Joshua Schimmel
Executive Director

Program Summary
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
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
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
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
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
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**

**INTEGRITY**  **VISION**  **ACCOUNTABILITY**
James Laurila
Director of Water Operations

Water Supply, Treatment, Transmission, and Storage
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
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
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**
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
Planning the Future Drinking Water Operations

Factors Impacting Operations

Regulations

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

Treatment Plant – Aging Process Equipment

• Ongoing need to replace equipment that is beyond its useful life

Treatment Plant – New Process Construction

• Master Planning may reveal new processes are needed to comply with evolving regulations
Daniel DiRienzo
Director of Field Services

Water Distribution System
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

<table>
<thead>
<tr>
<th>Key Statistics FY 16</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Retail Water Accounts</td>
<td>42,754</td>
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<tr>
<td>Miles of Water Pipe</td>
<td>595</td>
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<tr>
<td>Valves</td>
<td>19,148</td>
</tr>
<tr>
<td>Fire Hydrants</td>
<td>6,226</td>
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<tr>
<td>Gallons of Water Supplied</td>
<td>10.5 billion</td>
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</table>
Water Distribution System

Water Quality

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

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

<table>
<thead>
<tr>
<th>Water Distribution System Updates</th>
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<tbody>
<tr>
<td>New Hydrants</td>
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<tr>
<td>Replacement Hydrants</td>
</tr>
<tr>
<td>New Valves Installed</td>
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<tr>
<td>Valves Replaced</td>
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<tr>
<td>Water Service Repairs/Replacements</td>
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</table>

<table>
<thead>
<tr>
<th>Water Main Breaks in FY 16</th>
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</thead>
<tbody>
<tr>
<td>Month</td>
</tr>
<tr>
<td>July</td>
</tr>
<tr>
<td>August</td>
</tr>
<tr>
<td>September</td>
</tr>
<tr>
<td>October</td>
</tr>
<tr>
<td>November</td>
</tr>
<tr>
<td>December</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
</tbody>
</table>
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.
Robert Stoops
Chief Engineer
Engineering
Capital Projects
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
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
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
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
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
William Fuqua
Director of Wastewater Operations

Wastewater Collection System
Wastewater Collection System

Key Statistics FY 16

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
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<tbody>
<tr>
<td>Retail Sewer Accounts</td>
<td>37,230</td>
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<tr>
<td>Miles of Separated Sewer Pipe</td>
<td>314</td>
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<tr>
<td>Miles of Combined Sewer Pipe</td>
<td>145</td>
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<tr>
<td>Total Miles of Sewer Pipe</td>
<td>459</td>
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<tr>
<td>Combined Sewer Outfalls</td>
<td>23</td>
</tr>
<tr>
<td>Manholes</td>
<td>11,194</td>
</tr>
<tr>
<td>Pumping Stations</td>
<td>33</td>
</tr>
</tbody>
</table>

Appliances used in the maintenance of sewers, 1899
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
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
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
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
James Richardson
Director of Information Technology

Information Technology
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
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
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
Anthony Basile
Comptroller

The Financial Plan
Revenue Fiscal Year 2018

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

- **General**
  - $4,034,425
  - 5%
- **Power Generation**
  - $3,000,000
  - 4%
- **Regional Water**
  - $10,630,259
  - 13%
- **Retail Water**
  - $23,855,243
  - 30%
- **Retail Sewer**
  - $29,094,545
  - 37%
- **Regional Sewer**
  - $8,621,467
  - 11%
Spending By Category FY2018

Budget - $79,222,439

- Payroll: $14,834,980 (19%)
- Fringe: $8,702,186 (11%)
- Purchased Services: $21,429,224 (27%)
- Supplies & Materials: $2,974,004 (4%)
- Other: $1,125,423 (1%)
- Debt Service: $17,442,684 (22%)
- Bond Reserves: $3,933,188 (5%)
- Capital from Revenue: $8,780,750 (11%)
- Other: $1,125,423 (1%)

Total Budget: $79,222,439
Spending By Division FY2018

Budget - $79,222,439

- Wastewater Treatment: $14,432,376 (18%)
- Administration: $9,736,389 (13%)
- Bond Reserves: $3,933,188 (5%)
- Engineering: $2,498,130 (3%)
- Water Supply: $18,245,816 (23%)
- Water Distribution: $12,079,310 (15%)
- Sewer Collection: $18,297,230 (23%)

Total Budget: $79,222,439
Capital Spending 2018-2020

Total FY 18 - $22,164,700

- Spending from Revenues
- Spending from Bond

2018: $8,408,000
2019: $13,971,000
2020: $8,307,000
3-Year Total: $89,737,700
## Retail Water and Sewer Rates

<table>
<thead>
<tr>
<th></th>
<th>FY2017 Eff. July 1</th>
<th>FY2018 Eff. July 1</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential &amp; Commercial</td>
<td>$2.89</td>
<td>$3.01</td>
<td>4.0%</td>
</tr>
<tr>
<td>Industrial &amp; Municipal</td>
<td>$2.15</td>
<td>$2.24</td>
<td>4.0%</td>
</tr>
<tr>
<td><strong>Sewer:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential &amp; Municipal</td>
<td>$4.74</td>
<td>$4.93</td>
<td>4.0%</td>
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<tr>
<td>Commercial &amp; Hospital</td>
<td>$5.21</td>
<td>$5.42</td>
<td>4.0%</td>
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<tr>
<td>Industrial</td>
<td>$5.69</td>
<td>$5.92</td>
<td>4.2%</td>
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<tr>
<td>Restaurant</td>
<td>$6.16</td>
<td>$6.41</td>
<td>4.2%</td>
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<tr>
<td><strong>Combined Water and Sewer:</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Typical Annual Household Bill</td>
<td>$953.13</td>
<td>$991.30</td>
<td>4.0%</td>
</tr>
</tbody>
</table>

Note: rates above are for each 100 cubic feet (or 748 gallons) of metered water.
Average Annual Household Water and Sewer Bills
Source: MWRA December 2016 - for Fiscal Year 2018

- Gloucester, MA
- Revere, MA
- Quincy, MA
- Watertown, MA
- Chelsea, MA
- MWRA Average
- Walpole, MA
- Portland, ME
- Chicopee, MA
- Fitchburg, MA
- Lynn, MA
- Providence, RI
- Beverly, MA
- Salem, MA
- Medfield, MA
- Worcester, MA
- Fall River, MA
- Everett, MA
- Wilbraham, MA
- Springfield, MA 2018
- Brockton, MA
- Holyoke, MA
- Lawrence, MA
- Lowell, MA

Average Annual Household Water and Sewer Bills
Domenic Pellegrino
Finance Director

Capital Program
Fiscal Optimization

Proposed Rules and Regulations Changes
<table>
<thead>
<tr>
<th>Project Description</th>
<th>Status</th>
<th>Funding Source</th>
<th>Project ID</th>
<th>Cost Ctr</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities Planning &amp; Improvements</td>
<td>Planned</td>
<td>Revenue</td>
<td>090-0021</td>
<td>ADM</td>
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<tr>
<td>Unit 2 Hydro-Generator Overhaul</td>
<td>Planned</td>
<td>Bond</td>
<td>130-0002</td>
<td>PS</td>
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<tr>
<td>Transmission Line 637 Poles Replacement</td>
<td>Planned</td>
<td>Revenue</td>
<td>130-0006</td>
<td>PS</td>
<td>200,000</td>
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<td>Project A - Governors and Controls</td>
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<td>Overhead Door Replacement</td>
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<td>Center Street Ludlow DOT Project</td>
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<td>Revenue</td>
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<td>WD</td>
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<td>Distribution System Main Replacement 17-18 Const Season</td>
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<td>WD</td>
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<td>Septic System Borden Brook</td>
<td>Planned</td>
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<td>York House Demo &amp; Removal</td>
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<td>Raw Water Conduit Rehab - Construction</td>
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<td>Bond</td>
<td>005-0044</td>
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<td>WPF Slow Sand Filter 11-14 Valve Replacement</td>
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<td>Revenue</td>
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<td>WPF Redundant &amp; Emer Power Line Repl &amp; Expan</td>
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<td>Treatment Facilities Plan Phase II</td>
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<td>Slow Sand Purchase</td>
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<td>Burried Chlorine Line Replacements</td>
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<td>Revenue</td>
<td>005-0053</td>
<td>WS</td>
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<td>RS Inlet &amp; Drain Valve Repl</td>
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<td>Revenue</td>
<td>005-0054</td>
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<td>RSF Air Valve Atrctors &amp; Gearboxes</td>
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<td>Revenue</td>
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<td>Chemical Bulk Storage Room Improvements</td>
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<td>Loading Dock Repairs at West Parish Filters</td>
<td>Planned</td>
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<td>Rapid Sand Filter Air Header Pipe Replacements</td>
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<td>WS</td>
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<td>Transmission Main Private Service Removal</td>
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<td>Revenue</td>
<td>06A-0035</td>
<td>WS</td>
<td>310,000</td>
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<tr>
<td>Styrolutions 24 in main Service Removal</td>
<td>Planned</td>
<td>Revenue</td>
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<tr>
<td>Infrastructure Improvements Construction 17-18</td>
<td>Planned</td>
<td>Revenue</td>
<td>06A-0037</td>
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<td>94,000</td>
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<td>CSO Control Throttles</td>
<td>Planned</td>
<td>Bond</td>
<td>003-0033</td>
<td>WWC</td>
<td>2,131,700</td>
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<td>CSO Throttle Controls CA/RE</td>
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<td>WWC</td>
<td>320,000</td>
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<tr>
<td>CSO Phase II-York St Station &amp; River Crossing Final Design</td>
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<td>Bond</td>
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<td>WWC</td>
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<td>Wastewater Reporting &amp; Reg Compliance</td>
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<td>Revenue</td>
<td>003-0040</td>
<td>WWC</td>
<td>350,000</td>
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<tr>
<td>Sewer Rehabilitation 17-18 Constr Season</td>
<td>Planned</td>
<td>Bond</td>
<td>12A-2018</td>
<td>WWC</td>
<td>2,311,000</td>
</tr>
</tbody>
</table>

**Source of Funding**
- State Revolving Fund 13,756,700
- General Revenue Bond 4,189,000
- Total 17,945,700

**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 -
- Total 17,945,700
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.
Chapter 5 – Schedule of Rates, Fees, Charges and Penalties

### Section 5.2 Water Rates

<table>
<thead>
<tr>
<th>Class of Customer</th>
<th>FY 2017</th>
<th>FY 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential (per 100 cu.ft.)</td>
<td>$2.89</td>
<td>$3.01</td>
</tr>
<tr>
<td>Commercial (per 100 cu.ft.)</td>
<td>$2.89</td>
<td>$3.01</td>
</tr>
<tr>
<td>Industrial (per 100 cu.ft.)</td>
<td>$2.15</td>
<td>$2.24</td>
</tr>
<tr>
<td>Municipal (per 100 cu.ft.)</td>
<td>$2.15</td>
<td>$2.24</td>
</tr>
</tbody>
</table>

All Changes Effective FY 2018: July 1, 2017

### Section 5.8 Sewer Rates

<table>
<thead>
<tr>
<th>Class of Customer</th>
<th>FY 2017</th>
<th>FY 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential, Institutional and Municipal (per 100 cu.ft.)</td>
<td>$4.74</td>
<td>$4.93</td>
</tr>
<tr>
<td>Commercial and Medical Facility (per 100 cu.ft.)</td>
<td>$5.21</td>
<td>$5.42</td>
</tr>
<tr>
<td>Industry Wet &amp; Dry (per 100 cu.ft.)</td>
<td>$5.69</td>
<td>$5.92</td>
</tr>
<tr>
<td>FSE (per 100 cu.ft.)</td>
<td>$6.16</td>
<td>$6.41</td>
</tr>
</tbody>
</table>
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.
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
Significant Funding Needs

National Water and Sewer Utility Funding Needs

Source: ASCE Infrastructure Report

Massachusetts 20 Year Utility Funding Needs

State of the Industry

Demand Continues to Decline

Source: Residential End Uses of Water, Water Research Foundation 2016
State of the Industry
Rates Continue to Climb Nationally

US CPI - Water & Sewerage Maintenance Series

- Annual Increase
- CPI Cumulative % Increase

Annual Increase:
- 2005: 5.0%
- 2006: 4.0%
- 2007: 4.0%
- 2008: 7.0%
- 2009: 7.0%
- 2010: 7.0%
- 2011: 6.0%
- 2012: 5.0%
- 2013: 4.0%
- 2014: 3.0%
- 2015: 2.0%
- 2016: 1.0%

Cumulative Increase:
- 2005: 0%
- 2006: 1.0%
- 2007: 5.0%
- 2008: 12.0%
- 2009: 19.0%
- 2010: 26.0%
- 2011: 33.0%
- 2012: 40.0%
- 2013: 47.0%
- 2014: 54.0%
- 2015: 61.0%
- 2016: 68.0%
Nationwide Water & Sewer bills have increased at 3x the rate of inflation since 2000.
Regional Comparisons
Monthly Water Bill (10 HCF)

**2009**
- Brockton, City of $52
- Holyoke, City of $42
- Boston WSC $38
- Lynn WSC $31
- Lawrence, City of $30
- Worcester, City of $30
- Chicopee, City of $27
- Hartford MDC $27
- Narragansett Bay Commission $25
- SWSC $21
- Fall River, City of $21
- Lowell Regional Water Utility $17

**2017**
- Brockton, City of $58
- Holyoke, City of $50
- Hartford MDC $43
- Chicopee, City of $43
- Worcester, City of $40
- Lynn WSC $37
- Narragansett Bay Commission $35
- SWSC $34
- Fall River, City of $33
- Lawrence, City of $31
- Lowell Regional Water Utility $21
Regional Comparisons
Monthly Sewer Bill (10 HCF)

2009

Holyoke, City of $74
Lynn WSC $58
Boston WSC $49
Worcester, City of $43
Narragansett Bay Commission $39
Chicopee, City of $38
Lawrence, City of $32
Lowell Regional Water Utility $27
Brockton, City of $27
Fall River, City of $25
SWSC $25
Hartford MDC $7

2017

Holyoke, City of $75
Worcester, City of $71
Boston WSC $70
Lynn WSC $65
Chicopee, City of $62
Narragansett Bay Commission $54
Fall River, City of $53
SWSC $47
Lowell Regional Water Utility $42
Lawrence, City of $34
Hartford MDC $31
Brockton, City of $29
Regional Comparisons
Monthly Combined Bill (10 HCF)

### 2009
- Holyoke, City of
- Lynn WSC: $116
- Boston WSC: $89
- Brockton, City of: $88
- Worcester, City of: $79
- Chicopee, City of: $73
- Narragansett Bay Commission: $65
- Lawrence, City of: $64
- Fall River, City of: $62
- SWSC: $47
- Lowell Regional Water Utility: $44
- Hartford MDC: $34

### 2017
- Boston WSC: $121
- Holyoke, City of: $118
- Worcester, City of: $108
- Chicopee, City of: $101
- Lynn WSC: $100
- Narragansett Bay Commission: $88
- Brockton, City of: $87
- Fall River, City of: $86
- SWSC: $79
- Hartford MDC: $73
- Lawrence, City of: $65
- Lowell Regional Water Utility: $62
Regional Comparisons
Trends in Combined Monthly Bills (10 HCF) Among Regional Comparisons

![Graph showing trends in combined monthly bills from 2009 to 2017. The graph compares the maximum (Max), minimum (Min), average (Avg), and Springfield Water and Sanitation Commission (SWSC) bills. The y-axis represents the bill amount in dollars ranging from $0 to $140, and the x-axis represents the years from 2009 to 2017.]
Regional Comparisons

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


$0 $20 $40 $60 $80 $100 $120

SWSC Rate Trend
Other Community Rate Trends
# Regional Comparisons - Summary

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

* Moody’s Credit Rating Converted to S&P Credit Rating
What is the Value of Water?

Reliable Water and Sewer Services are Vital for:

- Public Health
- Fire Protection
- Economic Development
- Quality of Life
Springfield Water is a Great Value!
Springfield Water and Sewer Commission, Continuously Working for a Better Future

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Info@waterandsewer.org