Warren and Sen. Markey, providing them with valuable insights into emerging water issues, including aging infrastructure, climate change impacts, evolving regulations, and funding challenges, emphasizing the impacts these have on operations and ratepayers.

Additional Outreach and Education Initiatives

The Commission hosted Springfield fifth-graders at Ludlow Reservoir in partnership with Mass Audubon as part of their “Source to Sea” program, and provided them with hands-on, engaging outdoor education about watershed ecosystems and protection. This new partnership is expected to expand and continue in the coming years.

Staff members also participated in the production of two videos: one highlighting the Commission’s efforts in delivering essential services to the region, and the other showcasing the Pipeline Program. These videos serve as valuable tools to show customers all that goes into delivering water and wastewater services, as well as for attracting future Pipeline Program applicants and employees.



A Look Ahead

In FY24 the Commission is looking to highlight the ongoing work at West Parish Filters Water Treatment Plant by hosting the first public open house since before the pandemic. In addition, the public will also be invited to the opening of the new York Street Pump Station so they can see and experience the result of their ratepayer investment.

Outreach will continue to the State and Federal delegations to advocate for more direct funding in critical infrastructure projects. Customer-facing touchpoints such as the website and the water station will also continue to be enhanced, and the Commission will continue outreach and presentations to neighborhood councils and groups. Finally, the Pipeline Program will enter its second year, with more refined and targeted programming.

Top: The Commission hosted MassAudubon’s “River to Sea” program at Ludlow Reservoir for Springfield fifth-graders to learn about watershed ecosystems and protection.



FINANCIAL REPORT

Management's Discussion and Analysis

The management of the Springfield Water and Sewer Commission (the Commission) offers this narrative overview and analysis of the financial activities of the Commission for the fiscal year ended June 30, 2023.

Overview of the Financial Statements and Financial Highlights

The basic financial statements are comprised of (1) the Statement of Net Position, (2) the Statement of Revenues, Expenses, and Changes in Net Position, (3) the Statement of Cash Flows, (4) the Statement of Fiduciary Net Position, (5) the Statement of Changes in Fiduciary Net Position and (6) Notes to Basic Financial Statements. The Annual Comprehensive Financial Report (ACFR) also contains required and

other supplementary information and other information in addition to the basic financial statements themselves.

The Statement of Net Position is designed to indicate our financial position as of a specific point in time. At the close of FY23, net position was \$156,587,095.

The Statement of Revenues, Expenses, and Changes in Fund Position summarizes our operating results. The Commission's change in net position for the year ended June 30, 2023, was a change of \$17,293,449 in comparison to the prior year net position.

The Statement of Cash Flows provides information about the cash receipts and cash payments during the accounting period. It also provides information about the investing and financing activities for the same period.

The Statement of Fiduciary Net Position and Statement of Changes in Fiduciary Net Position account for resources held for the benefit of parties outside the Commission.

The notes in the ACFR provide additional information that is essential to a full understanding of the data provided in the financial statements.

In addition to the basic financial statements and accompanying notes, the ACFR also presents certain required supplementary information, which is required to be disclosed by accounting principles generally accepted in the United States of America, and other supplementary information.

As noted earlier, net position may serve over time as a useful indicator of the Commission's financial position. At the close of the most recent fiscal year, total net position was \$156,587,095, a change of \$17,293,449 in comparison to the prior year.

The Commission's net position is comprised of \$228,994,258 invested in capital assets, net of related debt, \$67,717,316 restricted for other purposes, namely restricted cash and inventory, and a deficit of \$(140,124,479) in unrestricted.

Financial Analysis of the Commission

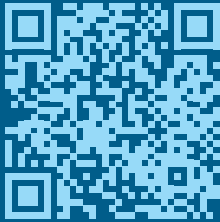
The Commission ended the year with operating income of approximately \$29.4 million. The following paragraphs give an overview of the fiscal year activity.

It has been the practice of the Commission to establish its rates and charges for water and wastewater services at levels sufficient to produce revenues adequate to defray all operation and maintenance expenses, debt service, and reserve deposits projected by the Commission's consulting engineers and to maintain net revenues available for debt service in excess of the coverage requirements mandated by the General Bond Resolution. Until fiscal year 2010, the Commission had historically adjusted its rates and charges for water and wastewater services on a basis which stabilized rates and charges over a multi-year period. Beginning in fiscal year 2011, the Commission

MAJOR CAPITAL ASSET EVENTS FY23

Hydrant Projects	\$56,000
Meter Replacements	\$447,000
West Parish Filters Water Treatment Plant Projects	\$9.4 million
Water Treatment System Improvement Projects	\$2.1 million
Wastewater Treatment System Improvements Projects	\$20.5 million
York Street and CT River Design Projects	\$29.6 million
Sewer Main Rehabilitation Projects	\$1.9 million
Collection System Assessment and Rehabilitation	\$1.4 million
Distribution System Rehabilitation Projects	\$1.5 million
Provin Reservoir Tank Projects	\$164,000
Bypass and Tunnel Construction	\$296,000
New Vehicle and Equipment Purchases	\$1.5 million
Computer Software and Equipment Purchases	\$746,000
Various Other Rehab and Improvement Projects	\$7.9 million

Additional information on the Commission's capital assets can be found in the ACFR's Notes to the Financial Statements, Note 10, Capital Assets.

Summary of Net Position	2023(\$)	2022 (\$)	Last Five Fiscal Years					
			Water Rates (\$ per 100 CF)	2024	2023	2022	2021	2020
Current Assets	140,899,947	441,442,380	Residential	4.75	4.46	4.19	3.96	3.62
Non-Current Assets	538,063,713	3,152,345	Commercial	4.75	4.46	4.19	3.96	3.62
Capital Assets	535,011,410	455,656,564	Municipal	3.55	3.33	3.13	2.96	2.70
Total Assets	678,963,660	900,251,289	Industrial	3.55	3.33	3.13	2.96	2.70
Deferred Outflows of Resources	107,109,393	98,559,706	Solutia contract	3.48	3.26	3.07	2.90	2.65
Total Assets and Deferred Outflows	786,073,053	998,810,995	Town contracts (per million gals)	2,028.37	1,950.32	1,656.62	1,340.94	1,727
.....			Residential Water % Change	6.5%	6.4%	5.8%	9.4%	12.4%
Current Liabilities	54,926,245	124,232,253					
Non-Current Liabilities	371,839,892	547,168,634	Sewer Rates (\$ per 100 CF)	2024	2023	2022	2021	2020
Total Liabilities	426,766,137	671,400,887	Residential	7.51	7.05	6.62	6.25	5.71
Deferred Inflows of Resources	202,719,821	188,116,462	Commercial	8.26	7.76	7.28	6.88	6.28
.....			Industrial	9.01	8.46	7.94	7.50	6.85
Net Investment in Capital Assets	228,994,258	201,071,124	Municipal	7.51	7.05	6.62	6.25	5.71
Restricted – Other Purposes	67,717,316	62,790,797	Food Service	9.76	9.17	8.61	8.13	7.43
Unrestricted	(140,124,479)	(124,568,275)	Medical	8.26	7.76	7.28	6.88	6.28
Total Net Position	156,587,095	139,293,646	Solutia contract (per million gals)	1,392.86	1,326.36	1,288.93	1,340.94	1,138.91
.....			Town contracts (per million gals)	1,392.86	1,326.36	1,288.93	1,340.94	1,138.91
Operating Revenues	99,984,908	91,884,507					
Operating Expenses	70,583,294	(64,477,335)	Residential Sewer % Change	6.5%	6.5%	5.9%	9.5%	7.3%
Operating Income	29,401,614	27,407,172					
.....			Average Combined Rate Increase	6.5%	6.5%	5.9%	9.4%	9.9%
Non-Operating Revenues (Expenses)	750,255	(5,325,184)	Source: Commission's adopted Rules and Regulations Chapter 5					
Special Items	(12,858,420)	(26,145,756)					
.....			To see the full FY23 ACFR click here or scan the QR code to the right					
Increase (Decrease) in Net Position	17,293,449	(4,063,768)						
Beginning Net Position	139,293,646	143,357,414						
Ending Net Position	156,587,095	139,293,646						

has adopted single-year rate schedules to match revenues more closely to expenditures.

The Commission is required to file each year with Electronic Municipal Market Access (EMMA), the Commission's Annual Comprehensive Financial Report (1) the filing is being made merely to comply with contractual commitments, not to provide all information material to an investment in the linked securities, and does not purport to provide all such information, (2) consequently, the information set forth in the filing should not be relied upon as indicative of future financial performance.

In fiscal year 2023, there was an increase in collection efforts, however, overall usage was lower than anticipated. As a result, wastewater charges revenue and fees were approximately \$1.4 million lower than budget. Wholesale water charges and fees were lower than budget by approximately \$255,000. Power generation revenues were higher than estimates by approximately \$359,000. These and other factors resulted in total operating revenue of approximately \$100 million in fiscal year 2023, approximately \$686,000 more than budget, and \$8.1 million more than the prior year. Operating expenses were less than budget by approximately \$3.8 million, primarily as a result of conservative budgeting for general operational expenses. There were also vacant positions and less overtime needed than anticipated.

In fiscal year 2011, the Commission implemented Accounting Standards Codification (ASC) 980, *Accounting for the Effects of Certain Types of Regulation*, which essentially adjusts for differences between how revenue / rates are budgeted and how they are accounted for on a generally accepted accounting principles (GAAP) basis. In the Commission's case, revenue intended to fund capital asset acquisitions is set aside (deferred) and is recognized equal to the annual depreciation expense on those assets; depreciation expense on assets funded in other ways (such as through bonds) is removed from the statement of revenues, expense, and changes in net position because those costs are not factored into the budget process; conversely, because principal debt repayment costs are funded through the budget, those costs are reflected in the statement of revenues, expense, and changes in net position as a reduction to net position. The net effect of these adjustments is reported under the line "Excess revenues used to fund

deferrals" on the Statement of Revenues, Expenses, and Changes in Net Position. This was a decrease of \$(12,858,420) for fiscal year 2023.

As a result of the key elements described above, the activities for the year resulted in a change in net position of \$17,293,449.

Capital Assets and Debt Administration

Total investment in capital assets at year-end amounted to \$535,011,410 (net of accumulated depreciation). This investment in capital assets includes land, buildings and improvements, furniture and fixtures, vehicles and equipment, infrastructure, and construction in progress.

Additional information on the Commission's capital assets can be found in the Notes to Basic Financial Statements, Note 10, Capital Assets.

Long-Term Debt

At the end of the current fiscal year, total bonded debt outstanding was \$292,589,052, all of which was backed by dedicated revenues of the Commission. The Commission maintained their AA credit rating from Standard & Poor's (S&P) in the most recent bond rating in June 2021 for the secured loan issued by the U.S. Environmental Protection Agency under the Water Infrastructure Finance and Innovation Act (the WIFIA loan). At the same time, S&P affirmed the AA rating on the Commission's parity debt outstanding.

Additional information on the Commission's long-term debt can be found in the Notes to Basic Financial Statements, Note 13, Long-Term Debt in the FY23 ACFR.

Requests for Information

This financial report is designed to provide a general overview of the Springfield Water and Sewer Commission's finances for all those with an interest in the Commission's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

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FY23 ANNUAL REPORT

Building Our Future