

# Springfield Water and Sewer Commission

Fiscal Year 2018 Budget and  
Capital Plan Public Hearing

June 6, 2017

# Joshua Schimmel

## Executive Director

### Program Summary



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# Presentation Summary

- Commission Goals and Vision
- Commission Accomplishments
- Water Supply, Treatment, Transmission, and Storage
- Water Distribution System
- Engineering Capital Projects
- Wastewater Collection System
- Information Technology
- Commission Financials
- Fiscal Optimization
- Proposed Changes to Rules and Regulations
- Commission Challenges
- Summary and Closing Remarks



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# Commission Goals & Vision

## Provide Safe, Reliable, and Affordable Services

- Maintain High Quality and Safe Drinking Water
- Stabilize Rates for Long Term Sustainability & Affordability
- Value Retail & Wholesale Customer Satisfaction
- Meet Federal and State Standards and Regulations for Water and Wastewater Quality
- Develop Long Term Operational, Capital, and Financial Strategy
- Prioritize & Optimize Water and Sewer Systems Investment
- Properly Collect and Treat Wastewater



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# Commission Statistics - FY 17

- Produced 11.67 BG of High Quality Drinking Water
- Collected and Treated 11.92 BG of Wastewater, Returning Cleaned Water to the Environment
- Responded to 71,610 Customer Service Calls
- Performed 2,589 Dig Safe Markouts
- Processed 424,000 Individual Bills



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# Commission Accomplishments - FY 17

## Continuously Evaluating and Improving Operations

- Formalized Financial Policies & Strategic Vision
- Created Stabilization Fund
- Developed Senior Leadership Team with Common Objectives and Strategy – Develop, Maintain, Recruit High Performance Work Force
- Continued Strategic CIP & Rate Program for Long Term Stability
- Established Information Technology Division
- Responsibly invested \$27 Million in Water and Sewer System Improvements
- Enhanced Customer Service by Introducing a New Online Bill Payment System



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# Commission Accomplishments - FY 17

## Continuously Evaluating and Improving Operations

- Received 2016 Association of State Dam Safety Officials (ASDSO) Northeast Region Award of Merit for outstanding contributions to dam safety on a Regional Level
- Negotiated Wholesale Wastewater Contracts with 6 Communities
- Received S&P Financial Credit Rating Upgrade to AA Stable
- Received Government Finance Officer's Association Award for Financial Reporting



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# The Commission Provides Essential Services All Day, All Night, Every Day

**Cobble Mtn. Reservoir**



**Water Treatment Plant**



**Transmission, Storage & Distribution System**



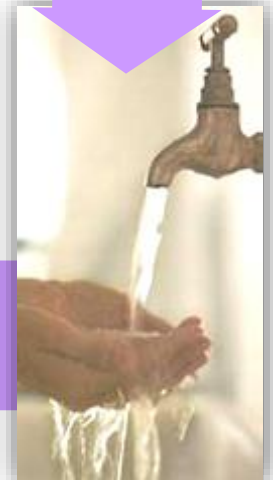
**Discharge to River**



**Wastewater Treatment Plant**



**Collection System**



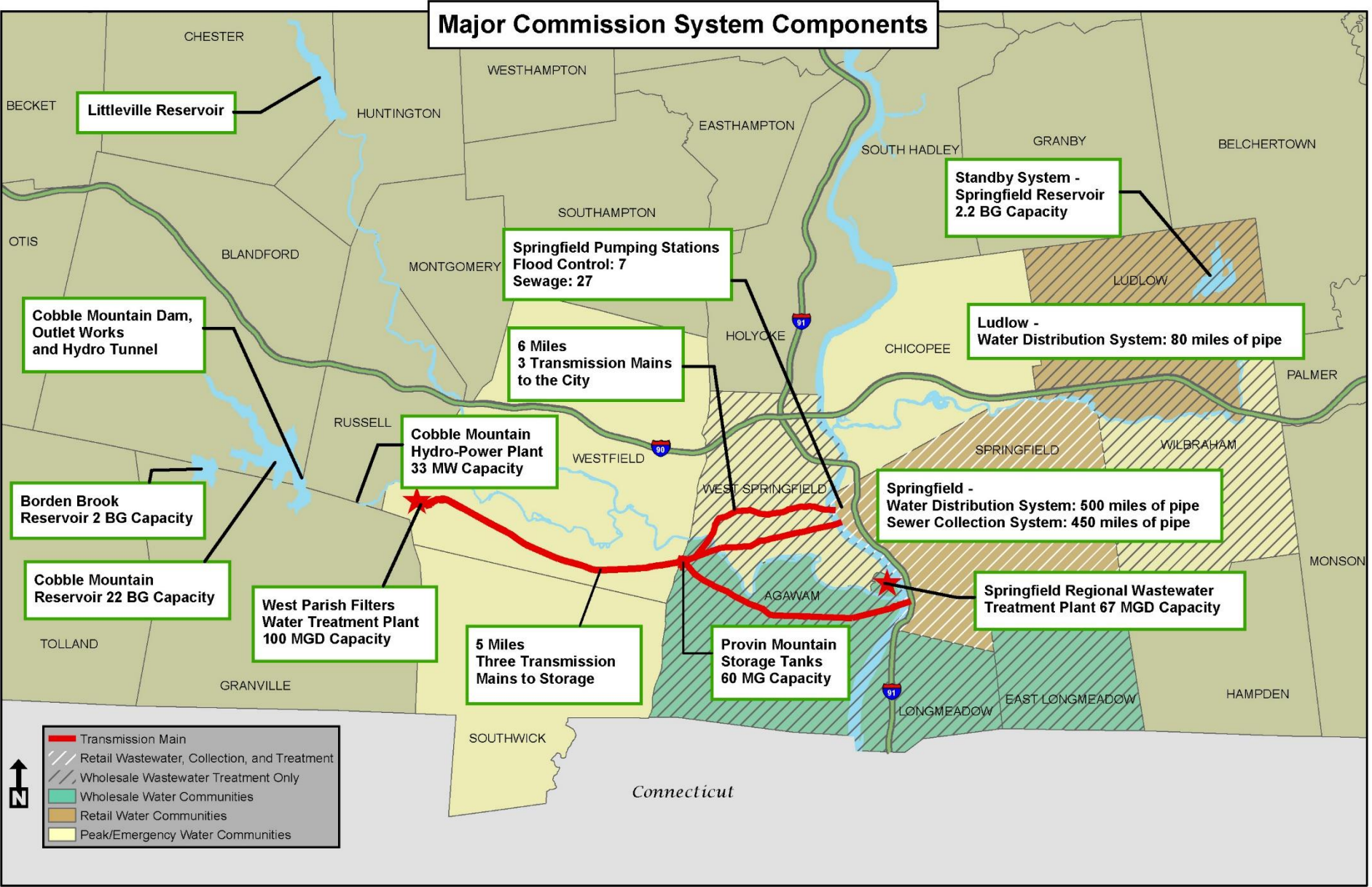
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# Major Commission System Components



# James Laurila

## Director of Water Operations

**Water Supply, Treatment,  
Transmission, and Storage**



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# Facilities Planning

Dams, Raw Water Conveyance System, Treatment Plant, Transmission Mains, and Provin Mountain Storage Facility

## Phase 1

### Assessment

- Assess asset condition, hydraulic capacity, structural integrity, redundancy, and reliability – **complete**
- Implement findings and improvements over the next 3-5 years

## Phase 2

### Assessment

- Assess systems in context of meeting water quality criteria, regulatory criteria, and operational optimization – **ongoing**
- Implement findings and improvements in the next 25 years

**Facilities Planning Project Cost (Phase 1 & 2) = \$1.2 million**



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# Water System – FY18 Capital Projects

## Treatment

### Many upgrades to aging treatment plant

- Slow sand 11-14 valve replacement
- Emergency power
- Slow sand filters – replacement sand
- Chlorine feed pipe replacement
- Rapid sand filters
  - Air header replacement
  - Air valve and actuator replacement
- Chemical Bulk Storage Room – upgrades
- Loading dock repairs

**Total Cost = \$2.1 Million**



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# Water System – FY18 Capital Projects

## Transmission

### ***42-inch raw water conduit repair***

- Raw water by-pass to WPF
- Needed for intake dam repair work and power plant upgrades

**Construction Cost = \$1.45 Million**



### ***Transmission Main – Service Connections***

- Replace 17 service connections to transmission main with private wells
- Needed for future main repairs and future treatment strategies

**Construction Cost = \$310,000**



### ***Transmission Main – Assessment/Design***



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# West Parish Filters – Operational Developments

## Optimizing Treatment - Cost Effectively

### Plant Process Adjustments - Coagulation

- Coagulation Trial – with inorganic aluminum salt
- Goal: to reduce natural organic matter (NOM) which are precursors to disinfection by-products (DBPs).
- 7 months of trial - results are excellent with 50-60% removal of NOM



### Plant Process Adjustments - Disinfection

- Better treatment reduces DBPs production
- Increase in chlorine residuals in the pipes provides required protection from bacterial contamination
- Improved tools to track chlorine residual and to make adjustments in the piping system



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## Factors Impacting Operations

- Changes to Safe Drinking Water Act
- UCMR4 Unregulated Contaminant Monitoring Rule - EPA efforts to regulate new compounds
- NPDES – Discharge permit for wash water

- Ongoing need to replace equipment that is beyond it's useful life

- Master Planning may reveal new processes are needed to comply with evolving regulations



**Daniel DiRienzo**

**Director of Field Services**

**Water Distribution System**



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# Water Distribution System

## Meters and Field Services

- Approximately 580 miles of distribution mains in Springfield and Ludlow
- Cyclical meter replacement program: 4500 meters/year
- Customer Field Service handles approximately 500 calls/week

| Key Statistics FY 16      |              |
|---------------------------|--------------|
| Retail Water Accounts     | 42,754       |
| Miles of Water Pipe       | 595          |
| Valves                    | 19,148       |
| Fire Hydrants             | 6,226        |
| Gallons of Water Supplied | 10.5 billion |



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# Water Distribution System

## Water Quality

- Ongoing maintenance of valves and hydrants
- Unidirectional flushing program cleans water mains and maintains water quality

| Water Quality Statistics  |       |                                |
|---------------------------|-------|--------------------------------|
| Year                      | FY 16 | Total<br>(since program began) |
| Hydrants Inspected        | 2,639 | 30,951                         |
| Hydrants Rebuilt/Repaired | 779   | 5,841                          |
| Hydrants Painted          | 296   | 10,124                         |
| Valves Exercised          | 2,978 | 35,853                         |
| Pipe Flushed (miles)      | 79.4  | 838                            |



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# Water Distribution System

## Infrastructure Maintenance

- Ongoing upgrades and repairs to the water distribution system
- Available 24/7/365

**Water Main Replaced FY 16**  
**8,679 feet**  
(multiple streets)

Notable Streets:  
Worthington St.  
Fort Pleasant Ave.

### Water Distribution System Updates

|                                    |     |
|------------------------------------|-----|
| New Hydrants                       | 4   |
| Replacement Hydrants               | 176 |
| New Valves Installed               | 142 |
| Valves Replaced                    | 22  |
| Water Service Repairs/Replacements | 107 |

### Water Main Breaks in FY 16

| 2015      |             | 2016     |             |
|-----------|-------------|----------|-------------|
| Month     | # of Breaks | Month    | # of Breaks |
| July      | 1           | January  | 7           |
| August    | 2           | February | 7           |
| September | 4           | March    | 1           |
| October   | 5           | April    | 3           |
| November  | 7           | May      | 4           |
| December  | 4           | June     | 3           |
| TOTAL     |             | 48       |             |



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# Planning for the Future

## Field Services

- Continue to develop efficiencies for main break response, pipe replacement, hydrant flushing, and meter replacement using the principles of asset management.
- Manage overtime with an eye towards fiscal sustainability while balancing the need to have 24/7/365 response to all potential emergencies.



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# **Robert Stoops**

## **Chief Engineer**

### **Engineering**

### **Capital Projects**



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# Green Energy Production & Plant Improvements

## 33-MW Cobble Mountain Hydro Power Plant

**Energy production in FY 2016 = 20,400 Megawatts**

**Enough to supply power to 31,600 homes**



Improvements  
in FY 16 =  
\$234,000

**FY 2016 Gross Revenue \$1.7 million**



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# South Transmission Main Replacement Project

- A leak detection survey, internal inspection, and lab analysis of the main were performed, concluding that the pipe reached the end of its useful life
- Project consisted of replacing the 6 mile pipeline from Provin Mountain to the Route 5 rotary at the South End Bridge
- New pipe brought online Summer 2016

**Total Project Cost = \$24 million**



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# Infrastructure Improvements – Casino Development

## Water and Sewer Improvements funded by Casino Development

### Rehabilitated approximately

- 1750-ft of sewer main & 14 Manholes
- 774-ft of reinforced water main

### Replaced approximately

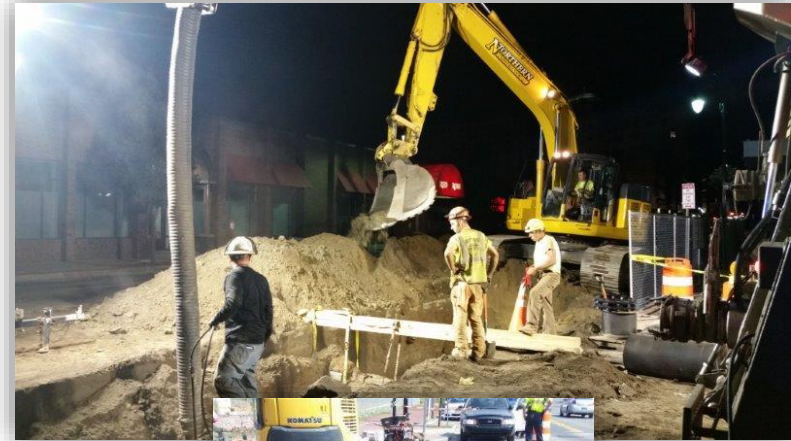
- 950-ft of sewer main & 6 Manholes
- 2754 -ft of 8-16-inch water main and 83 valves

### Improvements

Main St., State St. Union St., Howard St.,  
Bliss St., and East Columbus.

Project started in 2016 and to be  
complete in fall 2017

**Estimated Project Cost = \$5.5 million**



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# Water & Sewer Infrastructure Improvements - Ongoing Program Developed from Asset Management Information

- Rehabilitating approximately
  - 5,745-ft of sewer main
  - 43 manholes
- Replacing approximately
  - 3,530-ft of sewer main
  - 7,930-ft of water main
- Multiple sites throughout the City
- To be complete in fall 2017

**Estimated Project Cost = \$7,110,000**



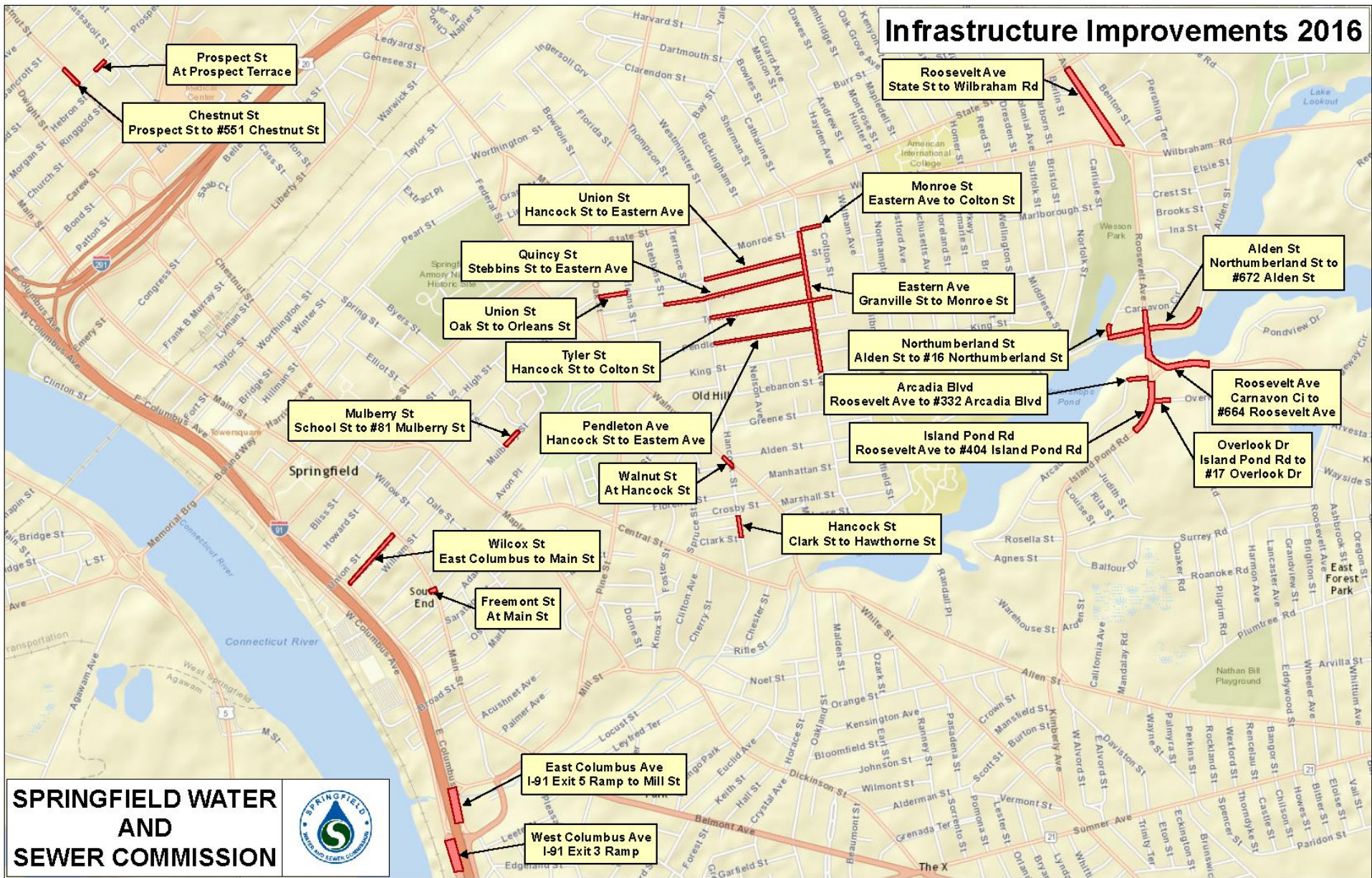
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# Infrastructure Improvements 2016



**SPRINGFIELD WATER  
AND  
SEWER COMMISSION**



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# Planning for the Future

## 2018-19 Infrastructure Improvements

Program Developed from Asset Management Information  
and Coordinated with City DPW Pavement Program

- Rehabilitating approximately  
7,000-ft of sewer main
- Replacing approximately  
1,600-ft of sewer main  
10,800-ft of water main
- Multiple sites throughout the City
- Project to begin in Summer 2018

**Estimated Project Cost = \$8,250,000**



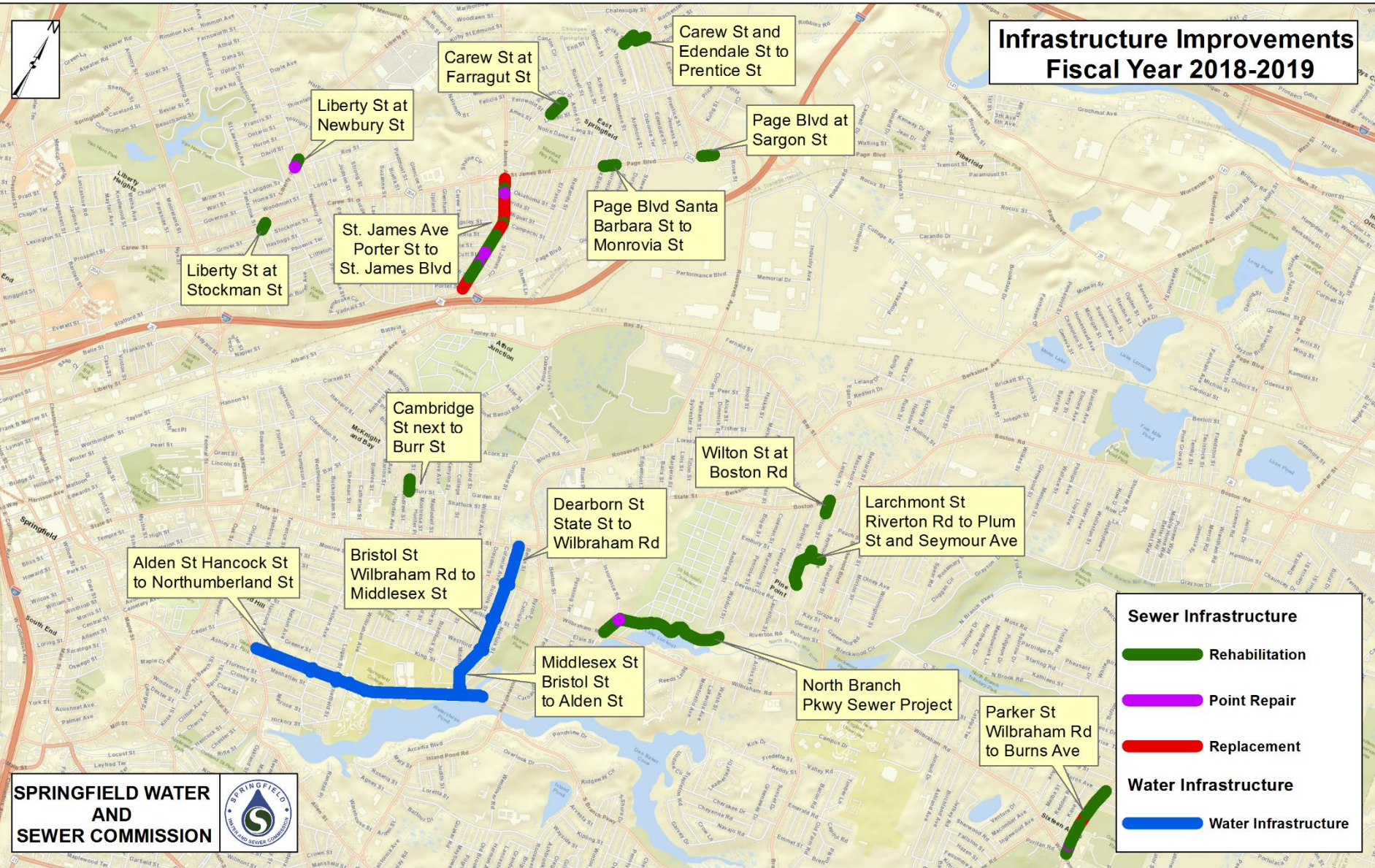
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# Infrastructure Improvements Fiscal Year 2018-2019



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AND  
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# **William Fuqua**

## **Director of Wastewater Operations**

### **Wastewater Collection System**



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# Wastewater Collection System

## Key Statistics FY 16

|                               |        |
|-------------------------------|--------|
| Retail Sewer Accounts         | 37,230 |
| Miles of Separated Sewer Pipe | 314    |
| Miles of Combined Sewer Pipe  | 145    |
| Total Miles of Sewer Pipe     | 459    |
| Combined Sewer Outfalls       | 23     |
| Manholes                      | 11,194 |
| Pumping Stations              | 33     |

*Appliances used in  
the maintenance of  
sewers, 1899*



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# Asset Management and Maintenance Program

## Clean, Map, and Assess Wastewater Collection System

### *Since 2009*

- 1,943,000 ft of mainline sewers cleaned and assessed
- 80% + of all city sewers

### Goals

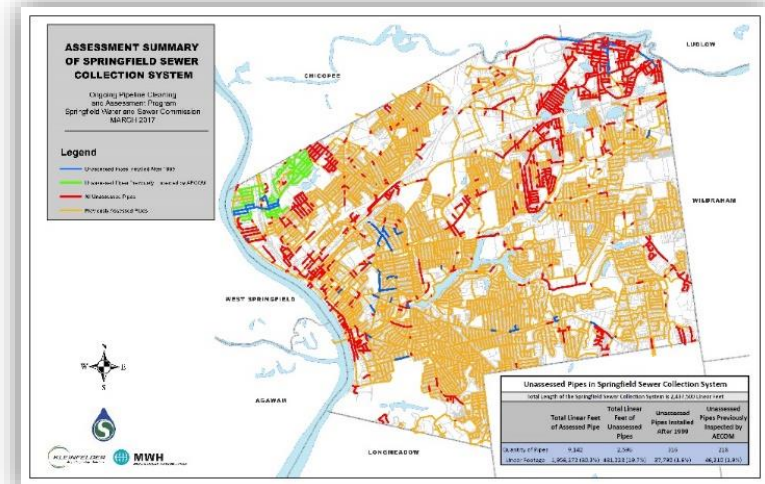
- Complete remaining system
- Transition work to Commission forces

### *Inflow & Infiltration*

- Utilizing Asset Management data to identify and abate sources of I/I

### Goals

- Increase system capacity
- Reduce operating costs



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# Main Interceptor Rehabilitation and CSO Improvements Project

## Rehabilitation of a Critical Combined Sewer Pipeline

- Pipeline carries flow for more than 60% of the City
- Inspection identified need for immediate rehabilitation
- Project consists of rehabilitating:
  - 3,200 feet of 60 and 66-inch diameter sewer pipe and manholes with cured-in-place liners
  - Three CSO structures along the Connecticut River
- Completion mid-2017

**Total Project Cost = \$25,476,000**

### Goals

Preserve critical infrastructure from catastrophic and costly failure



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# Connecticut River Crossing & York Street Pump Station

## Conveying CSO & Wastewater Flow for Treatment

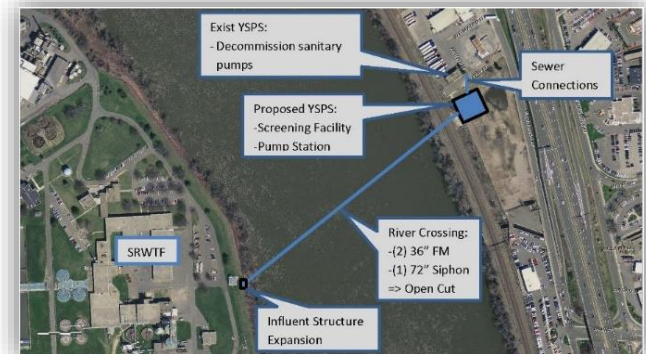
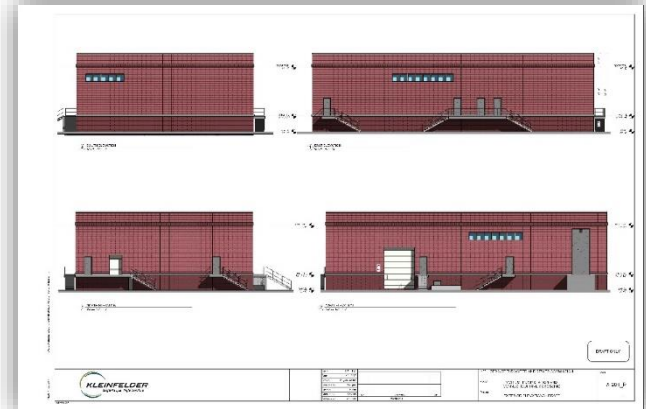
### Scope

- Collection system performance optimization
- Construction of 2 – 36" and 1 – 72" river crossing pipes
- Improvements to SRWTF Influent Structure
- Construction of a new pumping station at York Street

**Estimated Total Project Cost = \$83,000,000**

### Goals

- Redundancy of critical infrastructure
- Reduction in CSO volume to river improving water quality
- Operational flexibility



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# Future Wastewater Projects Under Development

## Sustainable Cost Savings in the Future

### Solar Energy

- Development of 1.4 MW solar energy project by third party on SWSC property
- Evaluation of Net Metering solar energy credits



### Steam to Energy

- Partnering with Covanta Energy to utilize steam from incinerator to generate on-site power



### Goals

- Reduce treatment plant energy costs 25 – 50% through the use of green, renewable resources



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# **James Richardson**

## **Director of Information Technology**

### **Information Technology**



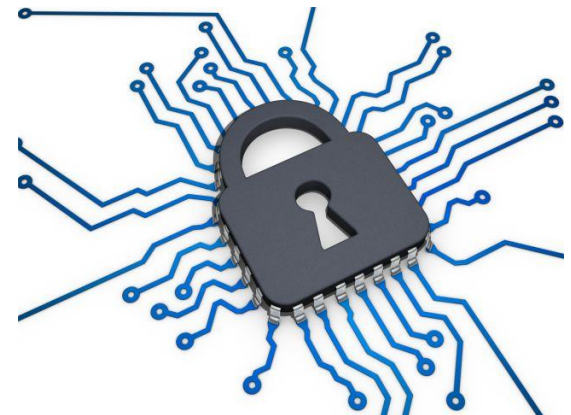
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# Information Technology FY18 Goals

- **Improve Cyber Security throughout the enterprise**
  - Allows us to deploy newer technology and services to support the commission
  - Reduce risk of data breach or system compromise
  - Protect customer data
- **Building redundancy to the commission's I.T. infrastructure**
  - I.T. will introduce business continuity and resiliency (DR)
  - Adding redundant data center at West Parish Filters facility
  - Implementing Site Recovery Manager to greatly improve return to operation (RTO) after a disaster



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# Information Technology FY18 Goals

- **Introduce data governance to the commission's unstructured data**
  - Where is the data, what's it doing and who has access to it
- **Establish I.T. SLAs**
  - Clearly define and establish the response times of I.T. services and systems
- **Plan for expansion of SCADA related services**
  - Secure remote access
  - Greater coverage and broader system availability
- **Standardize documentation and work instructions for I.T. services**



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# Information Technology Division Overview

- **Maintains and manages over 50 servers in a virtual environment**
  - Virtualization enables supporting more technology with less investment in hardware
    - Reduces cost of:
      - Power and cooling
      - Hardware annual maintenance
- **Supports end user devices:**
  - ~160 laptops and computers
  - ~125 mobile devices
  - ~45 printers and plotters
- ***G.I.S. now part of I.T.***
  - Aligns better with business goals
  - Strategically places G.I.S. to work with all business units equally



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# Anthony Basile

## Comptroller

### The Financial Plan



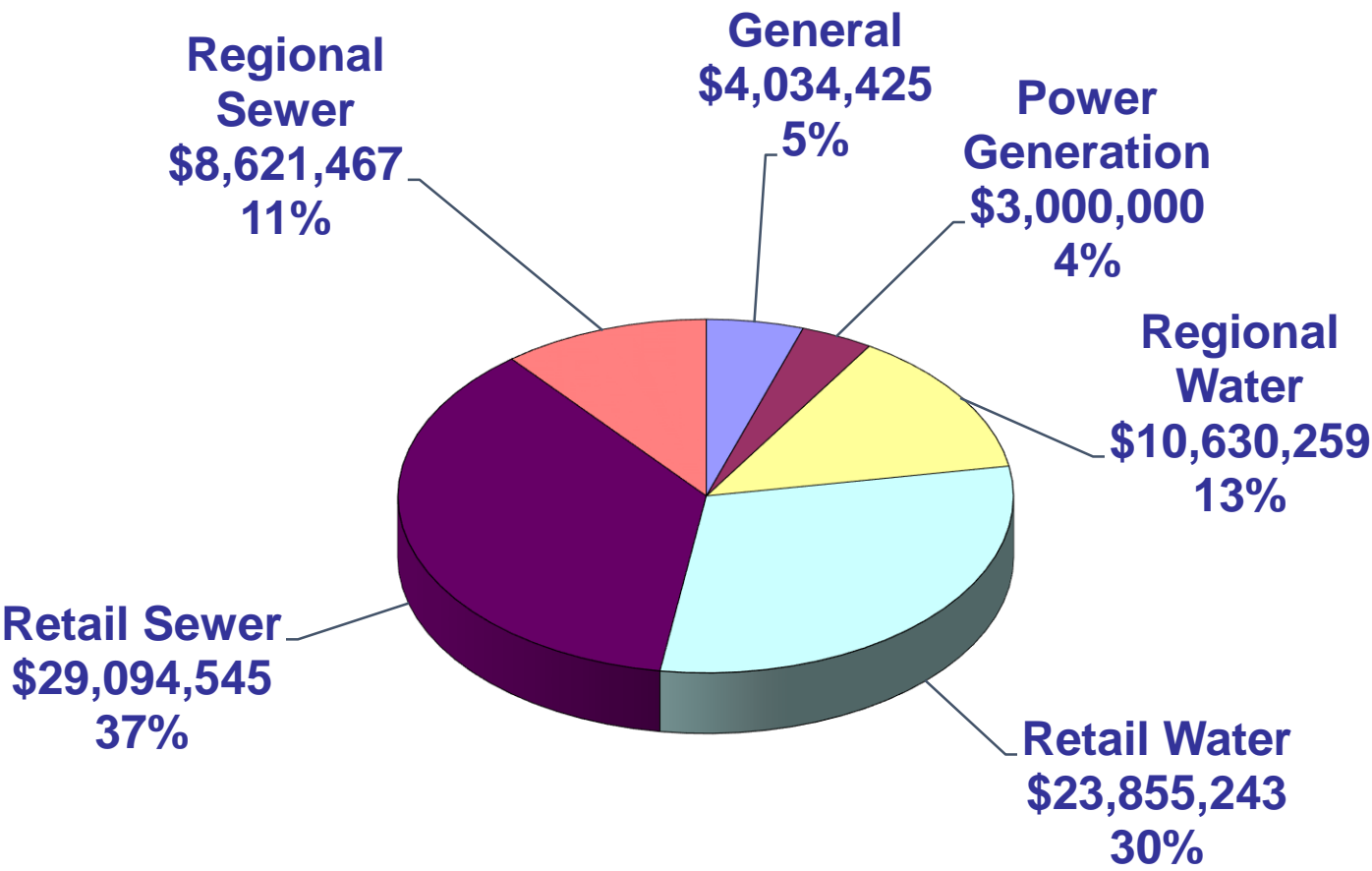
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# Revenue Fiscal Year 2018

**Estimate - \$79,235,939**



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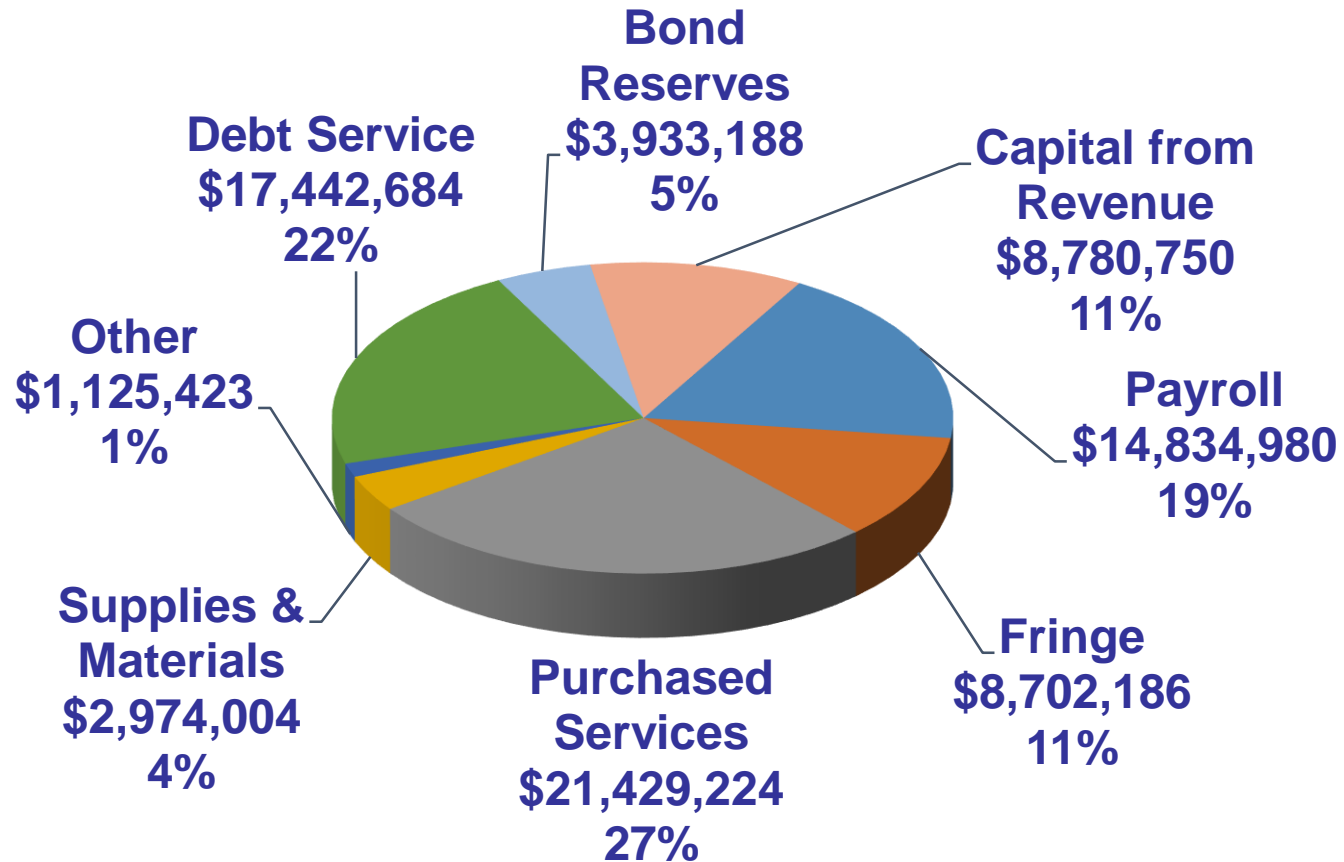
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# Spending By Category FY2018

**Budget - \$79,222,439**



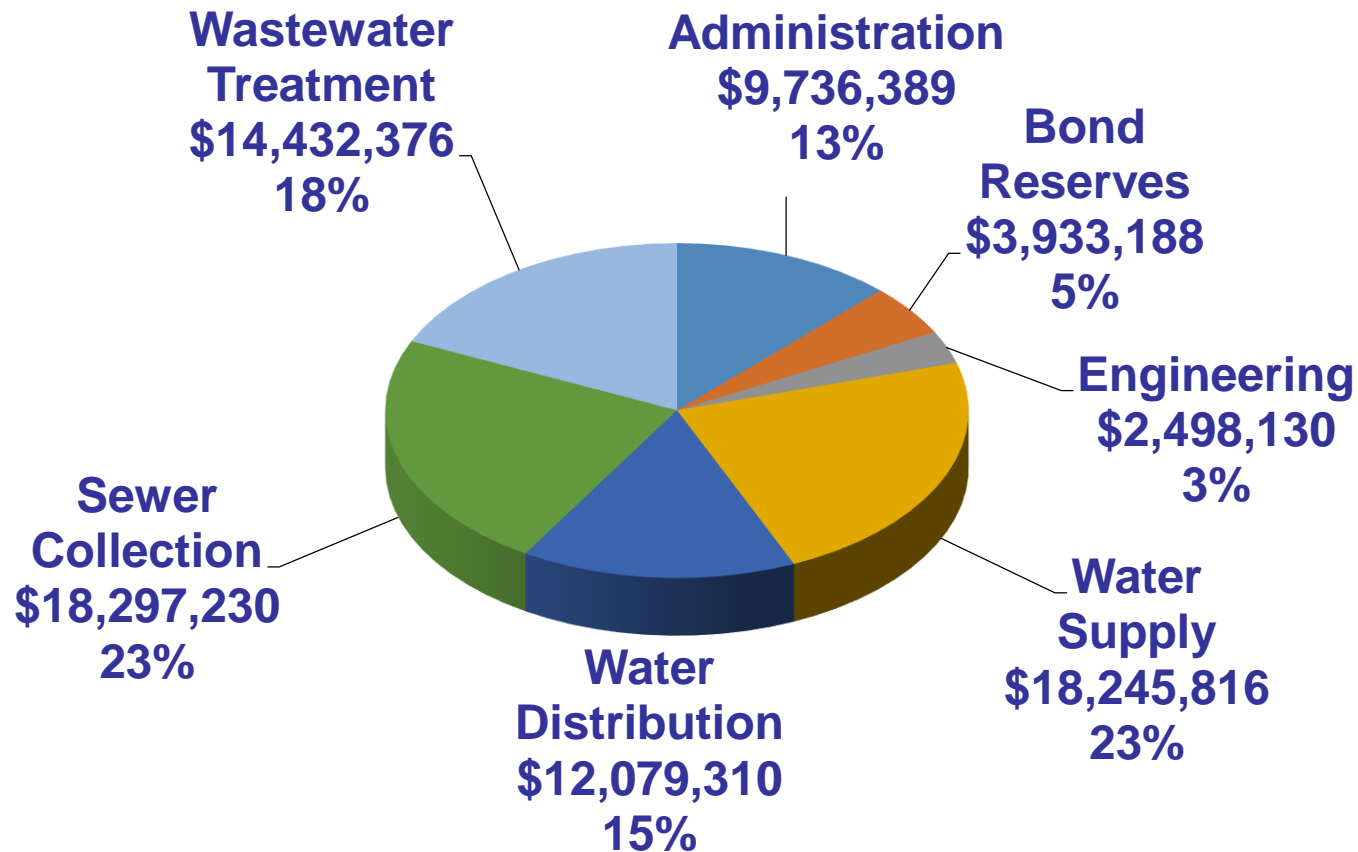
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# Spending By Division FY2018

**Budget - \$79,222,439**



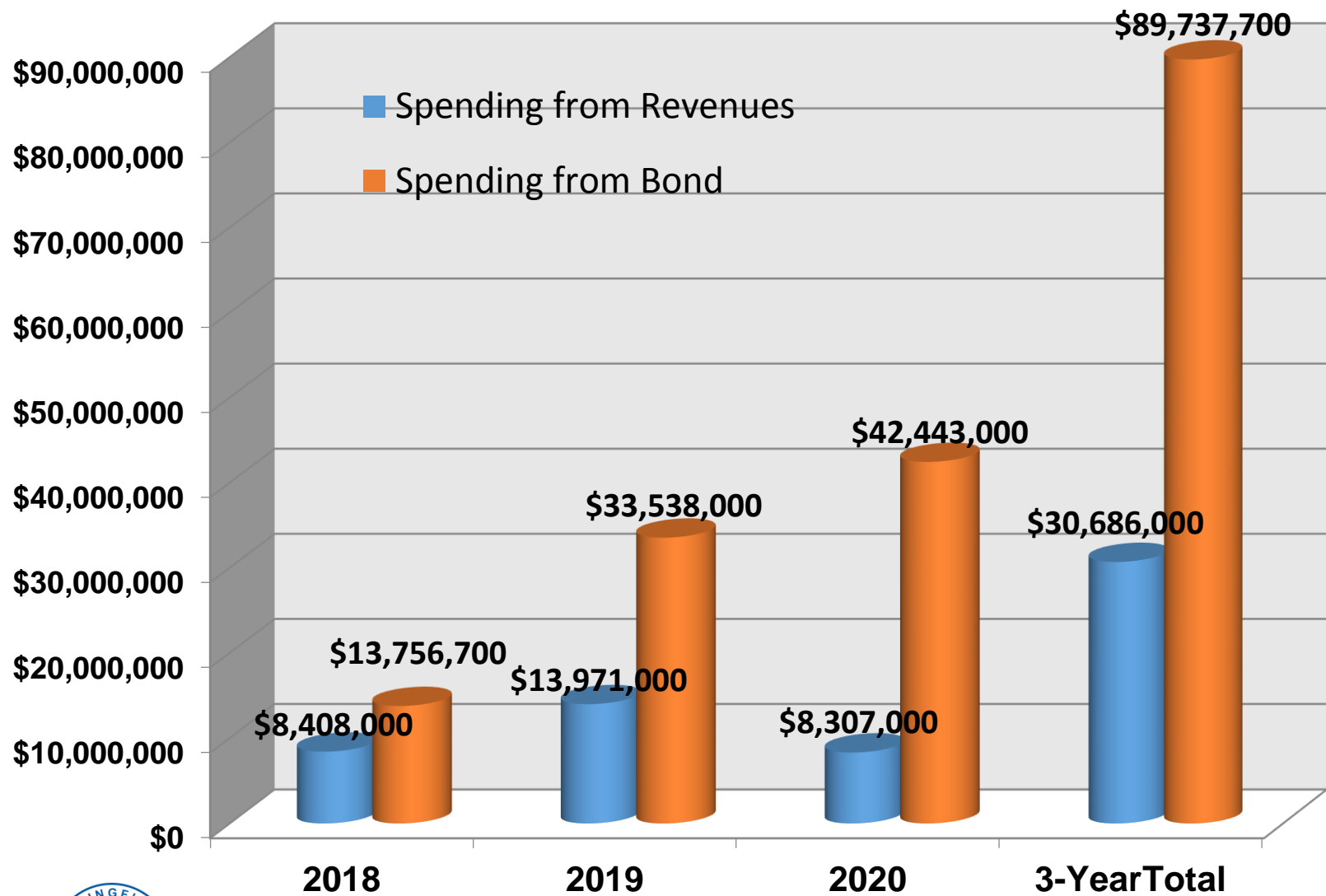
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# Capital Spending 2018-2020

**Total FY 18 - \$22,164,700**



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# Retail Water and Sewer Rates

|                                      | <b>FY2017</b><br>Eff. July 1 | <b>FY2018</b><br>Eff. July 1 | <b>% Increase</b> |
|--------------------------------------|------------------------------|------------------------------|-------------------|
| <b>Water:</b>                        |                              |                              |                   |
| <b>Residential &amp; Commercial</b>  | <b>\$2.89</b>                | <b>\$3.01</b>                | <b>4.0%</b>       |
| <b>Industrial &amp; Municipal</b>    | <b>\$2.15</b>                | <b>\$2.24</b>                | <b>4.0%</b>       |
| <b>Sewer:</b>                        |                              |                              |                   |
| <b>Residential &amp; Municipal</b>   | <b>\$4.74</b>                | <b>\$4.93</b>                | <b>4.0%</b>       |
| <b>Commercial &amp; Hospital</b>     | <b>\$5.21</b>                | <b>\$5.42</b>                | <b>4.0%</b>       |
| <b>Industrial</b>                    | <b>\$5.69</b>                | <b>\$5.92</b>                | <b>4.2%</b>       |
| <b>Restaurant</b>                    | <b>\$6.16</b>                | <b>\$6.41</b>                | <b>4.2%</b>       |
| <b>Combined Water and Sewer:</b>     |                              |                              |                   |
| <b>Typical Annual Household Bill</b> | <b>\$953.13</b>              | <b>\$991.30</b>              | <b>4.0%</b>       |

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



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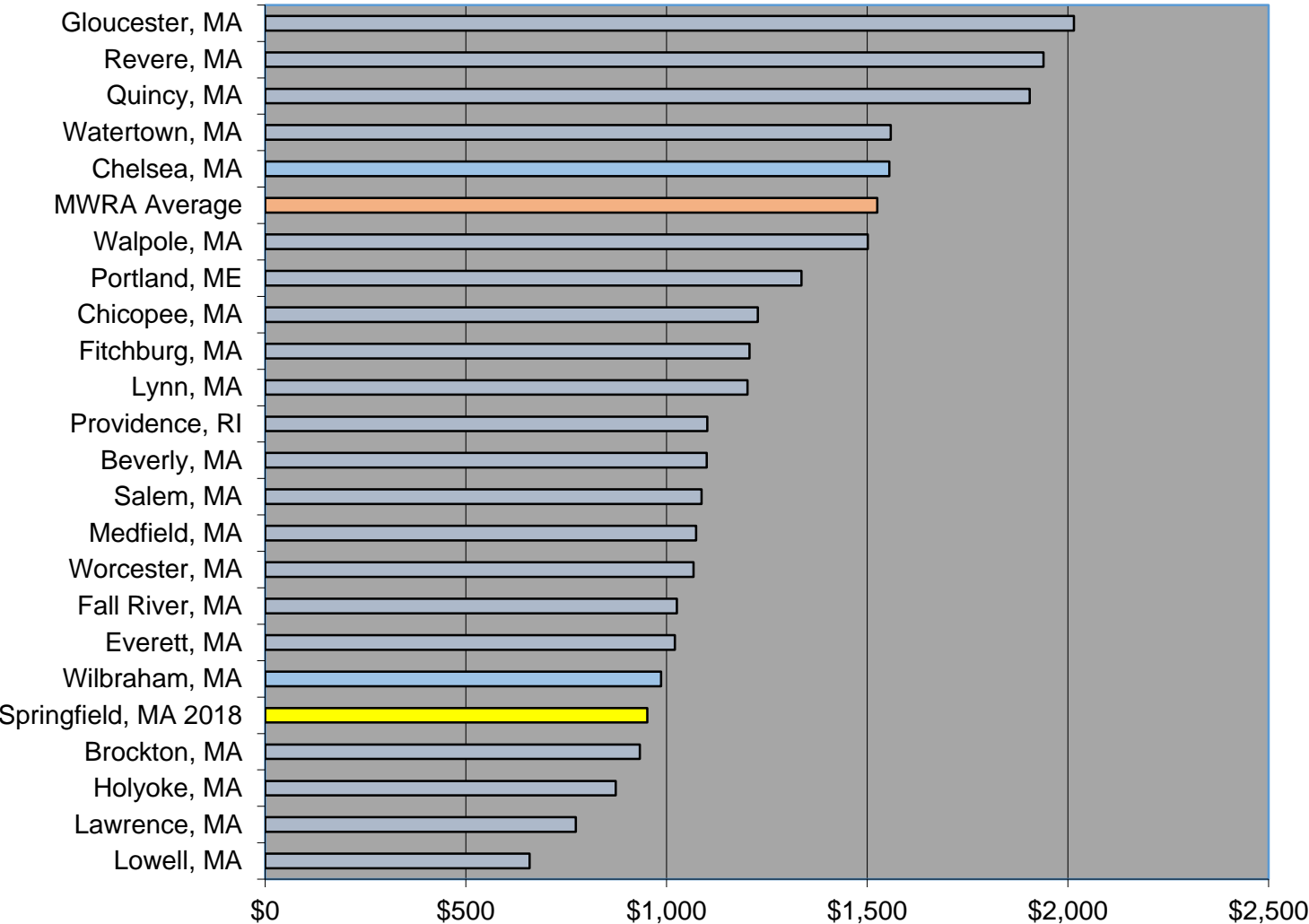
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# Rate Comparison

## Average Annual Household Water and Sewer Bills

Source: MWRA December 2016 - for Fiscal Year 2018



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# **Domenic Pellegrino**

**Finance Director**

**Capital Program**

**Fiscal Optimization**

**Proposed Rules and Regulations Changes**



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# FY 2018 Capital Spending Program

| Project Description  | Status  | Funding Source | Project ID | Cost Ctr | 2018              |
|--|---------|----------------|------------|----------|-------------------|
| Facilities Planning & Improvements                         | Planned | Revenue        | 090-0021   | ADM      | 500,000           |
| Unit 2 Hydro-Generator Overhaul                            | Planned | Bond           | 130-0002   | PS       | 200,000           |
| Transmission Line 637 Poles Replacement                    | Planned | Revenue        | 130-0006   | PS       | 200,000           |
| Project A - Governors and Controls                         | Planned | Bond           | 130-0007   | PS       | 480,000           |
| Overhead Door Replacement                                  | Planned | Revenue        | 130-0008   | PS       | 80,000            |
| Center Street Ludlow DOT Project                           | Planned | Revenue        | 12B-0072   | WD       | 245,000           |
| Distribution System Main Replacement 17-18 Const Season    | Planned | Bond           | 12B-2018   | WD       | 2,534,000         |
| Septic System Borden Brook                                 | Planned | Revenue        | 004-0029   | WS       | 70,000            |
| York House Demo & Removal                                  | Planned | Revenue        | 004-0031   | WS       | 40,000            |
| Raw Water Conduit Rehab - Construction                     | Planned | Bond           | 005-0044   | WS       | 2,600,000         |
| WPF Slow Sand Filter 11-14 Valve Replacement               | Planned | Revenue        | 005-0048   | WS       | 200,000           |
| WPF Redundant & Emer Power Line Repl & Expan               | Planned | Revenue        | 005-0049   | WS       | 175,000           |
| Treatment Facilities Plan Phase II                         | Planned | Revenue        | 005-0050   | WS       | 500,000           |
| Slow Sand Purchase   | Planned | Revenue        | 005-0051   | WS       | 210,000           |
| Buried Chlorine Line Replacements                          | Planned | Revenue        | 005-0053   | WS       | 330,000           |
| RS Inlet & Drain Valve Replc                               | Planned | Revenue        | 005-0054   | WS       | 110,000           |
| RSF Air Valve Actuators & Gearboxes                        | Planned | Revenue        | 005-0055   | WS       | 80,000            |
| Chemical Bulk Storage Room Improvements                    | Planned | Revenue        | 005-0056   | WS       | 150,000           |
| Loading Dock Repairs at West Parish Filters                | Planned | Revenue        | 005-0057   | WS       | 100,000           |
| Rapid Sand Filter Air Header Pipe Replacements             | Planned | Revenue        | 005-0058   | WS       | 50,000            |
| Transmission Main Private Service Removal                  | Planned | Revenue        | 06A-0035   | WS       | 310,000           |
| Styrolutions 24 in main replacement                        | Planned | Revenue        | 06A-0036   | WS       | 75,000            |
| Infrastructure Improvements Construction 17-18             | Planned | Revenue        | 06A-0037   | WS       | 94,000            |
| CSO Control Throttles                                      | Planned | Bond           | 003-0033   | WWC      | 2,131,700         |
| CSO Throttle Controls CA/RE                                | Planned | Revenue        | 003-0035   | WWC      | 320,000           |
| CSO Phase II-York St Station & River Crossing Final Design | Planned | Bond           | 003-0038   | WWC      | 3,500,000         |
| Wastewater Reporting & Reg Compliance                      | Planned | Revenue        | 003-0040   | WWC      | 350,000           |
| Sewer Rehabilitation 17-18 Constr Season                   | Planned | Bond           | 12A-2018   | WWC      | 2,311,000         |
|  |         |                |            |          | <b>17,945,700</b> |

## Source of Funding

|                      |                   |
|----------------------|-------------------|
| State Revolving Fund | -                 |
| General Revenue Bond | 13,756,700        |
| Revenue              | 4,189,000         |
| <b>Total</b>         | <b>17,945,700</b> |

## Funding by Cost Center

|                             |                   |
|-----------------------------|-------------------|
| Administration              | 500,000           |
| Power Supply                | 960,000           |
| Water Distribution          | 2,779,000         |
| Water Supply & Transmission | 5,094,000         |
| Wastewater Collections      | 8,612,700         |
| Wastewater Treatment        | -                 |
| <b>Total</b>                | <b>17,945,700</b> |



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# Fiscal Optimization Activity

- ***Estimated \$625,000 in interest income per year*** – The SWSC in conjunction with the Commission's Trustee has put together an investment portfolio, in accordance with the General Bond Resolution's permitted investments, that will yield interest income from the reserve requirements on deposit with the Trustee.
- ***Refunding of Revenue Bonds*** – The Commission was able to refinance Revenue Bonds issued in FY 2011 and FY 2015. The refinance resulted in a present value savings of \$2.4 million over the next 12 years (or roughly \$200,000 per year)
- ***Increase in Bond Rating*** – As a result of a review by Standard & Poors Bond rating agency, the Commission was upgraded to AA from AA-. This upgrade is similar to an individual's Credit Score, a higher rating results in lower borrowing rates.



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# Rules and Regulations Proposed Changes

All Changes Effective FY 2018: July 1, 2017

## Chapter 5 – Schedule of Rates, Fees, Charges and Penalties

| <b>Section 5.2</b>           | <b>Water Rates</b> |         |
|------------------------------|--------------------|---------|
| Class of Customer            | FY 2017            | FY 2018 |
| Residential (per 100 cu.ft.) | \$2.89             | \$3.01  |
| Commercial (per 100 cu.ft.)  | \$2.89             | \$3.01  |
| Industrial (per 100 cu.ft.)  | \$2.15             | \$2.24  |
| Municipal (per 100 cu.ft.)   | \$2.15             | \$2.24  |

| <b>Section 5.8</b>  | <b>Sewer Rates</b> |         |
|---|--------------------|---------|
| Class of Customer   | FY 2017            | FY 2018 |
| Residential, Institutional and Municipal (per 100 cu.ft.) | \$4.74             | \$4.93  |
| Commercial and Medical Facility (per 100 cu.ft.)          | \$5.21             | \$5.42  |
| Industry Wet & Dry (per 100 cu.ft.)                       | \$5.69             | \$5.92  |
| FSE (per 100 cu.ft.)                                      | \$6.16             | \$6.41  |



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# Rules and Regulations Proposed Changes

All Changes Effective FY 2018: July 1, 2017

Copies of the Rules and  
Regulations Proposed Changes are  
Available by Request.



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# Joshua Schimmel

## Executive Director

### Challenges and Closing Remarks



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# What Are Our Future Challenges?

- Changing Regulatory Requirements & Continued Compliance
- Aging Infrastructure & Strategic Renewal Plan
- Rates & Affordability
- Evolving Customer Needs
- Workforce Strategies
- Safety & Security
- Resiliency & Reliability
- Keeping Pace with Technology



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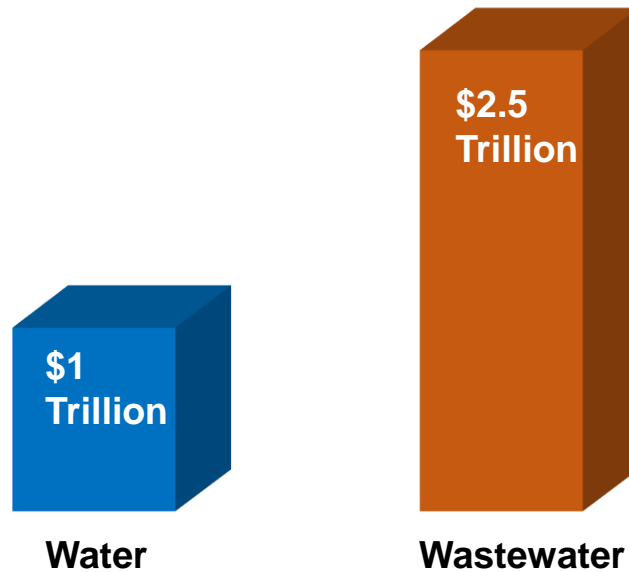
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# State of the Industry

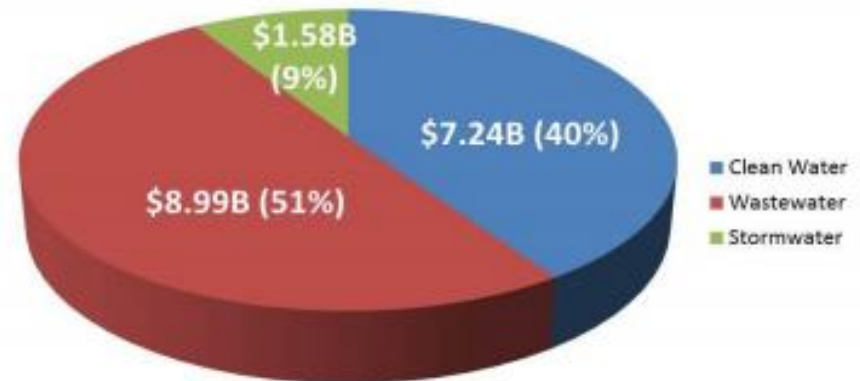
## Significant Funding Needs

### 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



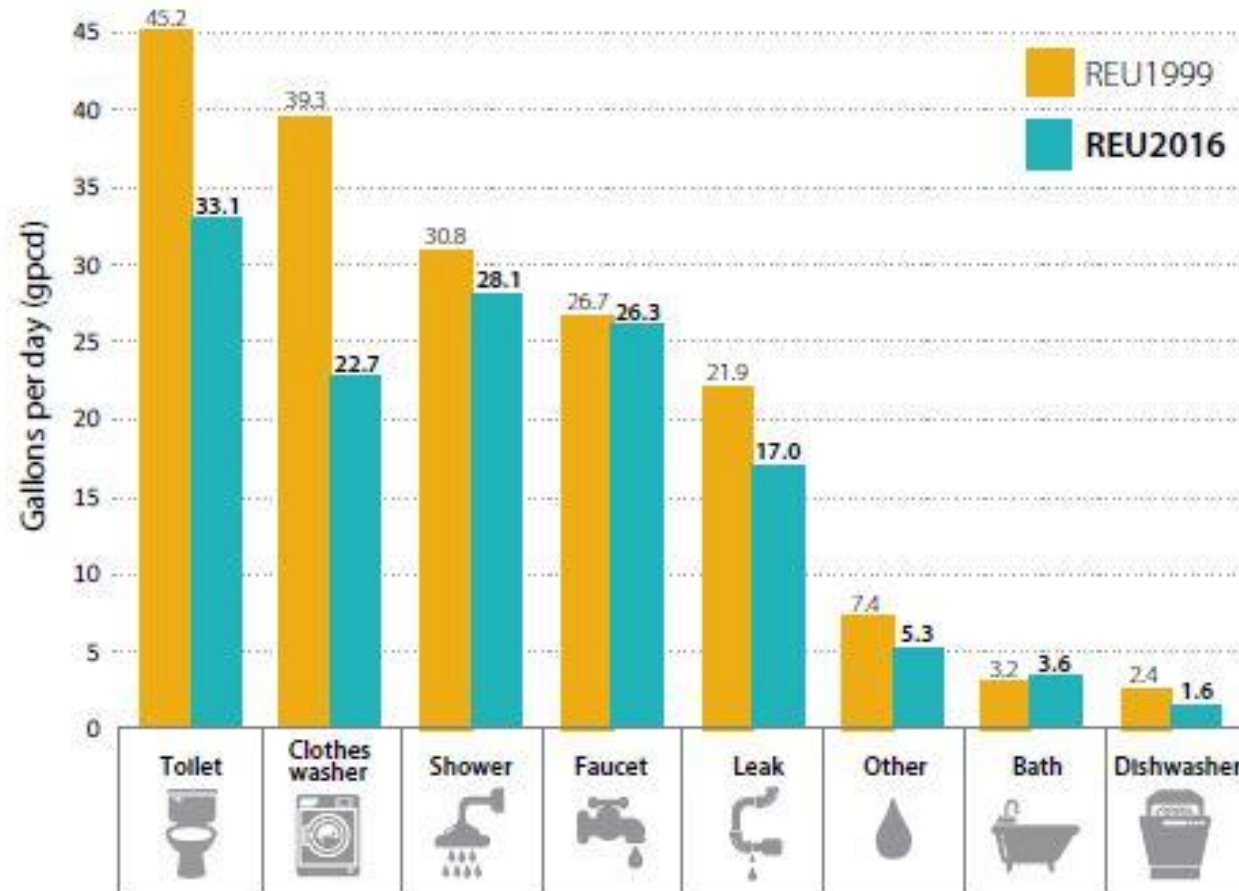
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# State of the Industry

## Demand Continues to Decline



**22%**  
DECREASE  
PER HOUSEHOLD  
DAILY WATER USE  
1999 TO 2016

Source: Residential End Uses of Water, Water Research Foundation 2016



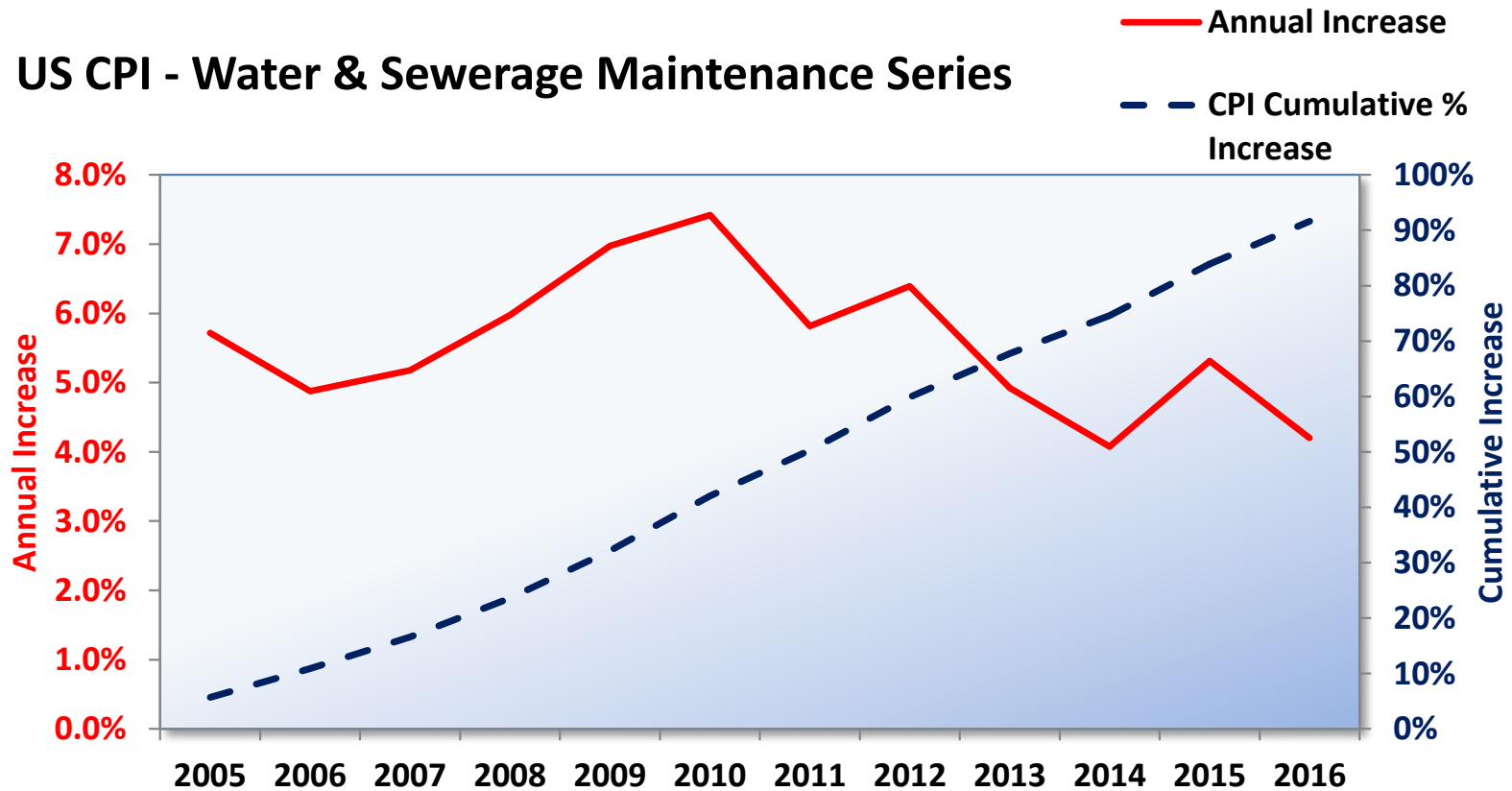
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# State of the Industry

## Rates Continue to Climb Nationally



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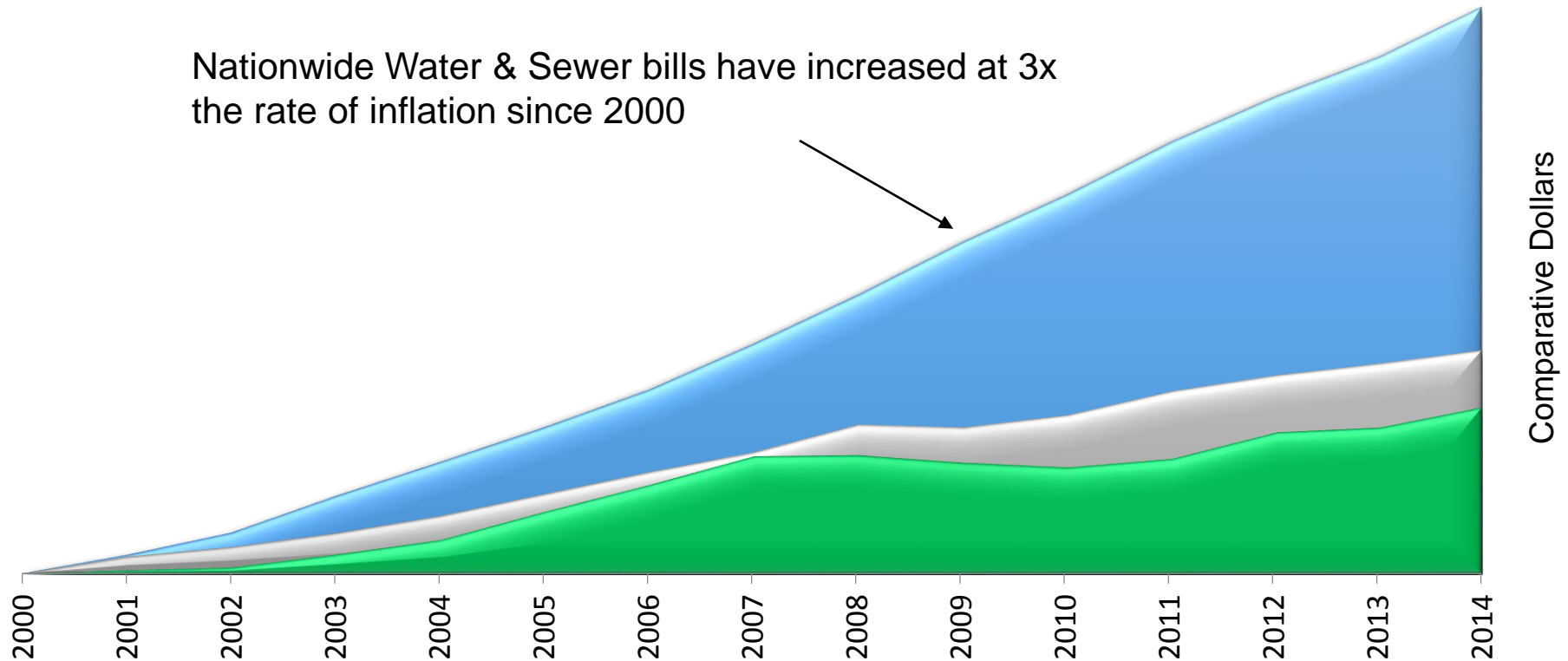
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# State of the Industry

## Increases Have Outpaced Income Growth

■ Water/Sewer Bills ■ CPI-U ■ Income Growth

Nationwide Water & Sewer bills have increased at 3x the rate of inflation since 2000



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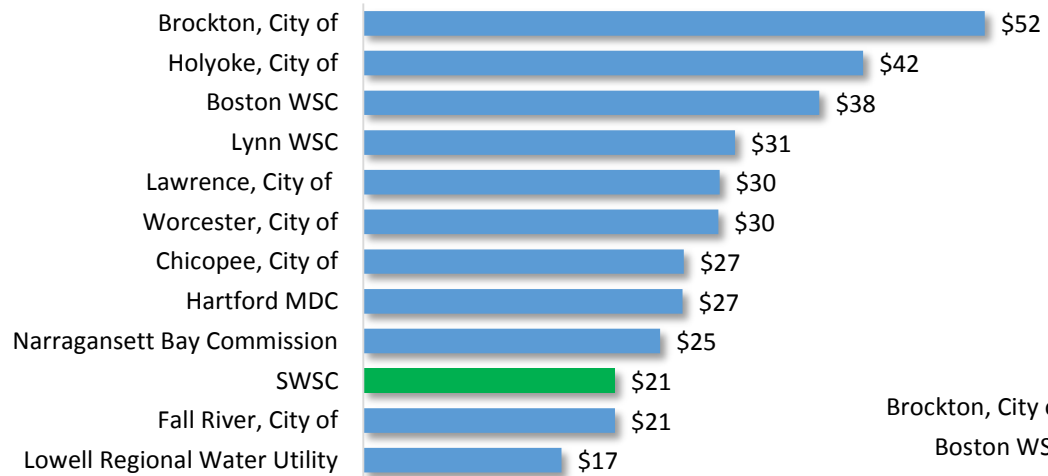
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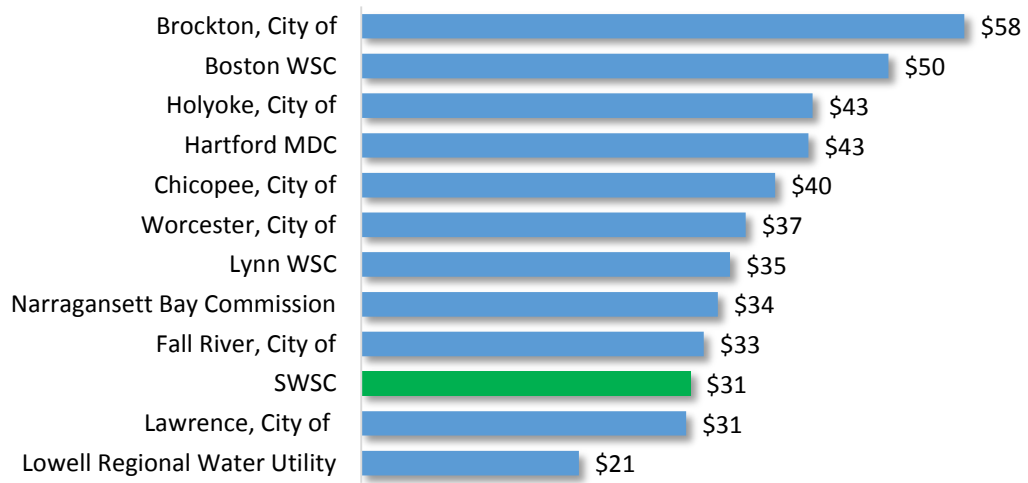
# Regional Comparisons

## Monthly Water Bill (10 HCF)

2009



2017



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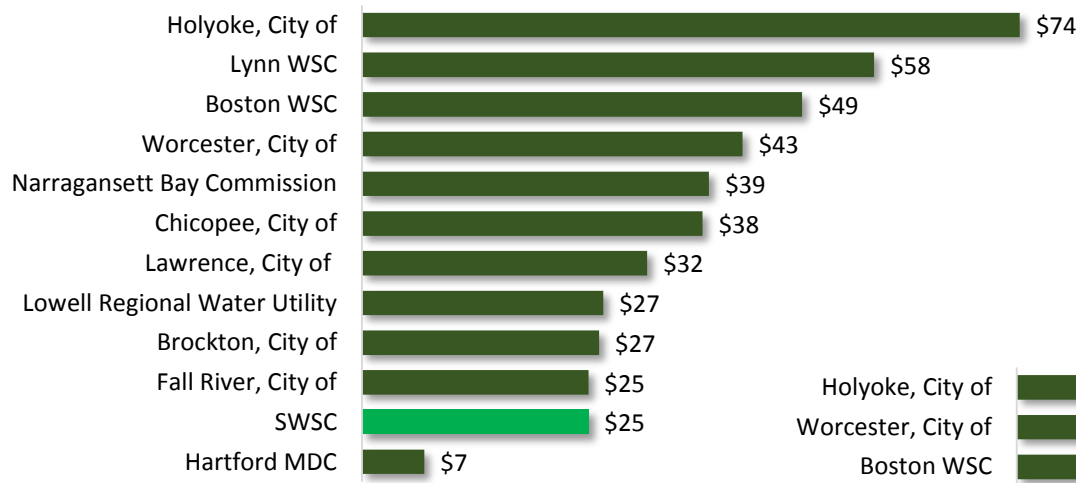
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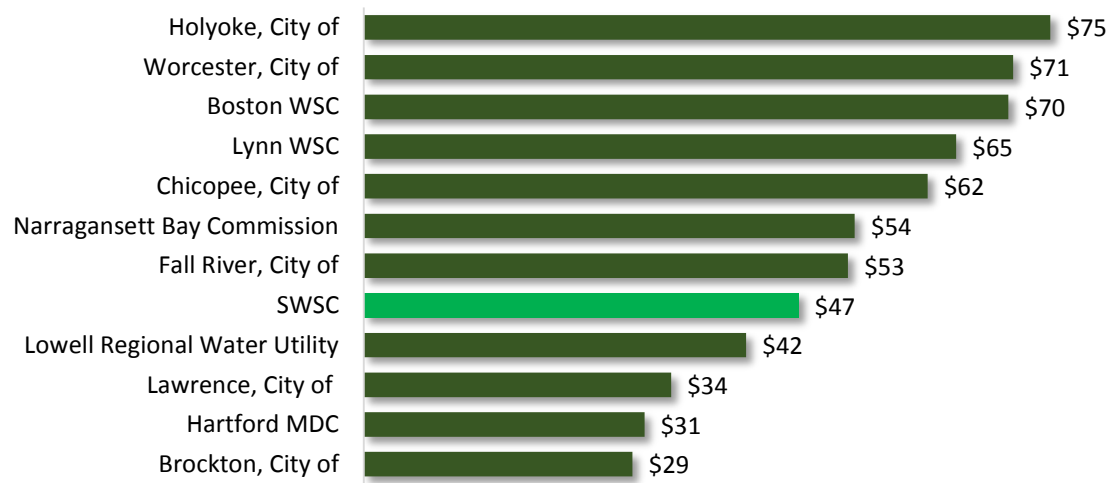
# Regional Comparisons

## Monthly Sewer Bill (10 HCF)

2009



2017



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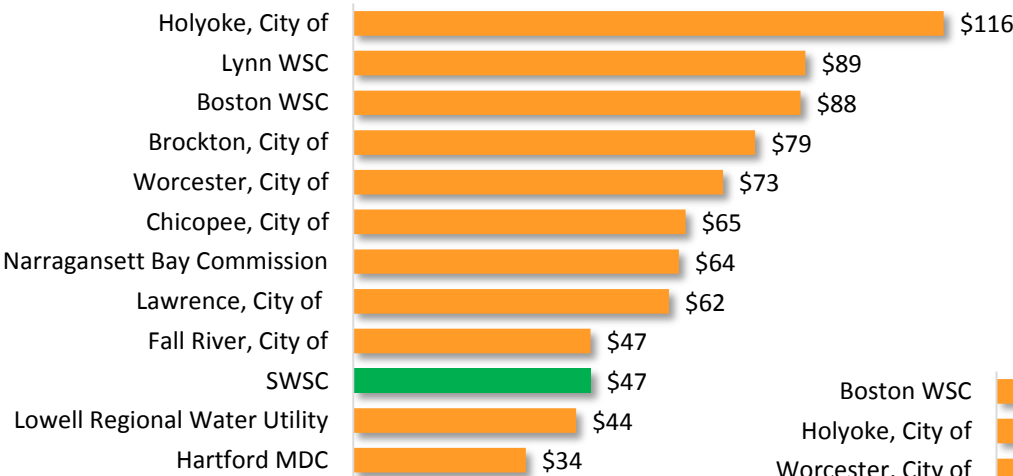
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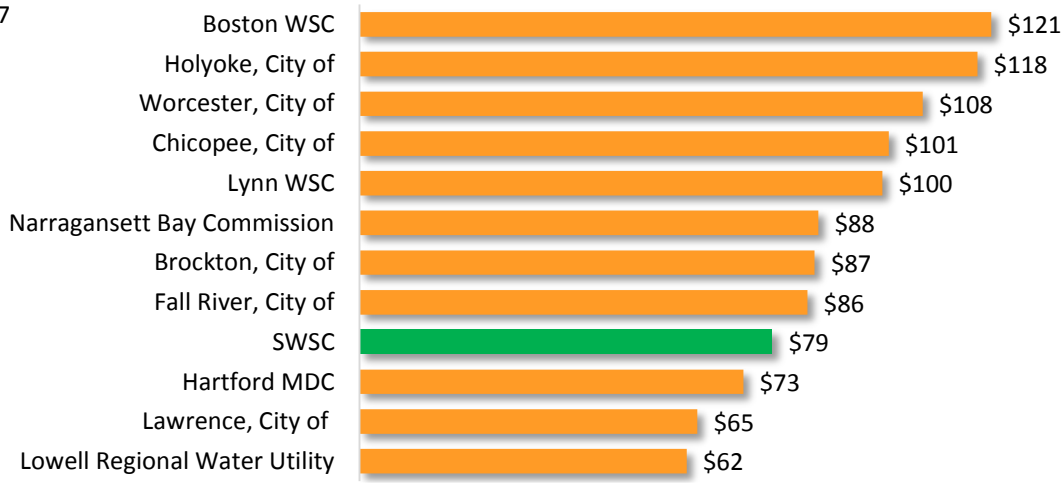
# Regional Comparisons

## Monthly Combined Bill (10 HCF)

2009



2017



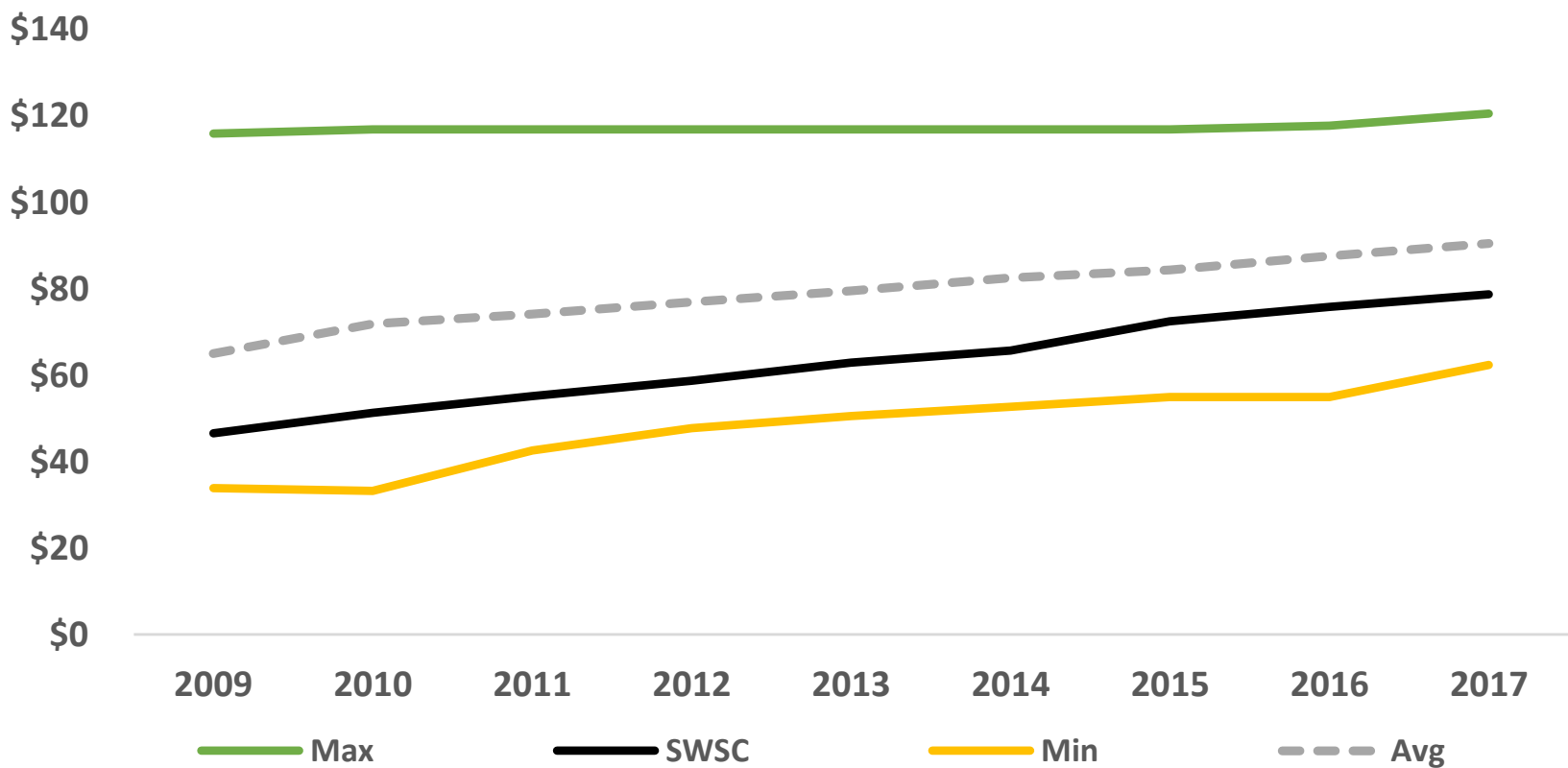
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# Regional Comparisons

Trends in Combined Monthly Bills (10 HCF)  
Among Regional Comparisons



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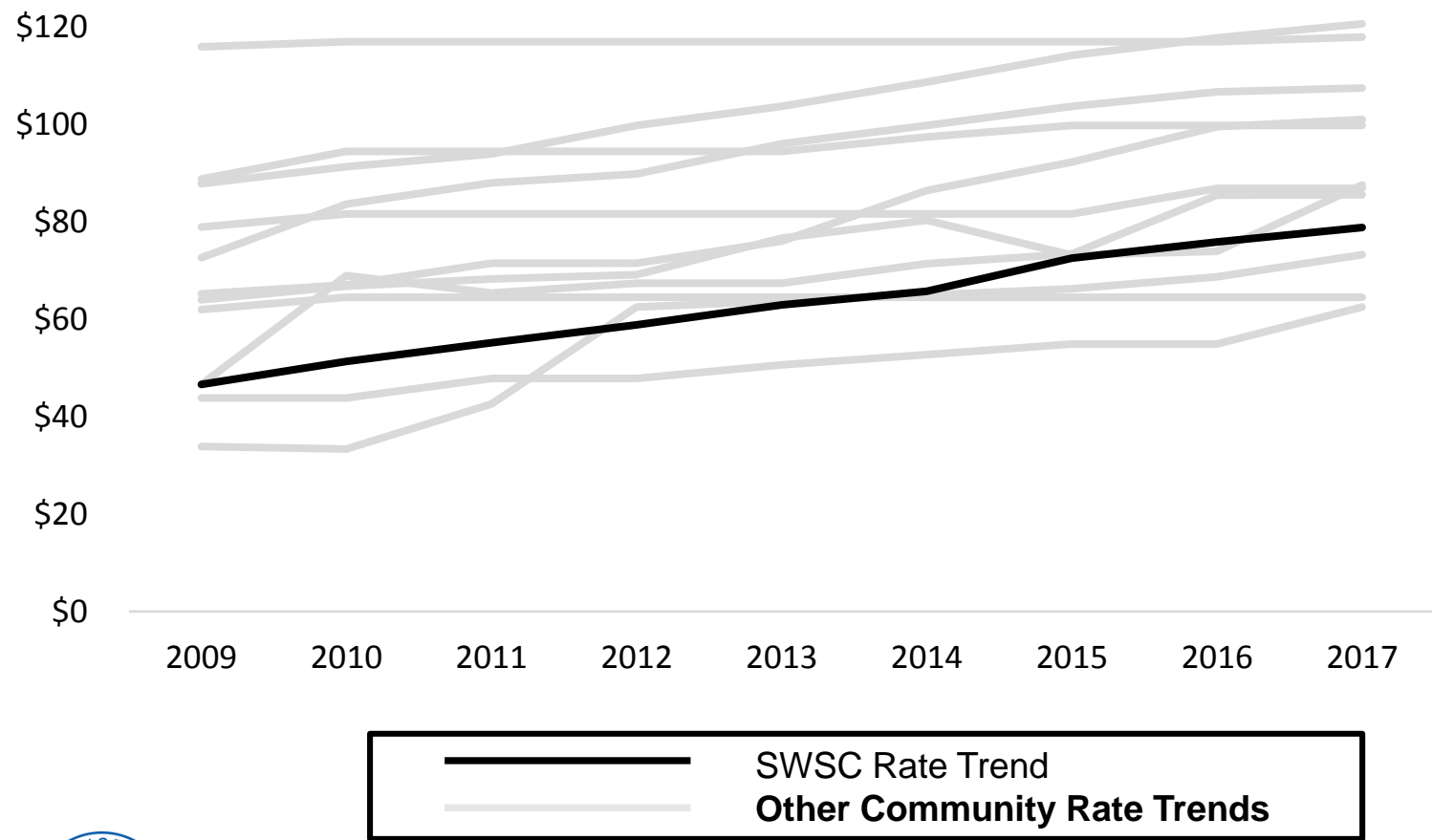
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# Regional Comparisons

## Trends in Combined Monthly Bills (10 HCF) Among Regional Comparisons



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# Regional Comparisons - Summary

| 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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# What is the Value of Water?

Reliable Water and Sewer Services are Vital for:



**Public Health**



**Fire  
Protection**



**Economic  
Development**



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# Springfield Water is a Great Value!



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# Springfield Water and Sewer Commission, Continuously Working for a Better Future



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