Robert Stoops
Chief Engineer

History of Commission
System Wide Components &
Water Infrastructure Improvements
Presentation Summary

• Brief History and Systems Overview
• Commission Goals and Services
• Water System Infrastructure Improvements
  Dams, Reservoirs and Watersheds
  Water Treatment, Storage and Transmission
  Distribution System
• Wastewater System Infrastructure Improvements
  Sewer Collection System, Combined Sewer Overflows &
  Wastewater Treatment Facility
• Proposed Changes to Rules and Regulations
• Commission Financials
• Summary and Closing Remarks
History of Springfield’s Water Supply

- 1848 - Springfield Aqueduct Co. develops community water supply
- 1872 - City of Springfield purchased existing water works company
- 1875 - Development of Ludlow Reservoir (1.71 BG)
- 1910 - Construction of Borden Brook Reservoir (2.5 BG)
- 1931 - Construction of Cobble Mountain Reservoir (22.8 BG)
- 1996 - Formation of the Springfield Water and Sewer Commission
Major Commission System Components

- **Littleville Reservoir**
- **Cobble Mountain Dam, Outlet Works and Hydro Tunnel**
- **Borden Brook Reservoir 28G**
- **Cobble Mountain Reservoir 228G**
- **West Parish Filters 100MGD**
- **Hydro Electric Station 33MW**
- **Springfield Flood Control Pumping Stations**
- **6 Miles 3 Transmission Mains to the City**
- **5 Miles Three Transmission Mains to Storage**
- **Provin Mountain Storage Tanks 60MG**
- **Standby System - Springfield Reservoir 2.2BG**
- **Ludlow - Water Distribution System: 80 miles of pipe**
- **Springfield - Water Distribution System: 500 miles of pipe**
- **Sewer Collection System: 450 miles pipe**
- **Springfield Regional Wastewater Treatment Plant 67 MGD Capacity and Springfield Water and Sewer Commission Administration Offices**
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

Consumption and Collection System
Commission Goals

Protect Public Health and Safety and Respond to Customer Needs by:

• Meeting federal and state standards for water and wastewater quality
• Maintaining high quality drinking water
• Properly collecting and treating wastewater
• Investing in our water and sewer systems
• Keeping rates affordable
System-wide Major Projects

- Power Plant Improvements $700,000
- SCADA Upgrade $1,500,000
- Armory Street Bridge $335,000
- Ludlow Main #2 Chicopee Crossing $2,100,000
- State Street $1,500,000
- Systemwide Collection System Improvements $3,000,000
- Water & Sewer Improvements $7,000,000
- Provin Tank #2 Rehabilitation $2,500,000
- Washburn CSO Phase II Construction $23,000,000
- South Transmission Main Replacement $24,000,000

Legend:
- Transmission Main
- Commission Owned Lands

Map showing the locations of the projects within the SPRINGFIELD and LUDLOW areas.
Dam Maintenance in FY 2013

• Updated Dams operation and maintenance (O&M) manuals
• Completed MA Dept. of Conservation and Recreation Phase I Dam inspections
• Conducted a topographic survey and a hydrologic and slope stabilization study for Dam #3 in Westfield and Cherry Valley Dam in Ludlow
Green Energy Production
33-MW Cobble Mountain Hydro Power Plant

Energy production in FY 2013 = 21,000 Megawatts

Enough to supply power to 25,000 homes

FY 2013 Net Revenue $1,600,000
Green Energy Production
33-MW Cobble Mountain Hydro Power Plant

Improvements made in FY 2013:
• Installation of new fuel tank
• New emergency power generator
• New transmission poles with fiber optic cable
• Inspection and rehabilitation work

Total Project Cost = $700,000
Water Treatment Plant Projects

Emergency Generator Replacement

- Completed in April 2013
- New 800 kW Engine/Generator with sound attenuated weather proof enclosure
- New Switchgear

Total Project Cost = $1,250,000
Water Treatment Plant Projects

SCADA Upgrade

- SCADA = Supervisory Control and Data Acquisition System
- The computer system that automates and monitors Treatment Plant operations
- Upgrades will increase functionality and enhance security
- Will be complete by end of 2014

Estimated Construction Cost = $1,500,000
Aerial View of Provin Mountain Storage Tanks
60 million gallons combined

Original square tanks circa 1909 and 1930

Tank 2 Updated in 2012 & 2013

320 ft diameter circular tanks circa 1960s
Provin Tank 2 Structural Improvements Complete

- Reinforced concrete walls and roof reinforcement with new vents
- Demolition and replacement of aerator with new reinforced slab
- Concrete joint water stop installation

Total Project Cost = $2,500,000
OUR AGING TRANSMISSION AND DISTRIBUTION SYSTEM IS IN CONSTANT NEED OF REPAIR AND REPLACEMENT
Transmission and Distribution System Maintenance

Why is it Important?

• Proper maintenance ensures flow capacity, provides adequate pressure to fight fires, and maintains water quality for our customers.

• Federal and state regulations require maintenance to protect public safety and health.
Springfield and Ludlow Water Systems

• Over 600 miles of transmission and distribution mains
• Most distribution mains are unlined cast-iron 75 to 100 years old:
  77 miles of 6-inch diameter
  125 miles of 8-inch diameter
• Primarily located in older residential areas
• Older unlined pipes typically exhibit significant internal corrosion (tuberculation)
## Distribution System Infrastructure Summary

<table>
<thead>
<tr>
<th></th>
<th>Springfield</th>
<th>Ludlow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrants</td>
<td>5,430</td>
<td>590</td>
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<tr>
<td>Valves</td>
<td>16,820</td>
<td>2,180</td>
</tr>
<tr>
<td>pipes (miles)</td>
<td>500</td>
<td>80</td>
</tr>
</tbody>
</table>
South Transmission Main
Emergency Repair Project

• Circa 1928 welded and riveted steel pipe ruptured along the welded seem discharging millions of gallons of treated water in November 2012

• Short term repairs included fabrication and installation of new steel pipe section and 2000 feet of internal weld repairs at a cost of $350,000
South Transmission Main Replacement Project

• A leak detection survey, internal inspection, and lab analysis of the main were performed, concluding that the pipe has reached the end of its useful life

• A replacement project will begin in Sept. 2014

• Consists of replacing the 6 mile pipeline from Provin Mountain to the Route 5 rotary

• Two+ year project

Estimated Project Cost = $24 million
Chicopee River Crossing
Ludlow Main No.2 Rehabilitation Project

- Completed June 2013
- Phase 1 – included the installation of 165-ft of 24-in DI water main under the railroad
- Phase 2 – included the installation of 2500-ft of 12-in, 16-in, and 24-in DI water main
- 43 valves, 6 hydrants & 5 water services were installed
- A new connection to the existing 30-in CI main at bank of Chicopee River

Total Project Cost = $2,100,000
Water Main Improvement Project
State Street Area, Ludlow

- Completed July 2013
- 4800-ft of 6-in, 8-in, & 10-in water mains cleaned & lined
- 9300-ft of 8-in, 12-in, or 16-in water main was either replaced or installed new
- 102 valves, 31 hydrants & 31 water services were installed new or replaced
- SWSC received $915,000 in grants

Total Project Cost = $1,500,000
Armory Street Bridge

- Completed December 2013
- Installed water main traversing two bridges on Armory Street
- Reconnected two dead ends in system
- Work was done across two active CSX railroad tracks
- 253-ft of water main installed

Total Project Cost = $335,000
## Distribution System
### Water Main Improvements

<table>
<thead>
<tr>
<th>Water Main Pipe Installed in FY 13 Springfield Location</th>
<th>Pipe Size (Diameter in inches)</th>
<th>Pipe Installed (Length in feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alden Street</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>Allen Street</td>
<td>Asst</td>
<td>14</td>
</tr>
<tr>
<td>Ashley Street</td>
<td>8</td>
<td>1,329</td>
</tr>
<tr>
<td>Blunt Park Road</td>
<td>Asst</td>
<td>156</td>
</tr>
<tr>
<td>Brigham Street</td>
<td>Asst</td>
<td>17</td>
</tr>
<tr>
<td>Carew Street</td>
<td>24</td>
<td>11</td>
</tr>
<tr>
<td>Cedar Street</td>
<td>16</td>
<td>32</td>
</tr>
<tr>
<td>Chestnut Street</td>
<td>Asst</td>
<td>13</td>
</tr>
<tr>
<td>Edwards Street</td>
<td>8</td>
<td>737</td>
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<tr>
<td>Former Monsanto Avenue</td>
<td>Asst</td>
<td>2,348</td>
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<tr>
<td>Linnell Street</td>
<td>Asst</td>
<td>572</td>
</tr>
<tr>
<td>Mercy Hospital</td>
<td>12</td>
<td>29</td>
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<tr>
<td>Morris Street</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Oakland Street</td>
<td>6</td>
<td>17</td>
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<tr>
<td>Orchard Street</td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>Oswego Street</td>
<td>6</td>
<td>80</td>
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<tr>
<td>Performance Boulevard</td>
<td>6</td>
<td>98</td>
</tr>
<tr>
<td>Plainfield Street</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>Springfield Street</td>
<td>8</td>
<td>13</td>
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<tr>
<td>Stafford Street</td>
<td>8</td>
<td>24</td>
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</table>

<table>
<thead>
<tr>
<th>Water Main Pipe Installed in FY 13 Ludlow Location</th>
<th>Pipe Size (Diameter in inches)</th>
<th>Pipe Installed (Length in feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berkshire Street</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Bristol Street</td>
<td>6</td>
<td>48</td>
</tr>
<tr>
<td>Center Street</td>
<td>Asst</td>
<td>89</td>
</tr>
<tr>
<td>Chestnut Street</td>
<td>8</td>
<td>39</td>
</tr>
<tr>
<td>Duke Street</td>
<td>6</td>
<td>114</td>
</tr>
<tr>
<td>East Street</td>
<td>Asst</td>
<td>73</td>
</tr>
<tr>
<td>Essex Street</td>
<td>6</td>
<td>116</td>
</tr>
<tr>
<td>First Avenue</td>
<td>Asst</td>
<td>781</td>
</tr>
<tr>
<td>Franklin Street</td>
<td>6</td>
<td>71</td>
</tr>
<tr>
<td>Hampden Street</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>Hampshire Street</td>
<td>6</td>
<td>104</td>
</tr>
<tr>
<td>Meadow Street</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Memorial Drive</td>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>Park Place</td>
<td>8</td>
<td>358</td>
</tr>
<tr>
<td>Park Terrace</td>
<td>8</td>
<td>371</td>
</tr>
<tr>
<td>Sewall Street</td>
<td>Asst</td>
<td>1,390</td>
</tr>
<tr>
<td>State Street</td>
<td>Asst</td>
<td>2,635</td>
</tr>
<tr>
<td>Thompson Street</td>
<td>8</td>
<td>145</td>
</tr>
<tr>
<td>Winsor Street</td>
<td>Asst</td>
<td>240</td>
</tr>
<tr>
<td>Worcester Street</td>
<td>8</td>
<td>488</td>
</tr>
</tbody>
</table>

Asst = Assorted Sizes  
All pipes installed were ductile iron  
All installs under 10” not included above = 175’

**Total = 12,902 ft**
Distribution System
Infrastructure Maintenance

<table>
<thead>
<tr>
<th>Water Distribution System Updates</th>
<th></th>
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<tbody>
<tr>
<td>New Hydrants</td>
<td>50</td>
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<tr>
<td>Replacement Hydrants</td>
<td>100</td>
</tr>
<tr>
<td>New Valves Installed</td>
<td>204</td>
</tr>
<tr>
<td>Valves Replaced</td>
<td>40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Quality Statistics</th>
<th>2013</th>
<th>Total (since program began, 2006)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrants Inspected</td>
<td>3,782</td>
<td>20,538</td>
</tr>
<tr>
<td>Hydrants Painted</td>
<td>1,198</td>
<td>7,803</td>
</tr>
<tr>
<td>Hydrants Rebuilt</td>
<td>577</td>
<td>3,950</td>
</tr>
<tr>
<td>Valves Exercised</td>
<td>3,288</td>
<td>25,964</td>
</tr>
<tr>
<td>Pipe Flushed (miles)</td>
<td>88.1</td>
<td>550.2</td>
</tr>
<tr>
<td>Pipe Swabbed (miles)</td>
<td>45.3</td>
<td>91.8</td>
</tr>
</tbody>
</table>
Josh Schimmel
Director of Wastewater Operations

Wastewater System
History of Springfield’s Wastewater Collection System

- 1842 - Construction of first sewer on Elm Street to drain marshy area of Main Street
- 1863 to 1882 - 33 miles of sewer constructed for $423,000, all discharging to local rivers
- 1938 - Connecticut River Interceptor Sewer and Primary Treatment Plant constructed
- 1977 - Main Interceptor Sewer and Springfield Regional Wastewater Treatment Plant constructed
Wastewater Collection System

• 450 miles of sewer and combined sewer pipe
• 12,000 manholes
• Portions of pipe network up to 120 years old
• Partially separated storm and combined sewer system
• 27 sewage pumping stations
• 7 flood control pumping stations

Appliances used in the maintenance of sewers, 1899
Wastewater Treatment Facility

- Completed in 1977
- 95% federal funding grant
- Service population of 250,000

- Design flow = 67 MGD
- Average flow = 38 MGD
- 13.9 billion GPY treated
- 24/7/365 operation
Asset Management and Maintenance Program

2013 Metrics & Performance

- CCTV assessment of 744,354-ft of sewer system
- Removal of 1,800 tons of grit
- GIS mapping of 4,800 manholes and pipe segments
- Digital archive of 25,000 collection system plans and 36,000 service cards
- Creation of maintenance maps for roots, grease, and structural defects
- Creation of Prioritized Capital Project List
72% reduction in sanitary sewer overflows (SSO) as a result of O&M optimization and investment.
Collection System Infrastructure Improvements 2013
Program Developed from Asset Management Information

### In 2013 the following work was completed:

<table>
<thead>
<tr>
<th>Location</th>
<th>Feet Replaced (apprx.)</th>
<th>Size of Cement Pipe</th>
<th>Pipe Dates From</th>
<th>Final Cost (apprx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen Street</td>
<td>240</td>
<td>10’</td>
<td>1940</td>
<td></td>
</tr>
<tr>
<td>Bradley Road</td>
<td>320</td>
<td>10’</td>
<td>1940</td>
<td>$378,000</td>
</tr>
<tr>
<td>Spruce Street</td>
<td>320</td>
<td>12’</td>
<td>1880</td>
<td></td>
</tr>
<tr>
<td>Chalfonte Drive</td>
<td>250</td>
<td>10’</td>
<td>1940</td>
<td></td>
</tr>
<tr>
<td>Federal Street</td>
<td>280</td>
<td>12’</td>
<td>1881</td>
<td>$163,000</td>
</tr>
</tbody>
</table>

### In October of 2013 the following construction work began:*

<table>
<thead>
<tr>
<th>Location</th>
<th>Feet Replaced (apprx.)</th>
<th>Size of Cement Pipe</th>
<th>Pipe Dates From</th>
<th>Estimated Cost (apprx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pine Street</td>
<td>1,500</td>
<td>12- and 15”</td>
<td>1883</td>
<td>$2.6 million</td>
</tr>
<tr>
<td>Thompson Street</td>
<td>2,150</td>
<td>12- and 15”</td>
<td>1887</td>
<td></td>
</tr>
<tr>
<td>Ingersoll Grove</td>
<td>500</td>
<td>12”</td>
<td>1887</td>
<td></td>
</tr>
<tr>
<td>Ingersoll Grove</td>
<td>330</td>
<td>12”</td>
<td>1887</td>
<td></td>
</tr>
</tbody>
</table>

*work is expected to be completed in 2014

New 12-inch PVC sewer at State St. and Thompson St. Intersection
Collection System Infrastructure Improvements 2014
Program Developed from Asset Management Information

- Rehabilitating approximately
  - 2,880-ft of sewer main
  - 35 manholes
- Replacing approximately
  - 9,950-ft of sewer main
  - 9,600-ft of water main
- Installing 55 manholes
- 21 sites throughout The City

Estimated Project Cost = $7,000,000
Infrastructure Improvements 2014

- Saint James Ave: #175 to #73 Saint James Ave
- Sherman St: Bay St to McKnight St
- McKnight St: Sherman St to #41 McKnight St
- Andrew St: #42 Andrew St to #20 Andrew St
- Ripley PI: #73 St. James to #18 Ripley PI
- Armory St: Magazine St to #25 Armory St
- Middleser St: Norfolk St to King St/Bristol St
- Wellington St: Sewer extending into Springfield College Campus
- Chalmers St: Summer Ave to #37 Chalmers St
- Allen St: Summer Ave to Dayton St
- Summer Ave: #1173 Summer Ave to Powell Ave
- Sumner Ave: Greenleaf St to Oakland St
- Belmont Ave: Fort Pleasant Ave to #102 Belmont Ave
- Central St: Maple St to Pine St
- Queen St: Walnut St to Hancock St
- Cross St: Main St to Willow St
- Walnut St: Oak St to Pine St
- Westminister St: Saint James Ave to #112 Westminster

SPRINGFIELD WATER AND SEWER COMMISSION
Wastewater Treatment Facility
Capital Investment Projects

• Dickinson and Tiffany Street Pumping Station emergency generator projects

• Bar Rack emergency power

• Secondary Basin Gate replacements

• Secondary Aeration System process optimization
  Energy efficiency optimization was 75% funded by grant and other sources

• Electrical Distribution System evaluation
Combined Sewer Overflows
Combined Sewer Overflow (CSO) Program

• Greater than 700 CSO communities across US
• All CSO Discharges regulated by USEPA and MADEP
• 23 CSO Locations
• Program administered via series of USEPA Administrative Orders
## CSO Program History

Required under EPA National Compliance Program
Driven by EPA Administrative Orders

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Start-End Year</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>Mill River CSO</td>
<td>2003-2004</td>
<td>$4,800,000</td>
</tr>
<tr>
<td>Watershops Pond</td>
<td>2003-2006</td>
<td>$1,200,000</td>
</tr>
<tr>
<td>Washburn CSO Replacement</td>
<td>2006-2007</td>
<td>$7,900,000</td>
</tr>
<tr>
<td>Chicopee River CSO</td>
<td>2004-2009</td>
<td>$36,400,000</td>
</tr>
<tr>
<td>Phase I Connecticut River CSO</td>
<td>2005-2012</td>
<td>$18,352,000</td>
</tr>
<tr>
<td>Washburn CSO Phase II Design</td>
<td>2009-2012</td>
<td>$2,500,000</td>
</tr>
<tr>
<td>Washburn CSO Phase II Construction</td>
<td>2012-ongoing</td>
<td>$20,497,000</td>
</tr>
<tr>
<td>Final CSO Long Term Control Plan</td>
<td>2009-2014</td>
<td>$8,700,000</td>
</tr>
</tbody>
</table>

**Total:** $100,349,000
Washburn CSO Control Project
EPA Federally Mandated Project

- Reduce CSO discharge to the Connecticut River
- Provide sewer and storm water separation in the North End of Springfield in areas tributary to Washburn Street including Birnie Avenue and Main Street

Project Includes:

- Targeted storm drain separation
- 1,200-ft of new 30-in sanitary sewer
- Rehabilitation of 1,100-ft of 84-in combined sewer
- Rehabilitation of 2,600-ft of large diameter sewer

CSO Construction Cost = $22,997,000
Combined Sewer Overflow Program Planning
Integrated Planning Framework

- Continued CSO compliance with regulations
- Optimize investment in CSO infrastructure to include broader system considerations and needs – multi-beneficial projects
- Continue to balance water quality improvements with program costs
Integrated Wastewater Plan

Wastewater Collection System and Treatment Program Sustainability

• Develop balanced and flexible Integrated Wastewater Plan for sustainable levels of renewal and compliance
• Identify wastewater system needs and risks
• Identify regulatory drivers
• Flexibility with regulatory changes
• Optimize operations and maintenance programs
• Developed a plan that identifies and prioritizes more than $300 million of wastewater infrastructure investment over 40 years which satisfies USEPA and MassDEP existing regulations
• Financially feasible and affordable to customers
• Understand long term impacts to system operation and financial implications across the water and sewer utility
Domenic Pellegrino
Finance Director

Proposed Rules and Regulations Changes
Rules and Regulations Proposed Changes
All Changes Effective FY 2015: July 1, 2014

Copies of the Rules and Regulations Proposed Changes are available by request.

Chapter 1 – Sewers and Wastewater Treatment
• Section 1.2.12 Applications/Permits – Removed from 6.: “There will be no fee for inspection for relaying or repairing any existing Sewer Connection”

Chapter 5 – Schedule of Rates, Fees, Charges and Penalties
• Section 5.1.1 Definitions – 62. Water / Sewer Pipe Inspection – added Building Sewer as a Commission infrastructure to be inspected.
### Section 5.2

<table>
<thead>
<tr>
<th>Class of Customer</th>
<th>FY 2014</th>
<th>FY 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential (per 100 cu.ft.)</td>
<td>$2.50</td>
<td>$2.66</td>
</tr>
<tr>
<td>Commercial (per 100 cu.ft.)</td>
<td>$2.50</td>
<td>$2.66</td>
</tr>
<tr>
<td>Industrial (per 100 cu.ft.)</td>
<td>$1.86</td>
<td>$1.98</td>
</tr>
<tr>
<td>Municipal (per 100 cu.ft.)</td>
<td>$1.86</td>
<td>$1.98</td>
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</tbody>
</table>

### Section 5.2.1

<table>
<thead>
<tr>
<th>Water Rates for All Bulk Water Haulers</th>
<th>FY 2014</th>
<th>FY 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Water (per 100 cu.ft.)</td>
<td>$2.50</td>
<td>$2.66</td>
</tr>
</tbody>
</table>

### Section 5.2.2

<table>
<thead>
<tr>
<th>Water Rates for Hydrant Users</th>
<th>FY 2014</th>
<th>FY 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Water (per 100 cu.ft.)</td>
<td>$5.00</td>
<td>$5.31</td>
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</tbody>
</table>

### Section 5.6

<table>
<thead>
<tr>
<th>Non-Beneficial Use Allowance</th>
<th>FY 2014</th>
<th>FY 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water charge (per 100 cu.ft.)</td>
<td>$0.53</td>
<td>$0.67</td>
</tr>
<tr>
<td>Sewer charge (per 100 cu.ft.)</td>
<td>$0.37</td>
<td>$0.52</td>
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</table>
### Chapter 5 – Schedule of Rates, Fees, Charges and Penalties

#### Section 5.7.16
**Water Service Pipe Installation Charges**

<table>
<thead>
<tr>
<th>Water Service Pipe Size</th>
<th>FY 2014</th>
<th>FY 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot; - 1&quot;</td>
<td>$30.00</td>
<td>$35.00</td>
</tr>
<tr>
<td>1 1/4&quot; - 1 1/2&quot;</td>
<td>$40.00</td>
<td>$45.00</td>
</tr>
<tr>
<td>2&quot;</td>
<td>$45.00</td>
<td>$50.00</td>
</tr>
<tr>
<td>4&quot;</td>
<td>$50.00</td>
<td>$55.00</td>
</tr>
<tr>
<td>6&quot;</td>
<td>$55.00</td>
<td>$60.00</td>
</tr>
<tr>
<td>8&quot;</td>
<td>$60.00</td>
<td>$65.00</td>
</tr>
<tr>
<td>10&quot;</td>
<td>$65.00</td>
<td>$70.00</td>
</tr>
<tr>
<td>12&quot;</td>
<td>$70.00</td>
<td>$75.00</td>
</tr>
</tbody>
</table>

#### Section 5.7.18
**Fire Service Pipe Installation Charges**

<table>
<thead>
<tr>
<th>Fire Service Pipe Size</th>
<th>FY 2014</th>
<th>FY 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>4&quot;</td>
<td>$50.00</td>
<td>$55.00</td>
</tr>
<tr>
<td>6&quot;</td>
<td>$55.00</td>
<td>$60.00</td>
</tr>
<tr>
<td>8&quot;</td>
<td>$60.00</td>
<td>$65.00</td>
</tr>
<tr>
<td>10&quot;</td>
<td>$65.00</td>
<td>$70.00</td>
</tr>
<tr>
<td>12&quot;</td>
<td>$70.00</td>
<td>$75.00</td>
</tr>
</tbody>
</table>

#### Section 5.7.1
**New Water Main Installations/Extensions Charge**

<table>
<thead>
<tr>
<th>Water Main Pipe Size</th>
<th>FY 2014</th>
<th>FY 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>6&quot;</td>
<td>$55.00</td>
<td>$60.00</td>
</tr>
<tr>
<td>8&quot;</td>
<td>$60.00</td>
<td>$65.00</td>
</tr>
<tr>
<td>12&quot;</td>
<td>$70.00</td>
<td>$75.00</td>
</tr>
<tr>
<td>16&quot;</td>
<td>$80.00</td>
<td>$85.00</td>
</tr>
<tr>
<td>24&quot;</td>
<td>$95.00</td>
<td>$100.00</td>
</tr>
</tbody>
</table>
Chapter 5 – Schedule of Rates, Fees, Charges and Penalties

<table>
<thead>
<tr>
<th>Section 5.7.25</th>
<th>Service Line Repair Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter and Length of Time for Repair</td>
<td>Regular Hours (Mon - Fri, 7 AM - 3 PM)</td>
</tr>
<tr>
<td>3/4&quot; to 1&quot; half day (up to 4 hours)</td>
<td>From $750 to $800</td>
</tr>
<tr>
<td>1 1/4&quot; to 2&quot; half day (up to 4 hours)</td>
<td>From $875 to $925</td>
</tr>
<tr>
<td>3/4&quot; to 1&quot; full day (4 to 8 hours)</td>
<td>From $1,200 to $1,250</td>
</tr>
<tr>
<td>1 1/4&quot; to 2&quot; full day (4 to 8 hours)</td>
<td>From $1,325 to $1,375</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section 5.7.26</th>
<th>Water/Sewer Pipe Inspection Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per inspection or site visit</td>
<td>Regular Hours (Mon - Fri, 7 AM - 3 PM)</td>
</tr>
<tr>
<td></td>
<td>From $150 to $175</td>
</tr>
</tbody>
</table>
Chapter 5 – Schedule of Rates, Fees, Charges and Penalties

<table>
<thead>
<tr>
<th>Section 5.8</th>
<th>Sewer Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class of Customer</strong></td>
<td><strong>FY 2014</strong></td>
</tr>
<tr>
<td>Residential, Institutional and Municipal (per 100 cu.ft.)</td>
<td>$3.82</td>
</tr>
<tr>
<td>Commercial and Medical Facility (per 100 cu.ft.)</td>
<td>$4.20</td>
</tr>
<tr>
<td>Industry Wet &amp; Dry (per 100 cu.ft.)</td>
<td>$4.58</td>
</tr>
<tr>
<td>FSE (per 100 cu.ft.)</td>
<td>$4.97</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section 5.12.5</th>
<th>Building Sewer Connection Repair Charge (Residential property)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regular Hours</strong> (Mon - Fri 7 AM - 3:30 PM)</td>
<td><strong>Evenings, Weekends and Holidays</strong></td>
</tr>
<tr>
<td>Half day</td>
<td>From $750 to $800</td>
</tr>
<tr>
<td>Full day</td>
<td>From $1,200 to $1,250</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section 5.12.6</th>
<th>Building Sewer Connection Repair Charge (Commercial or Industrial property including four family residential or greater)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regular Hours</strong> (Mon - Fri 7 AM - 3:30 PM)</td>
<td><strong>Evenings, Weekends and Holidays</strong></td>
</tr>
<tr>
<td>Half day</td>
<td>From $875 to $925</td>
</tr>
<tr>
<td>Full day</td>
<td>From $1,325 to $1,375</td>
</tr>
</tbody>
</table>
Anthony Basile
Comptroller
The Financial Plan
Revenue Fiscal Year 2015

Estimate - $69,879,319

- General Revenue: $722,500 (1%)
- Power Generation: $2,900,000 (4%)
- Regional Water: $9,181,365 (13%)
- Retail Water: $22,015,241 (32%)
- Retail Sewer: $26,377,540 (38%)
- Regional Sewer: $7,845,384 (11%)
- Grant Revenue: $837,289 (1%)

Total: $69,879,319
Spending Fiscal Year 2015

**Budget - $69,872,577**

- **Purchased Services** $19,355,736 (28%)
- **Debt Service** $14,437,810 (21%)
- **Fringe** $6,695,030 (9%)
- **Supplies & Materials** $3,441,512 (5%)
- **Other** $1,901,500 (3%)
- **Bond Reserves** $5,080,559 (7%)
- **Capital from Revenue** $5,138,500 (7%)
- **Payroll** $13,821,930 (20%)
- **Other** $1,901,500 (3%)

- **Debt Service** $14,437,810 (21%)
- **Bond Reserves** $5,080,559 (7%)
- **Capital from Revenue** $5,138,500 (7%)
- **Payroll** $13,821,930 (20%)
- **Fringe** $6,695,030 (9%)
- **Supplies & Materials** $3,441,512 (5%)
- **Other** $1,901,500 (3%)
- **Purchased Services** $19,355,736 (28%)

*SPRINGFIELD WATER AND SEWER COMMISSION*
Spending By Division FY2015

**Budget - $69,872,577**

- **Wastewater Treatment** $13,912,345 (20%)
- **Administration** $5,884,117 (8%)
- **Bond Reserves** $5,080,559 (7%)
- **Engineering** $3,541,649 (5%)
- **Sewer Collection** $15,180,340 (22%)
- **Water Supply** $13,614,675 (20%)
- **Water Distribution** $12,658,894 (18%)
Capital Spending 2015-2017

Total Spending: $138,286,500

- Spending from Revenues
- Spending from Bond

Spending from Revenues

- 2015: $5,138,500
- 2016: $9,928,000
- 2017: $8,020,000
- 3-Year Total: $23,086,500

Spending from Bond

- 2015: $5,138,500
- 2016: $9,928,000
- 2017: $67,050,000
- 3-Year Total: $115,200,000
## Retail Water and Sewer Rates

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential &amp; Commercial</td>
<td>$2.50</td>
<td>$2.66</td>
<td>6.2%</td>
</tr>
<tr>
<td>Industrial &amp; Municipal</td>
<td>$1.86</td>
<td>$1.98</td>
<td>6.2%</td>
</tr>
<tr>
<td><strong>Sewer:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential &amp; Municipal</td>
<td>$3.82</td>
<td>$4.34</td>
<td>13.6%</td>
</tr>
<tr>
<td>Commercial &amp; Hospital</td>
<td>$4.20</td>
<td>$4.77</td>
<td>13.6%</td>
</tr>
<tr>
<td>Industrial</td>
<td>$4.58</td>
<td>$5.20</td>
<td>13.6%</td>
</tr>
<tr>
<td>Restaurant</td>
<td>$4.97</td>
<td>$5.65</td>
<td>13.6%</td>
</tr>
<tr>
<td><strong>Combined Water and Sewer:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typical Annual Household Bill</td>
<td>$789.52</td>
<td>$867.68</td>
<td>9.9%</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 2012 - for Fiscal Year 2013

- Revere, MA
- Gloucester, MA
- Quincy, MA
- Chelsea, MA
- MWRA Average
- Watertown, MA
- Portland, ME
- Fitchburg, MA
- Lynn, MA
- Chicopee, MA
- Beverly, MA
- Worcester, MA
- Fall River, MA
- Providence, RI
- Brockton, MA
- Holyoke, MA
- New Bedford, MA
- Everett, MA
- Lawrence, MA
- Haverhill, MA
- Springfield, MA FY 15
- Lowell, MA

Source: MWRA December 2012 - for Fiscal Year 2013
Katherine Pedersen
Executive Director

Summary and Closing Remarks
What is Water Worth to You?

Facing Aging Infrastructure and Regulatory Challenges

The underground pipes, reservoirs, pumping stations and treatment facilities that bring clean water into our homes and carry wastewater to be cleaned and returned to the environment are vital for public health, environmental protection, economic development, and quality of life.

Today, water utilities are facing hefty challenges, and Springfield is not exempt.

**Challenge 1: An Aging Infrastructure**

Parts of the water and sewer infrastructure in the City of Springfield date back to the late 1800s. The pipes are aging and in need of repair and replacement.

![Example of corrosion on circa 1928 transmission main](image-url)
Water System Repairs & Maintenance

Reactive Repair Examples

Difficult Urban Pipe Break Repairs

CT River Crossing Break and Repair

Planned Maintenance Examples

Cobble Mountain Valve Replacement

Flushing, Swabbing and Cleaning and Lining Projects
Recent Water Main Breaks
Sewer System Repairs

Washburn/Orchard Street Area Sinkhole Repairs

Washburn St. Sink Hole

Interceptor Damage and Repair

Sewer Inspections and Pipe Repairs
Challenge 2: Regulatory Mandates

The Commission has been working to reduce overflows from Combined Sewer Overflows since 2003, and will continue to do so for the next 20 years and beyond.

In addition to CSOs, the Commission meets and surpasses multiple Safe Drinking Water Act regulations every single day.
Legislation and Regulations

Safe Drinking Water Act: 90 Regulated Contaminants, Stage 2 Disinfection Byproduct Rule, Long Term 2 Enhanced Surface Water Treatment, Lead and Copper Rule, Total Coliform Rule, Unregulated Contaminant Monitoring, Contaminant Candidate List

Clean Water Act: NPDES Permit for Water Treatment Plant, NPDES Permit for Wastewater Treatment Plant, Solids Regulations, Zero Discharge, Nutrient Removal, CSO's, Stormwater BMP’s, CMOM

What is Water Worth to You?

Facing Aging Infrastructure and Regulatory Challenges

The Commission must make a significant investment of time and resources in order to address these challenges.

- **South Transmission Main Replacement**: $24 million
- **Washburn CSO Reduction**: $23 million
- **Infrastructure Improvements 2014**: $7 million
- **Collection System Improvements 2013**: $3 million
- **CSO Reduction Spending to Date**: $100+ million
The Commission Supports Economic Development in Springfield

- MGM Springfield
- Cottage Street Solar Farm
- Balise Expansion
- Palmer Renewable Energy
- State Street Supermarket
- South End Community Center
- I-91 Reconstruction
- Mercy Medical Building
- Outing Park
- Sister Caritas Center Expansion
- Blunt Park Senior Center
- Union Station

Picture courtesy of Springfield Redevelopment Authority
The Commission Supports Economic Development in Springfield

The Commission reviewed the following commercial / industrial development and redevelopment projects:

- Casino Project Site Research
- Union Station Plan Review
- MassDOT projects
- Dunkin Donuts, Allen Street
- Warehouse/Office Space, Memorial Ave
- Luxe Burger, Hall of Fame Ave
- United Bank, Wilbraham Road
- Apartment Management Office, Saratoga Street
- Retail Space, State Street
- Dryden School, Surrey Road
Springfield Water is a Great Value!

1 \times \text{20 oz} = \text{\$1.50}

3 \times \text{128 oz (1 Gallon)} < \text{1\$ Delivered}
Springfield Water and Sewer Commission, Continuously Working for a Better Future

For more information, please contact:
Joyce Mulvaney, Public Communications Manager
413-787-6256 Ext. 182
Info@waterandsewer.org