

Fiscal Year 2019

Budget and Capital Plan Public Hearing



June 5, 2018
Springfield City Hall

Joshua Schimmel

Executive Director

Welcome



INTEGRITY

VISION

ACCOUNTABILITY

Welcome and Agenda

- Who we are & What we do
- Water
- Water Distribution System
- Wastewater
- Engineering and Capital Projects
- Information Technology
- Customer Service
- Financial Plan
- The Value of Water



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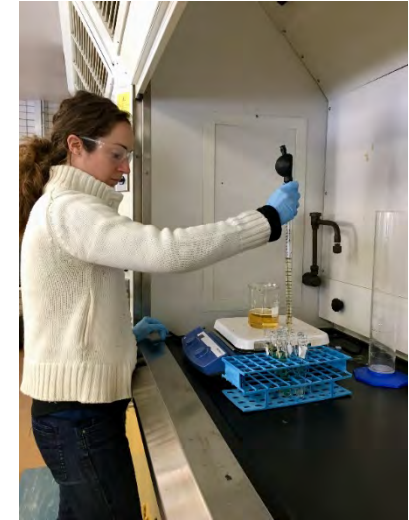
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Who We Are

We Proudly Serve 250,000 Customers in the Lower Pioneer Valley

- **Established in 1996** out of Springfield DPW
- **250 Employees** stationed in Westfield, Agawam, Springfield, and Ludlow
- **Stewards** of the largest water and wastewater system in Western Massachusetts



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What We Do

Safe, Reliable & Affordable Water and Wastewater Services

- **Protect Public Health** by Providing High Quality and Safe Drinking Water
- **Protect the Environment** by Properly Collecting and Treating Wastewater
- **Serve Our Customers** through Reliable Service, Responsiveness, and Long-term Sustainability and Affordability
- **Promote Economic Development** through System Reliability and Capacity



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What We Do

By the Numbers (FY17)

- Treated and Delivered **11 Billion Gallons** of Safe, High Quality Drinking Water
- Treated and Returned **12 Billion Gallons** of Wastewater to the Environment
- Responded to 71,000 Customer Service Calls

FY17 Activity	Results
Sewer Pipe or Lining Installed	8,326 linear feet (1.6 miles)
Water Mains Installed/Replaced	6,761 linear feet (1.3 miles)
New Valves Installed	212
Water Mains Flushed	60 miles



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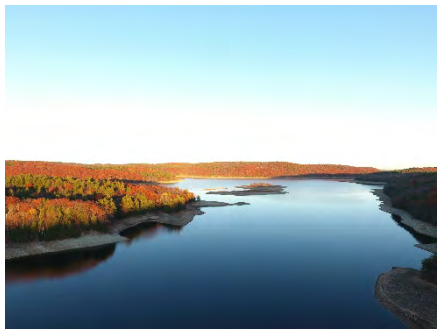
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Essential Services

24 Hours a Day, 7 Days a Week

Cobble Mtn. Reservoir



Water Treatment Plant



Transmission, Storage & Distribution System



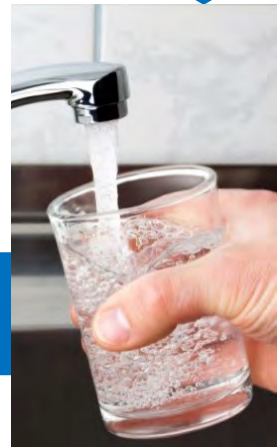
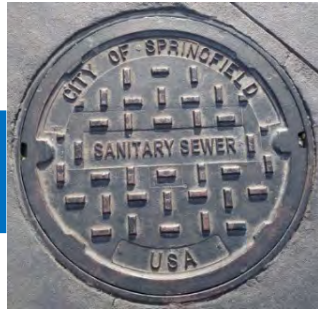
Discharge to CT River



WWTP



Collection System



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Emerging Issues

Challenges to the System

- Aging Infrastructure
- New Regulations
- New Technologies
- Cybersecurity
- Combined Sewer Overflows
- Climate Change & Resiliency
- Decreased Demand
- Public Awareness of Water Sector Challenges



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Addressing Today's Challenges

And Providing Stewardship for the Future

- Master Planning for Treatment Facilities
- Completion of the \$24 Million Main Interceptor Sewer Project
- Secured \$100 Million Low-Interest Loan for York Street / CT River Crossing Project
- Continued Strategic CIP & Stabilized Rate Program for Long Term Sustainability
- Technological Investments to Improve Efficiency



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Ready for the Unexpected

The Projects that Choose Us



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James Laurila

Director of Water Operations

Watershed, Reservoirs, Treatment,
Transmission, and Storage



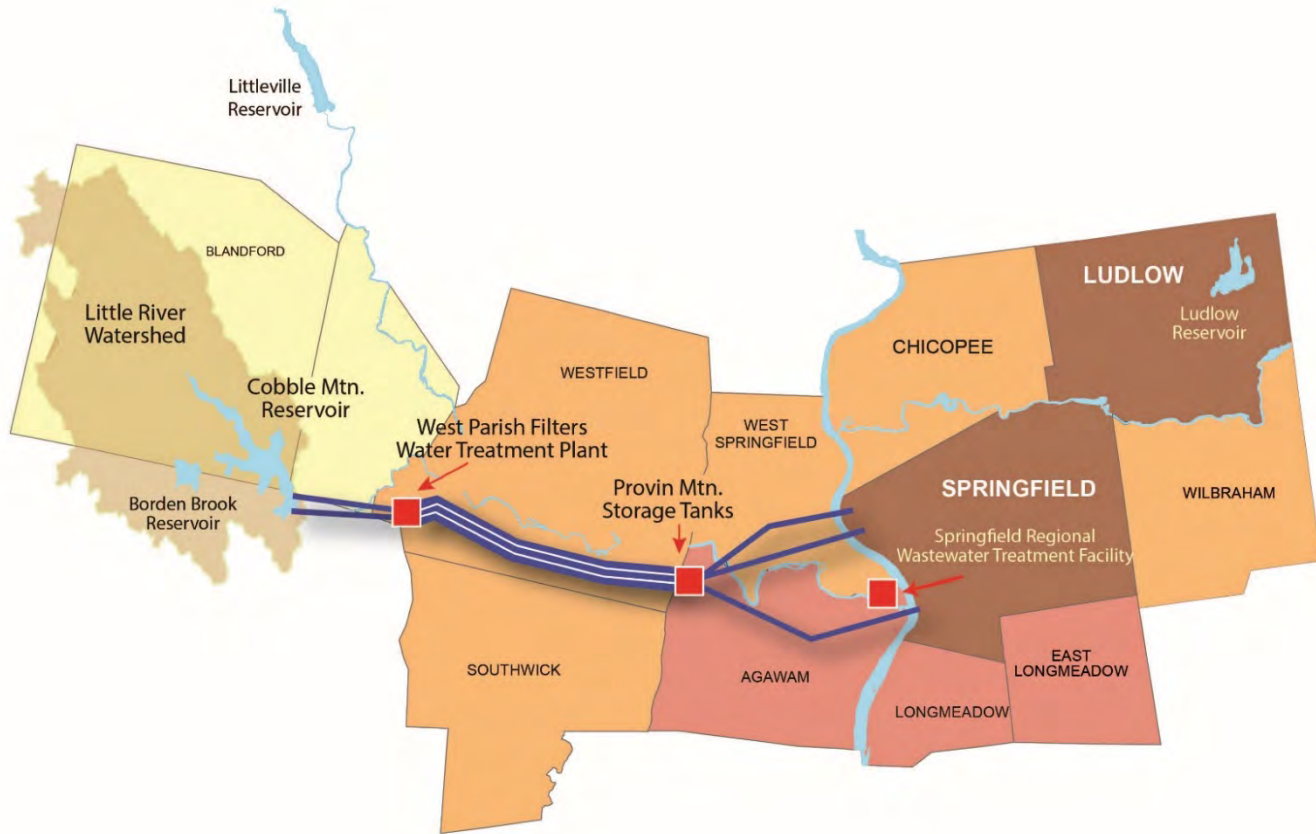
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Water Operations

Protecting, Treating, and Storing the Region's Drinking Water



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FY19 Water System Capital Projects

Improving Infrastructure and Protecting Land

Dams, Reservoirs, Watersheds

- Land Acquisition
- Dam Maintenance
- Intake Dam – Rehab study
- Drought Management Plan update



Total Cost = \$505,000



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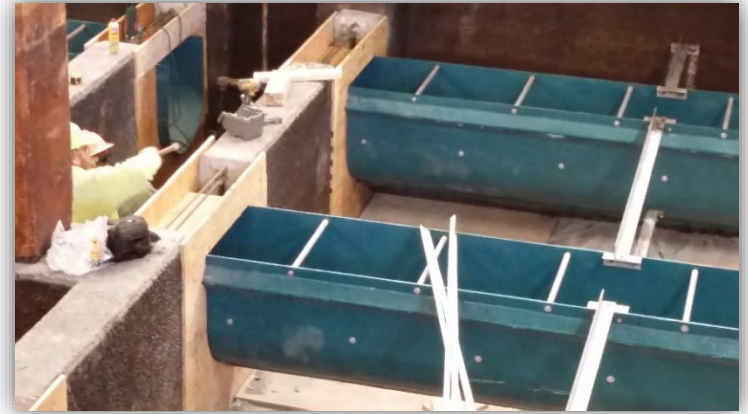
FY19 Water System Capital Projects

Treatment Plant and Site Upgrades

Many upgrades to aging treatment plant

- Facility Master Planning
- Emergency treatment plant power
- Chlorine feed pipe replacement
- New Chemical Bulk Storage Room
- Chlorine building – process upgrades
- Bridge Replacements – treatment plant
- Clearwell cover (design)
- In-line hydropower feasibility

Total Cost = \$3.4 Million



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FY19 Water System Capital Projects

Provin Mountain – Finished Water Storage

Storage Tank Projects

- Tank 1 Isolation
- New Tank mixers
- Tank 2 Roof liner design

Total Cost = \$701,000



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Daniel DiRienzo

Director of Field Services

Water Distribution System



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Water Distribution System

Delivering Clean, Safe Water to Your Tap

Daily Maintenance of Water Distribution System To:

- Ensure Flow Capacity
- Provide Adequate Pressure for Firefighting
- Maintain Drinking Water Quality

Challenging System Size:

- 595 Miles of Pipe in Springfield and Ludlow
- 40% of Mains are Over 75 Years Old
- 19,148 Valves
- 6,226 Fire Hydrants



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Water Construction

Fixing, and Getting Ahead of, the Leaks

Water Main Replacements

- Replace 2,000-6,000 feet/year

Hydrant Replacements

- Replacement of 400 century-old hydrants
- Project nearing completion in FY19

Water Main and Service Line Breaks

- Unpredictable in timing, size, and impact
- On-call 24/7 to respond
- Approximately 50 main breaks, 100 service line breaks each year



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Meters and Field Customer Service

Counting the Gallons

Meter Reading and Replacements

- Drive-by, radio, cellular data collection
- All meters will be read monthly in FY19
- Meter replacement program upgrading to 15-year intervals in FY19



Field Customer Service

- Responsible for water service installations, inspections, consumption surveys, customer questions
- Respond to 500 to 700 calls/week



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Water Quality

Keeping the Water Flowing

System Flushing

- Cleans water mains of sediment
- Brings fresh water to outlying reaches
- 65 miles cleaned/year

Hydrant Inspections

- 2,900 annual inspections generate prioritized rebuild/repair list

Valve Exercising

- Critical for emergency water shut-downs
- Crews exercise 4,000 valves/year on a 5-year cycle

Backflow Device Inspections

- 2,811 required annual backflow preventer inspections and tests



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William Fuqua

Director of Wastewater Operations

Wastewater Collection and Treatment



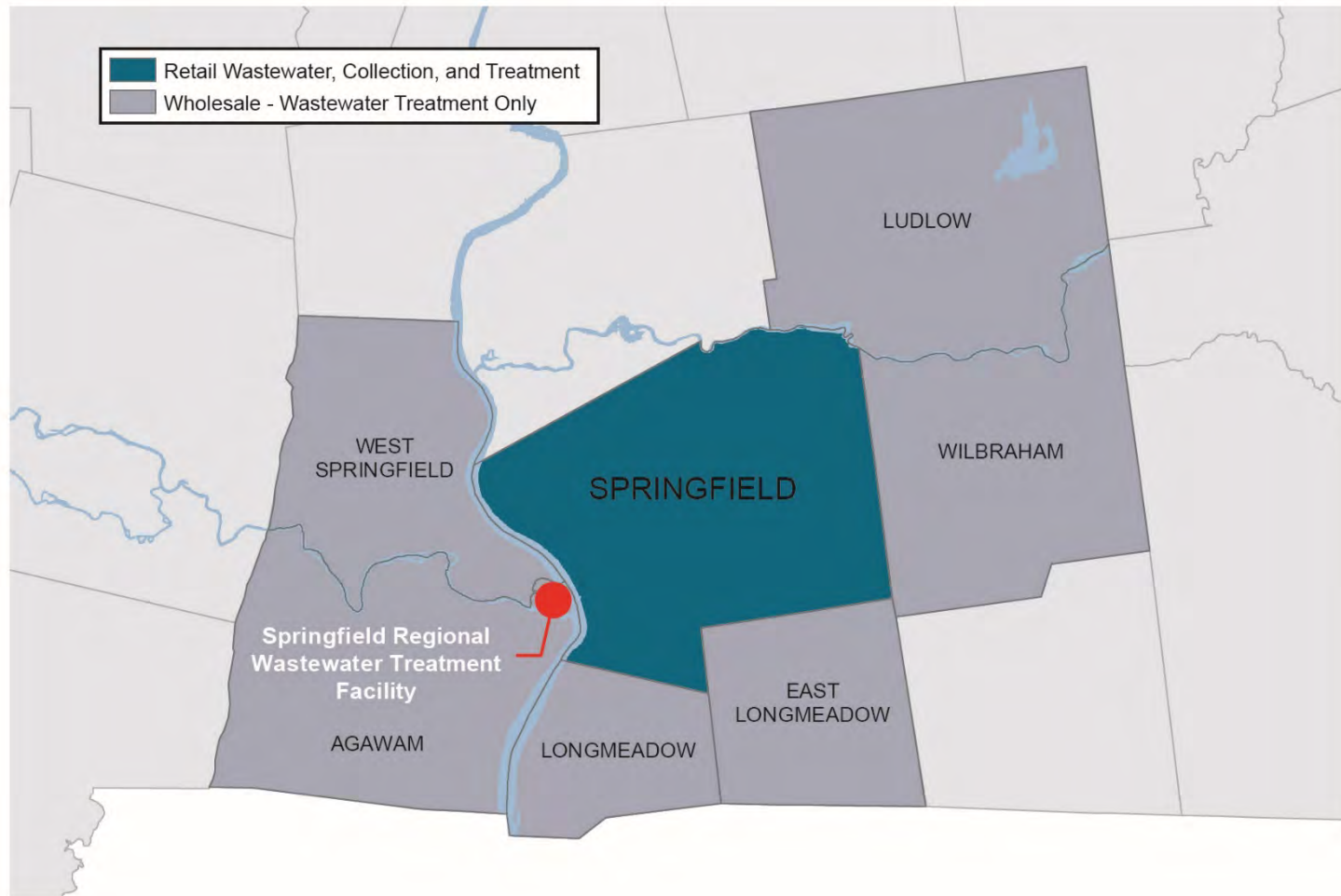
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Wastewater Collection & Treatment

Returning Cleaned Water Back to the Environment



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Wastewater Collection & Treatment

Factors Driving New Investment

NPDES Permit

- New finalized permit expected in FY19, first in 17 years
- Sets parameters for treatment and monitoring levels
- Includes new nitrogen limits

Aging Infrastructure, New Realities

- New 20-year O&M contract for treatment plant

CSO Remediation

- Need for cost-effective ways to reduce CSO discharges



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Asset Management and Maintenance Program

Cleaning and Assessing the City's Sewer System

Since 2009

- 1,975,000 feet of mainline sewers cleaned and assessed
- 80% + of all city sewers assessed

Outcomes

- Increase system capacity and reduce CSO discharges
- Reduce operating costs
- Prioritize and target investments



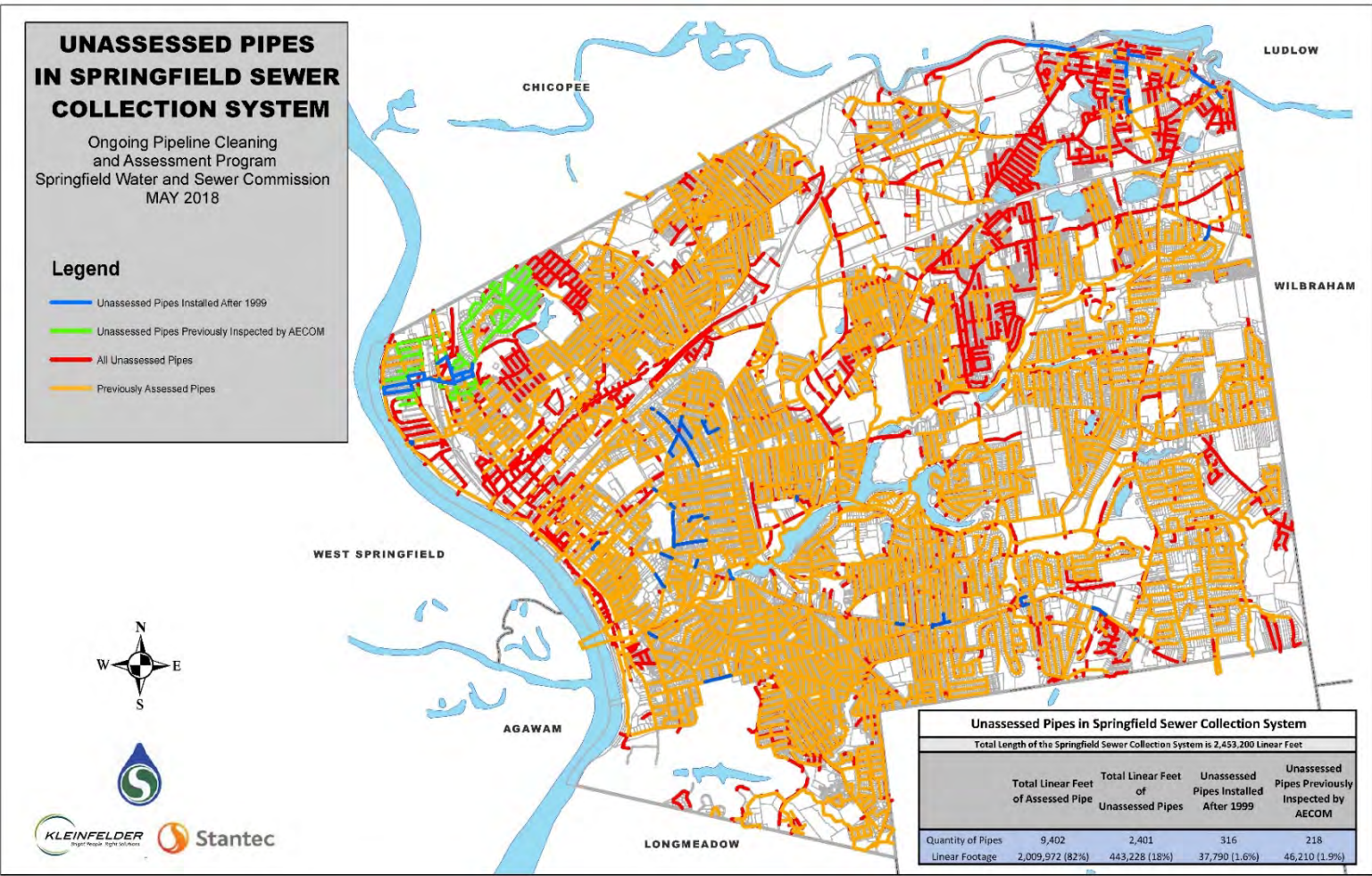
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Asset Management and Maintenance Program

Cleaning and Assessing the City's Sewer System



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CT River Crossing & York Street Pump Station

Addressing Multiple Needs in One Project

Resiliency, Redundancy, Renewal, CSOs

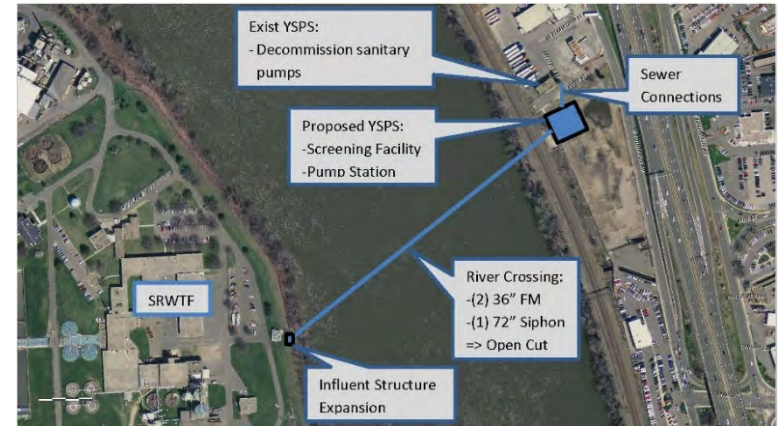
- Construction of new York Street pumping station
- Construction of 3 new river crossing pipes
- Improvements to SRWTF influent structure, flood control

Estimated Total Project Cost = \$100 M

Challenges

- Varying river conditions
- Numerous environmental restrictions
- Deep excavation

Construction Start – Spring 2019



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Robert Stoops

Chief Engineer

Engineering & Capital Projects



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Sewer System Repairs and Upgrades

Prioritizing Aging Infrastructure Renewal

Based on Asset Management Program

- Risk of Failure
- System Criticality
- DPW Paving Project Coordination
- Potential Customer, Traffic, Utility Impacts

FY19 Upgrades

- 12,075 linear feet
- \$3.96 Million



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Water System Repairs and Upgrades

Targeted and Coordinated Renewal Projects

Criteria for Upgrades

- Piping systems with history of breaks
- Pipes in highly corrosive zones
- Old unlined cast iron pipe
- Coordination with City DPW road reconstruction projects

FY19 Upgrades

- 18,080 linear feet
- \$7.08 Million



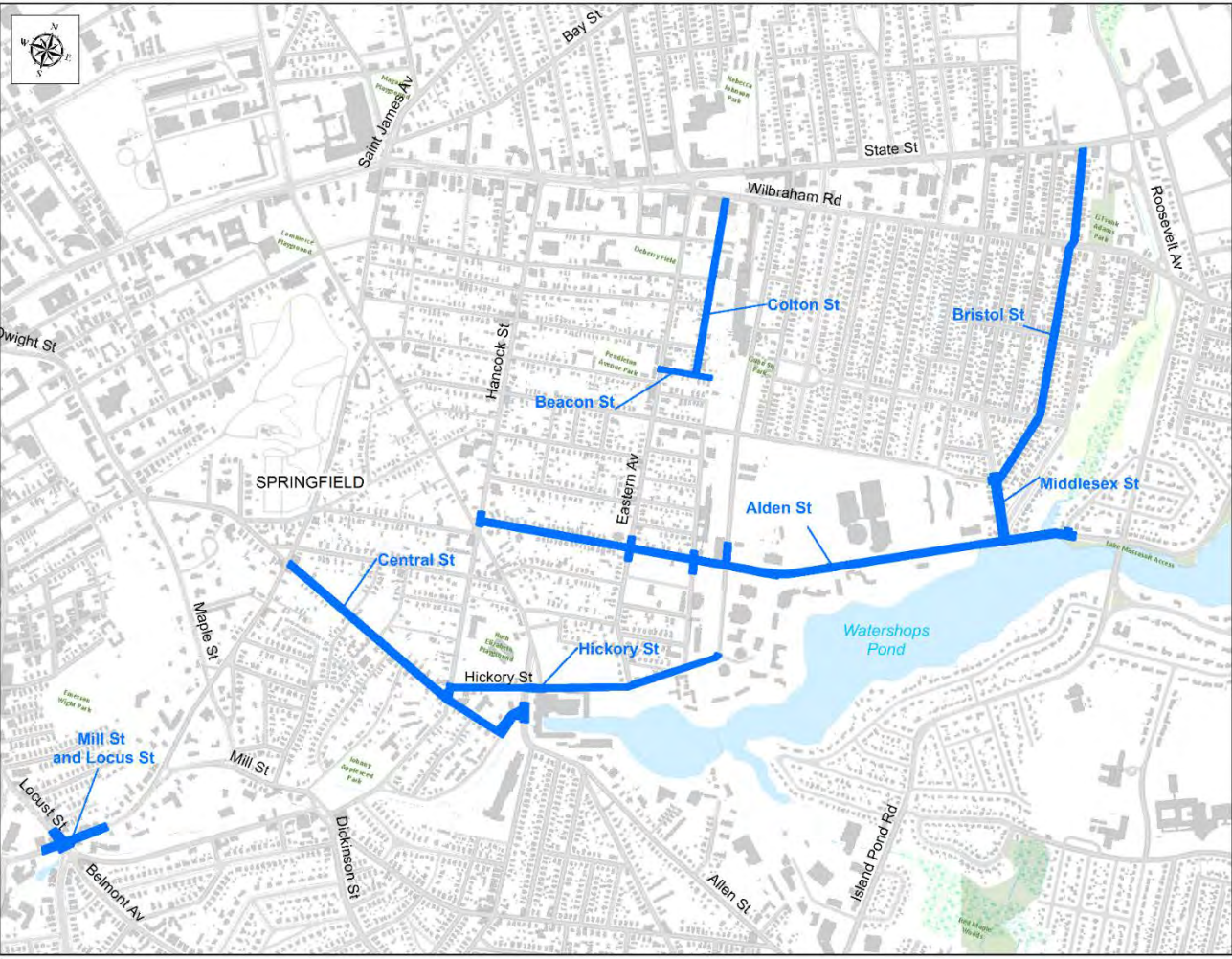
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Water System Repairs and Upgrades

FY19 Projects



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Green Energy Production

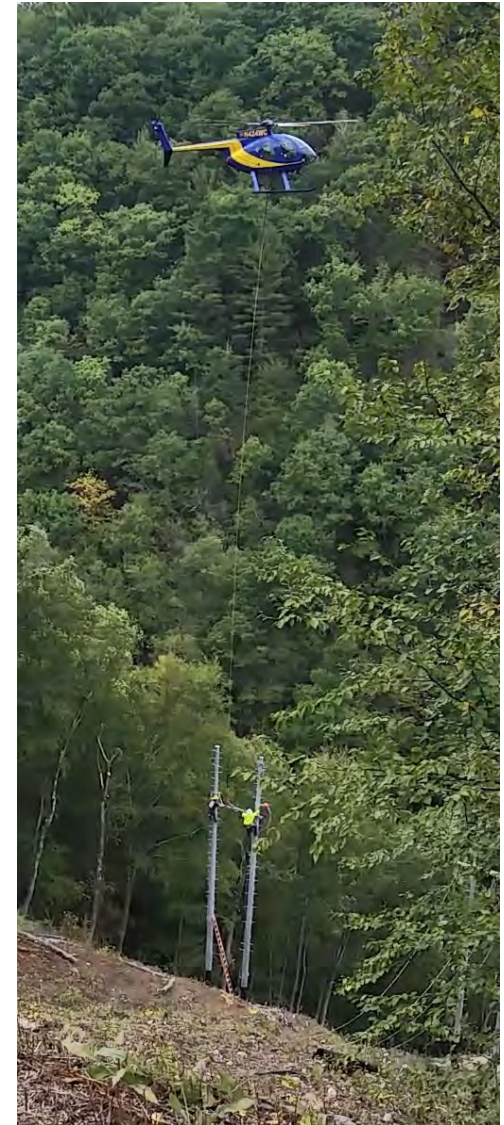
Putting Gravity to Work

Hydro-Power Station Produces Green Benefits

- 33 Megawatt station
- Capacity to power to 25,000 homes
- Generates revenue to offset water production costs
- \$3 Million in Gross Revenue in FY18

Needed FY19 Upgrades

- \$1,245,000 million to maintain functionality



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James Richardson

Director of Information Technology

Information Technology



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Information Technology

Enhancing Security and Enabling Mobility

Site Security Improvements

- Partnered with SecureWorks Counter Threat Operation Center
- Intrusion Detection and Prevention Systems

Next Generation Firewall

- Looks inside applications for hidden threats
- Better control of data and site redundancy

Deployed Mobile Device Management

- Enables secure application deployment to mobile devices

SUBSCRIBE

FASTCOMPANY

TECHNOLOGY

LEADERSHIP

ENTERTAINMENT

IDEAS

VID

The FBI makes it official: Russia is attacking U.S. energy, water, and critical systems



[Photo: snapwiresnaps.tumblr.com /Pexels]



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Information Technology

FY19 Objectives

Make All Employee Technology Fully Mobile

- Replace all desktops with updated devices

Benefits

- Seamless application deployment
- Reduced cost
- Longer hardware lifecycle
- Systems and data never leave protection of data center

- ✓ Same Desktops
- ✓ Same Applications
- ✓ No Hardware Constraints



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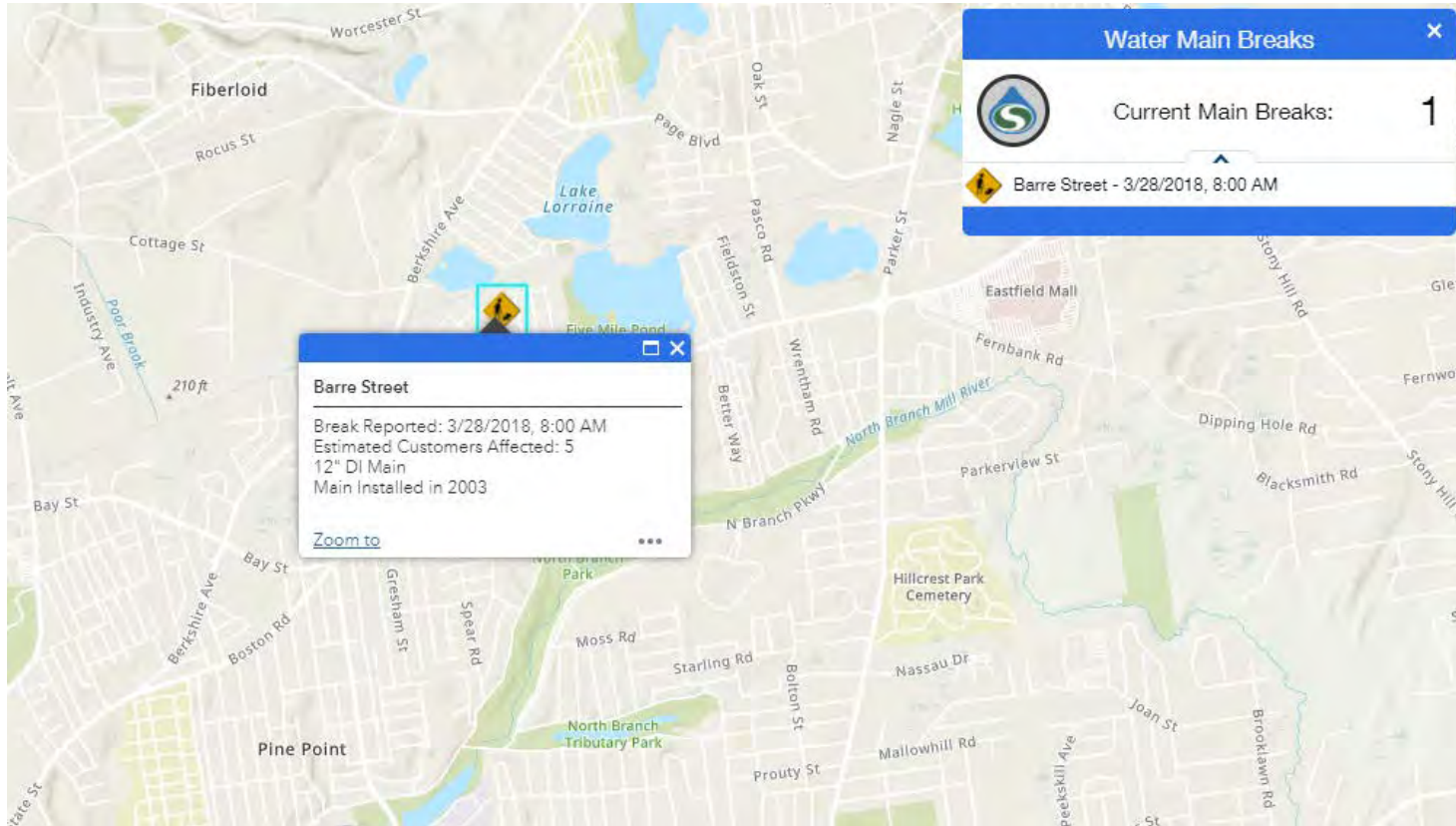
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Information Technology

GIS Mapping

Water Main Break Notification Webpage



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Jaimye Bartak

Communications Manager

Community Education & Outreach



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Community Education & Outreach

Increasing Awareness of the Value of Water

Ongoing Initiatives in FY19

- Public Tours of Facilities
- World is Our Classroom Program
- Public Events
- Media Outreach



Upcoming Initiatives in FY19

- Website Redesign
- Outreach to Neighborhood Councils
- Enhanced Legislative Outreach



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Domenic Pellegrino

Director of Finance

Customer Service

Commission Rules & Regulations



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Customer Service

As Important to Us as Water is to You

Responsive, Consistent, and Helpful

- Respond swiftly to questions about bills, water quality, leaks, or service needs
- Provide reassurance and guidance during water or sewer emergencies
- Investigate and resolve any indications of unusual water usage
- Provide programs and applications that enhance the customer experience (Leak Detection Program, Paymentus)

FY17 By the Numbers

- 42,810 water accounts
- 37,278 sewer accounts
- 450,433 bills produced



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Commission Rules & Regulations

New Policies for FY19

Guides Responses to Various Customer and System Situations

- Revised annually
- New changes effective July 1, 2018
- Available by contacting info@waterandsewer.org or on the website

Highlights of FY19 Changes

- Discontinuing pool abatements (averaged \$20 per abatement)
- New secondary meters only for in-ground irrigation systems



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Anthony Basile

Comptroller

The Financial Plan



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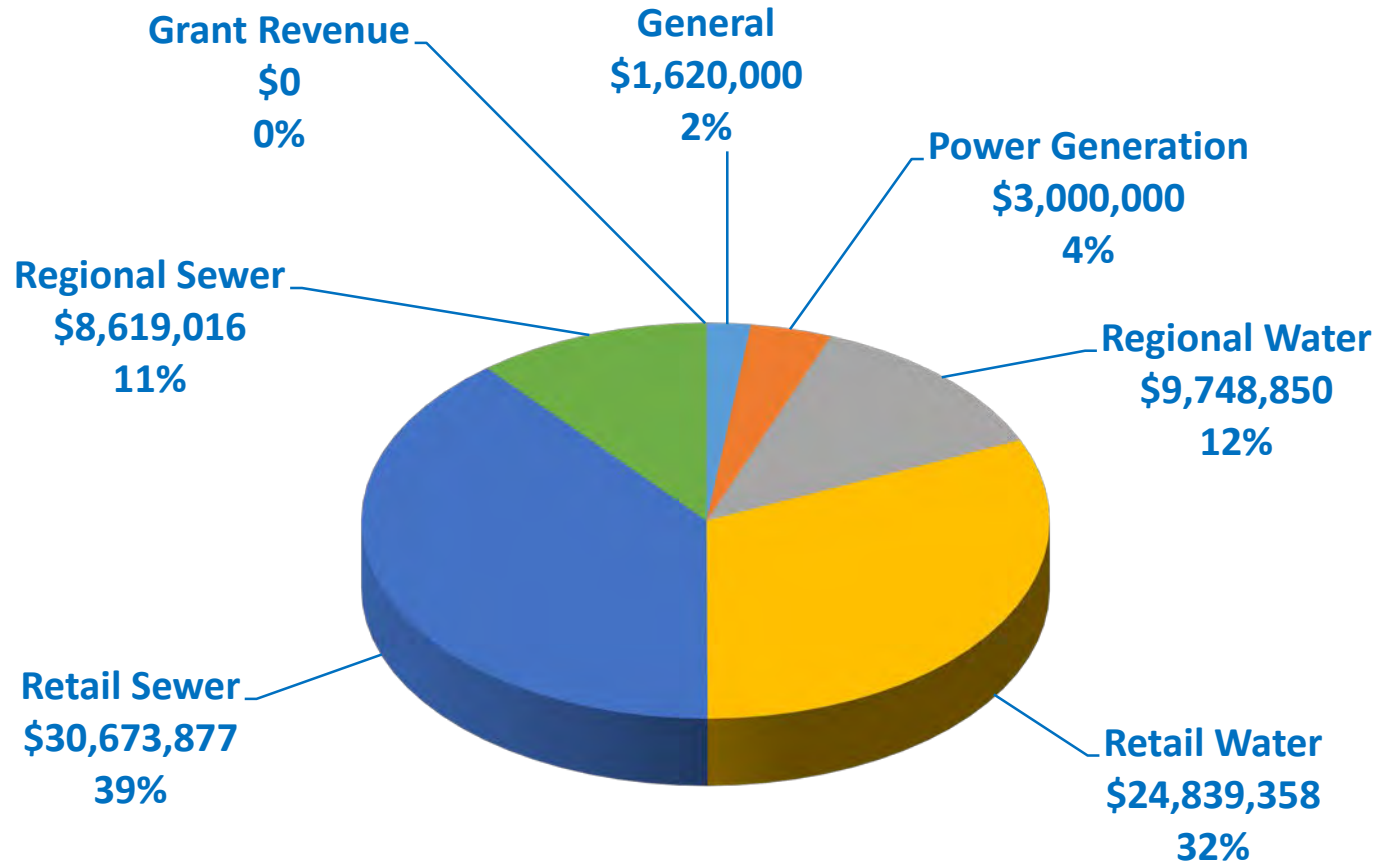
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Required Revenues

The Everyday Costs of Providing Water and Sewer Services

FY19 Estimated Costs - \$78,501,101



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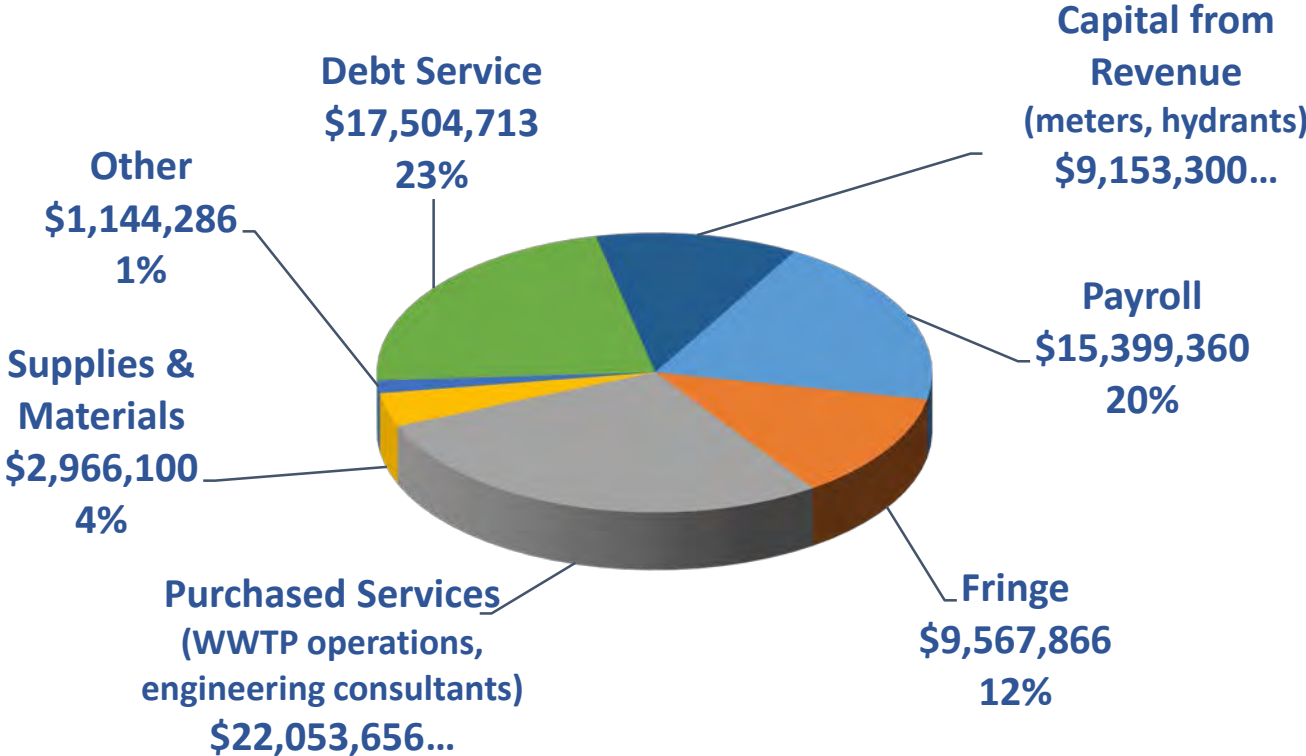
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O&M Spending

How is the Money Spent?

Budget - \$77,789,281



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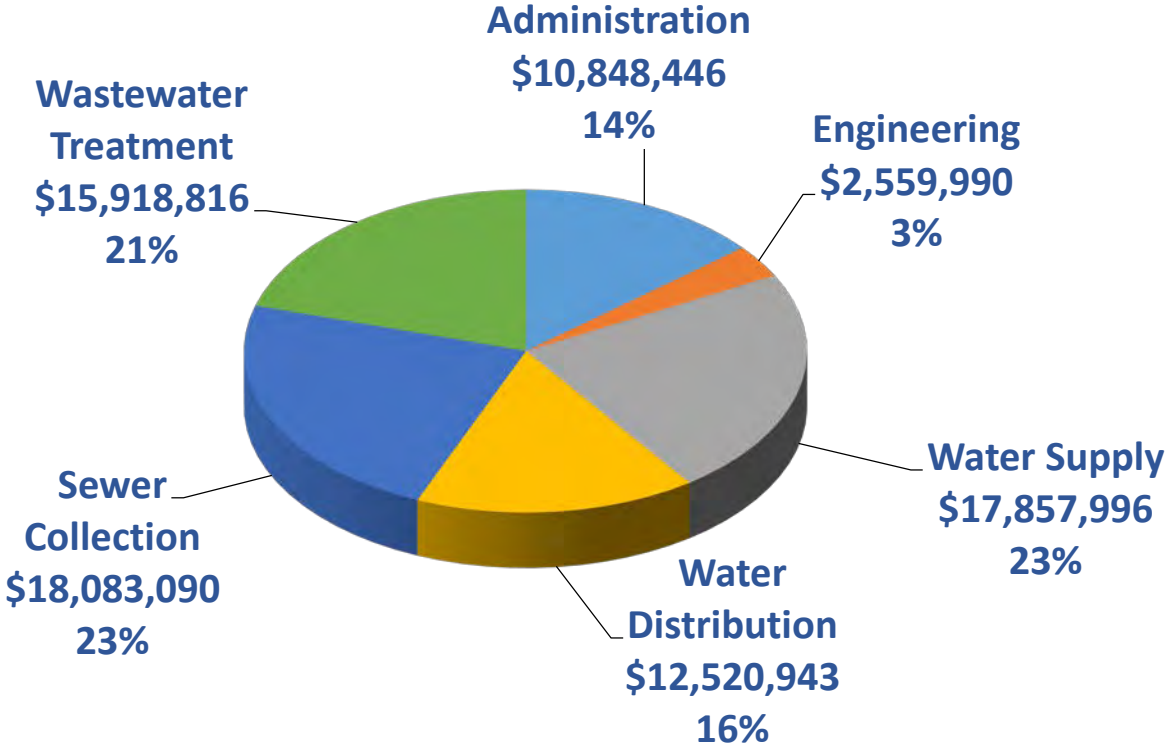
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O&M Spending

Where Is the Money Going?

Budget - \$77,789,281



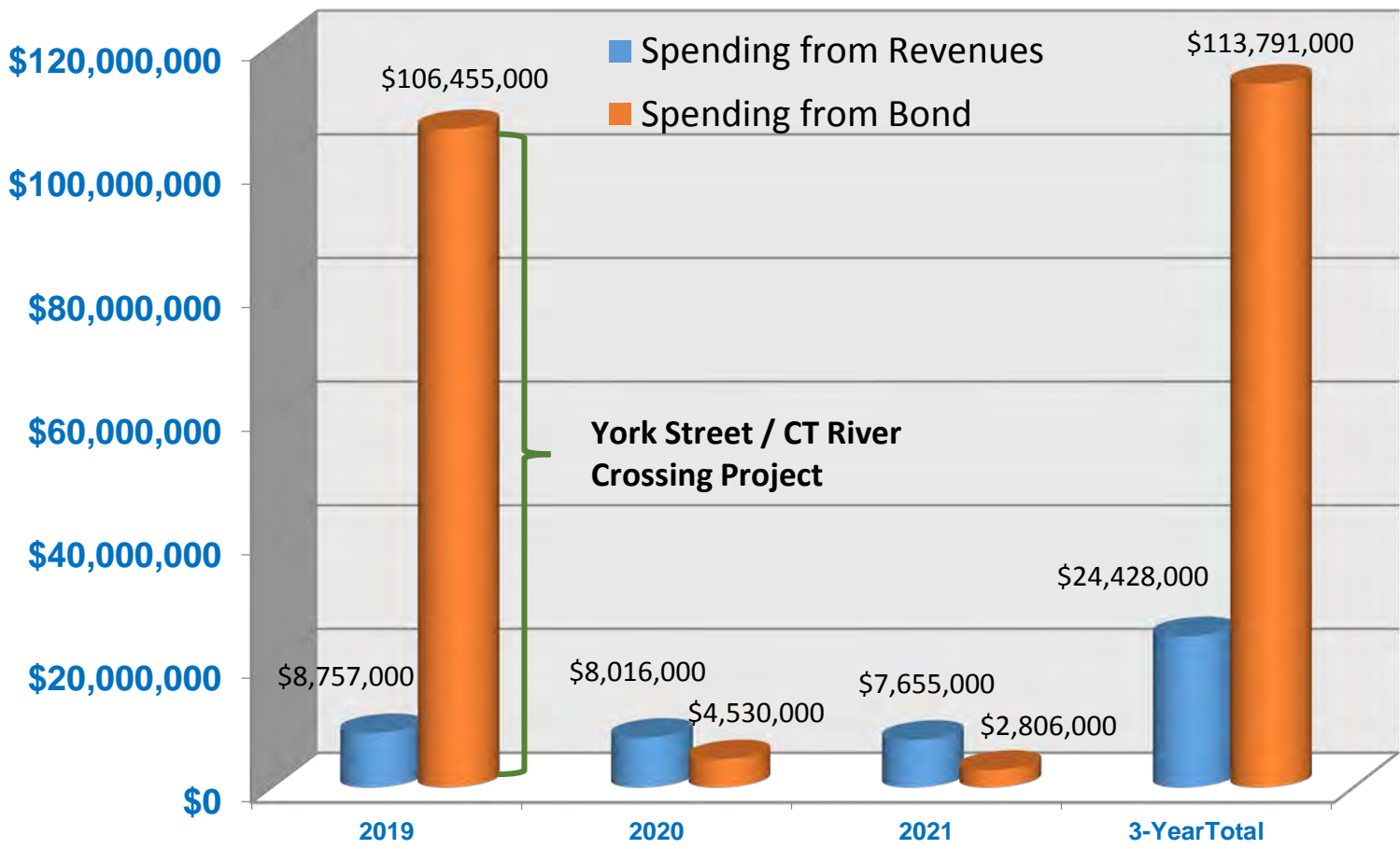
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Capital Plan

The Costs of Major Infrastructure Upgrades



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Capital Improvement Program

New Project Additions for FY19

Project Description	Status	Funding Source	Project ID	Cost Ctr	2019
Drought Management Plan	Planned	Revenue	004-0032	WS	\$110,000
WPF VFDs for Process Water Pumps	Planned	Revenue	005-0059	WS	\$100,000
WPF-ACH Bulk Storage Degn&Const	Planned	Revenue	005-0061	WS	\$450,000
WPF Culvert(s) Bridge Replacement	Planned	Bond	005-0063	WS	\$1,200,000
WPF Chlorine Storage Room Upgrades	Planned	Revenue	005-0064	WS	\$211,000
WPF InLine Hydro Study	Planned	Revenue	005-0065	WS	\$100,000
WPF Clearwell Cover Liner System DESIGN	Planned	Revenue	005-0067	WS	\$100,000
Provin Resv Tank 1 Isolation	Planned	Revenue	080-0016	WS	\$331,000
Provin Res Tanks Mixers Install	Planned	Revenue	080-0017	WS	\$120,000
Provin Res Tank 2 Roof Liner System DESIGN	Planned	Revenue	080-0018	WS	\$250,000
Water Services Mapped GIS	Planned	Revenue	06B-0007	WD	\$100,000
CT River Xing & York St Pump Station	Planned	SRF	003-0029	WWC	\$100,000,000
Public Education Documentary	Planned	Revenue	090-0022	ADM	\$200,000
					\$103,272,000

Source of Funding	
State Revolving Fund	100,000,000
General Revenue Bond	1,200,000
Revenue	2,072,000
Total	103,272,000
Funding by Cost Center	
Administration	200,000
Power Supply	-
Water Distribution	100,000
Water Supply & Transmission	2,972,000
Wastewater Collections	100,000,000
Wastewater Treatment	-
Total	103,272,000



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Rate Changes in FY19

The Bottom Line

	FY 2018 Eff. July 1	FY 2019 Eff. July 1	% Increase
Water			
Residential & Commercial	\$3.01	\$3.22	7.0%
Industrial & Municipal	\$2.24	\$2.40	7.0%
Sewer			
Residential & Municipal	\$4.93	\$5.32	8.0%
Commercial & Hospital	\$5.42	\$5.85	8.0%
Industrial	\$5.92	\$6.38	7.8%
Restaurant	\$6.41	\$6.92	8.0%
Combined Water and Sewer			
Typical Annual Household Bill	\$991.30	\$1,065.91	7.5%

Note: Rates above are for each 100 cubic feet (or 748 gallons) of metered water.



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Joshua Schimmel

Executive Director

The Value of Water



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Water Drives Everything

Imagine a Day Without It



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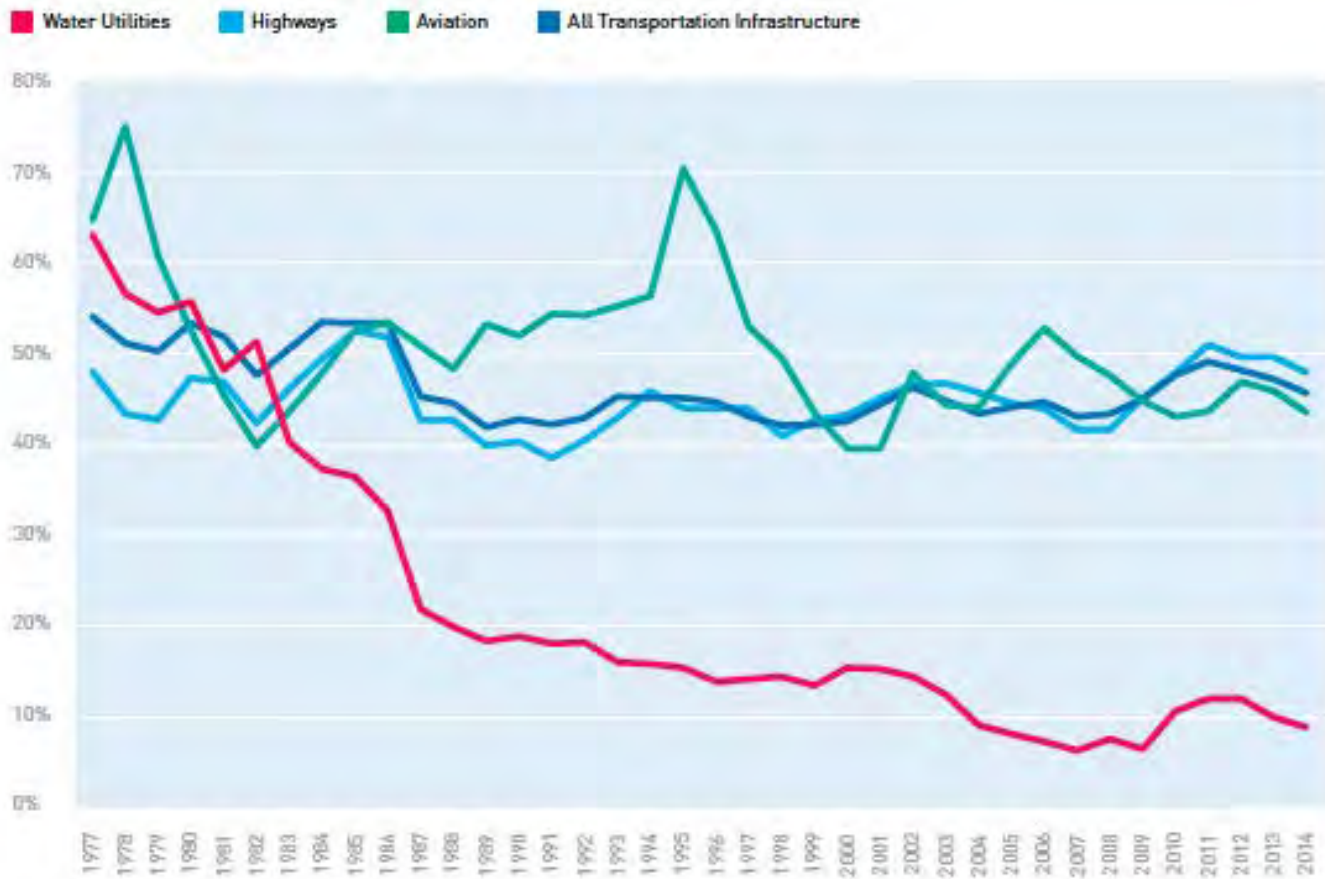
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National Infrastructure Investment

Water Sector Chronically Under-Prioritized

Federal Contribution to Total Infrastructure Spending



Source: CBO 2015.

Source: Water Research Foundation 2016



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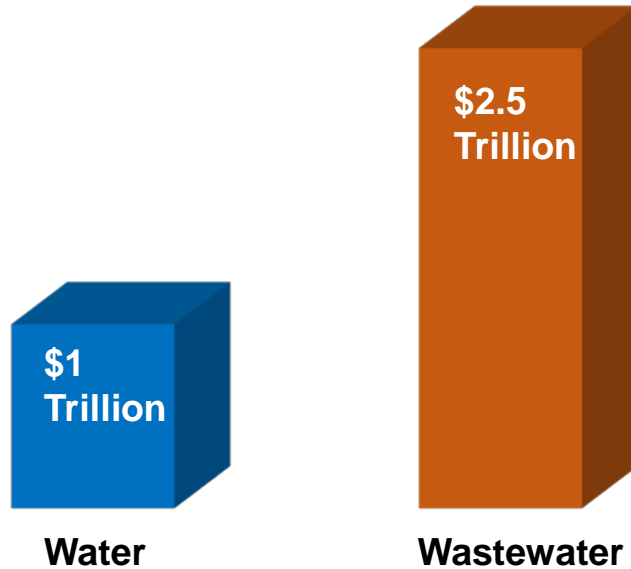
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Water Sector Funding Needs

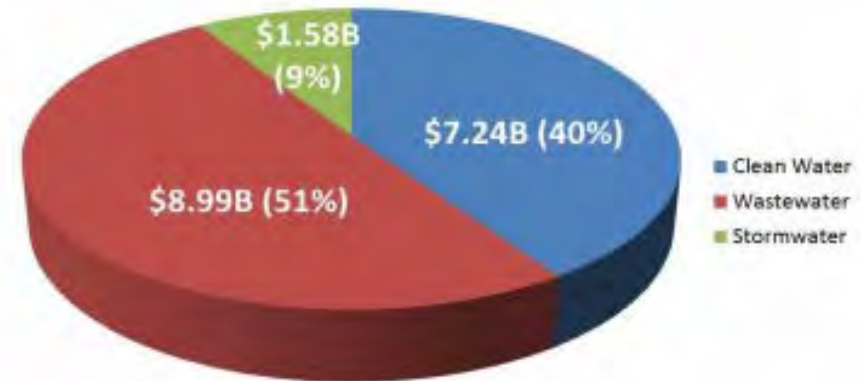
The State of the Industry

National Water and Sewer Utility Funding Needs



Source: ASCE Infrastructure Report

Massachusetts 20 Year Utility Funding Needs



Source: MA Office of Auditor: Local Financial Impact Review
- Issued January 17, 2017



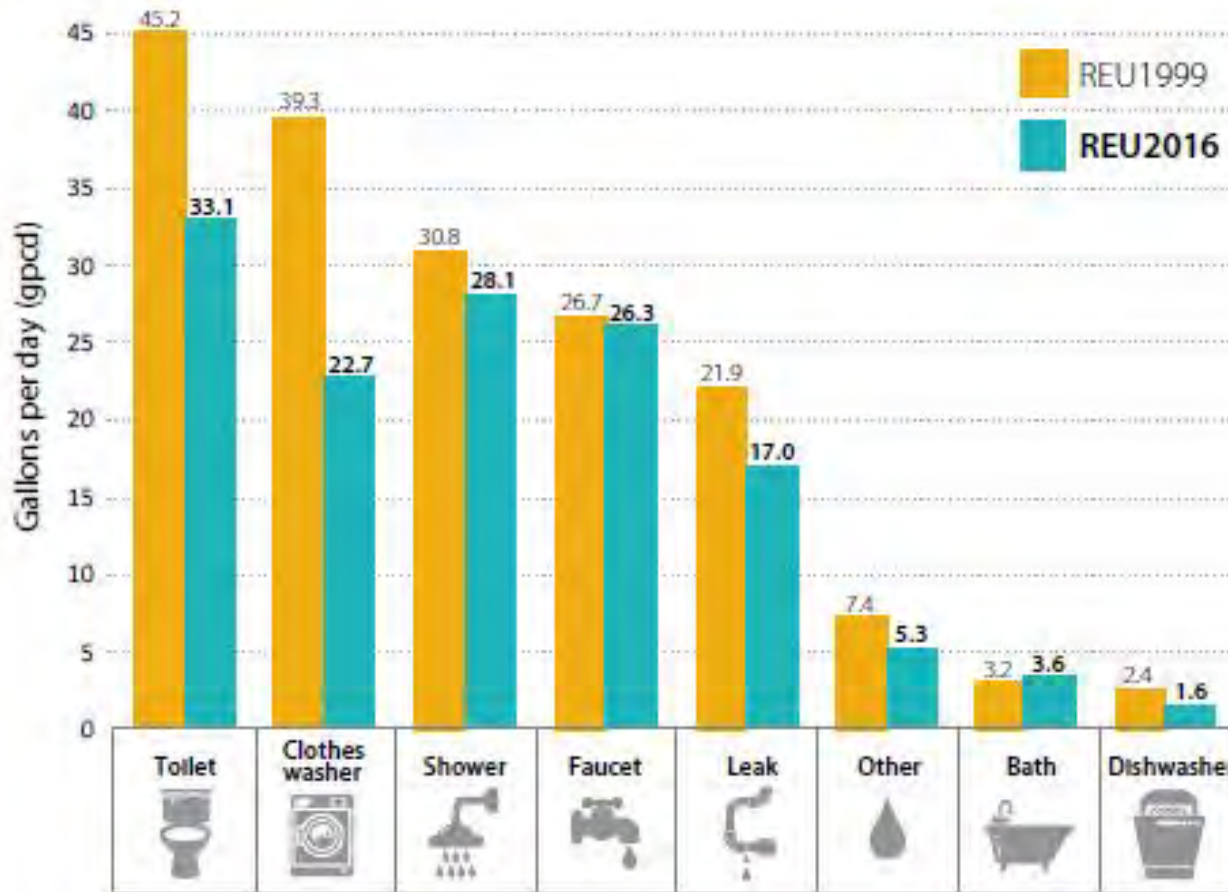
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Water Usage Declining

More Conservation, Same Number of Pipes



22%
DECREASE
PER HOUSEHOLD
DAILY WATER USE
1999 TO 2016



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Water is Worth It

SWSC Water is Still a Great Value



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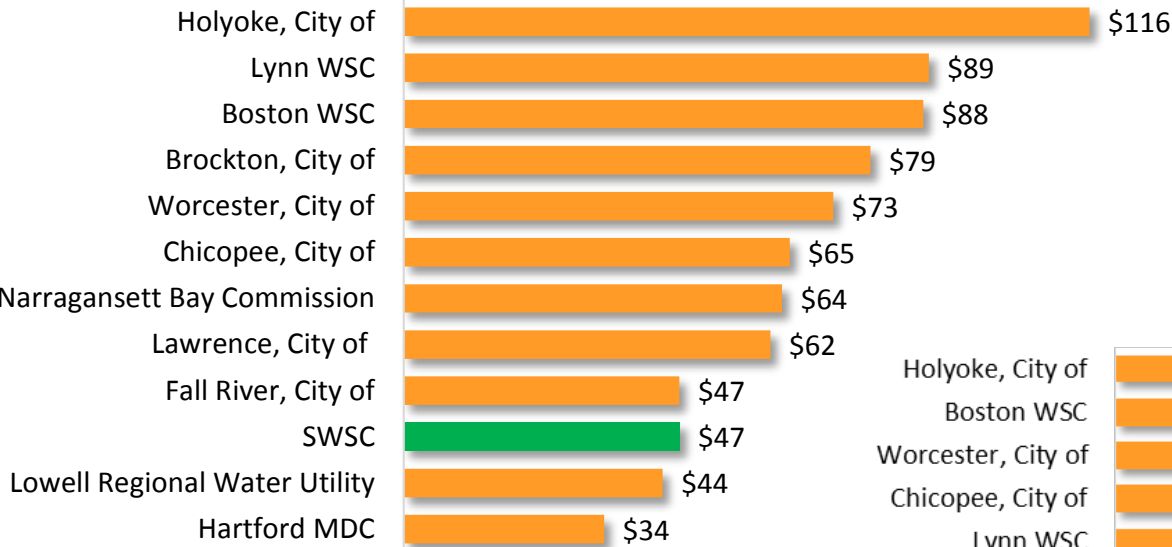
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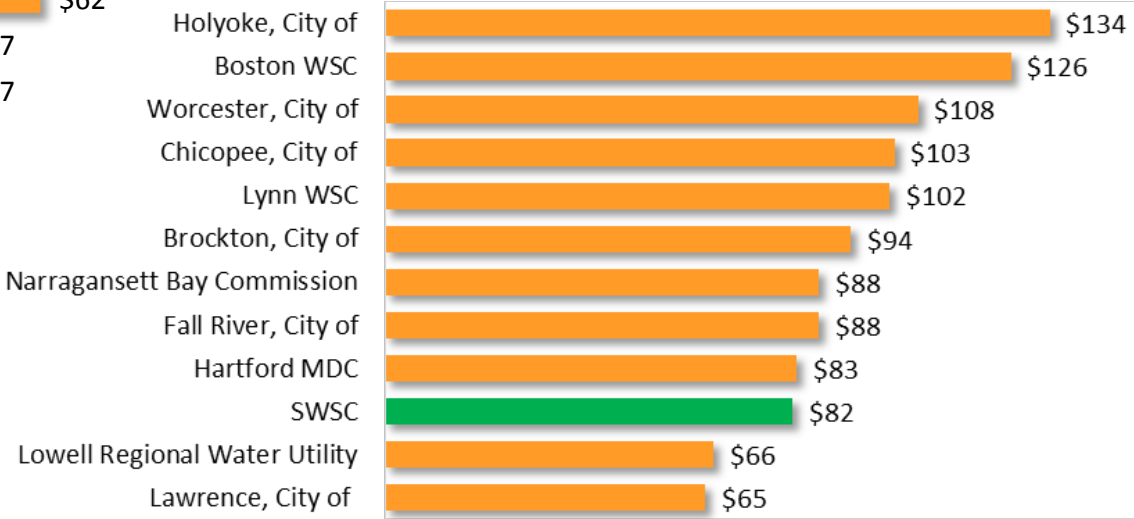
Rates in Context

Monthly Combined Bills in the Region

2009



2018



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Comparative Financial Position

Savings Through Sound Management

Utility	Median Household Income	Moody's Rating	S&P Rating
Boston WSC	\$55,777	Aaa	AAA*
SWSC	\$34,728		AA
Worcester, City of	\$45,472	Aa3	AA-
Narragansett Bay Commission	\$45,473		AA-
Chicopee, City of	\$47,684	Aa3	AA-*
Brockton, City of	\$47,557	A1	A+*
Lynn WSC	\$47,429	A1	A+*
Holyoke, City of	\$36,608	A1	A+*
Lowell Regional Water Utility	\$48,002	A1	A+*
Lawrence, City of	\$34,852	A3	A-*
Fall River, City of	\$35,213	A3	A-*
Hartford MDC	\$30,630	Ba2	BB*



* Moody's Credit Rating Converted to S&P Credit Rating

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Moving Forward

What's Next?

Commission Meeting/Vote

- Thursday, June 14, 2018, 9 A.M.
- John J. Lyons Administration Building, Bondi's Island

Questions and Comments Always Welcome

- info@waterandsewer.org
- 413-452-1300

Always Available, 24/7

- Water and Sewer Emergencies:
Call **413-310-3501**
- Waterandsewer.org



Thank you!



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