

# Springfield

2015 ANNUAL REPORT

Water and Sewer  
Commission

MASSACHUSETTS





Borden Brook Reservoir



# Table of Contents

Letter from the Commissioners .....	2
The Commission Welcomes a New Executive Director .....	3
Awards and Achievements .....	4
The Commission Supports Economic Development .....	5
Information Technology .....	6
Engineering and Capital Projects .....	7
Watershed Protection .....	10
Water Treatment .....	11
Water Quality and Consumption .....	12
Water Supply Map .....	13
Water Distribution .....	14
Wastewater Collection System .....	16
Integrated Wastewater Plan .....	17
Wastewater Treatment .....	18
Wastewater Treatment Data .....	19
Financials .....	20



## *Mission Statement*

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

### *While fulfilling our mission, we strive to:*

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

The Springfield Water and Sewer Commission (SWSC, the Commission), is pleased to present its Fiscal Year 2015 (FY 15) Annual Report. This report describes the water and wastewater systems, presents statistical data on work that has been completed during the fiscal year, and provides updates on Commission accomplishments, capital improvement projects, and daily operations.

In FY 15, the Commission continued to provide water and wastewater services to 250,000 regional residents in its day-to-day operations. Dependable water and wastewater services are crucial to maintaining public health, fire protection, economic development, and a high quality of life in our region. We are committed to providing these services to the City of Springfield and surrounding communities in a responsible, efficient, and sustainable manner.

The Commission saw a transition in leadership with the retirement of Executive Director Katherine J. Pedersen and the appointment of a new Executive Director, Joshua D. Schimmel. Ms. Pedersen retired after 31 years of service with the City Water Department and the Commission. She held positions such as Public Communications Director and Assistant Executive Director before her appointment to Executive Director in 2012. Ms. Pedersen has played a vital role in the leadership of the Commission over the years and her knowledge, expertise, and passion for public service will be greatly missed. Mr. Schimmel has been with the Commission and the City of Springfield for over 22 years, most recently as the Commission's Director of Wastewater Operations. We welcome Josh to this new role and look forward to working closely with him as the next Executive Director.

Construction of the South Transmission Water Main Replacement Project continued in FY 15. The South Transmission Main, installed in 1928, carries finished water to the distribution system that delivers water to Springfield and surrounding communities. This pipeline is vital to providing dependable and uninterrupted water service to the region. The project, which is expected to be complete in late summer of 2016, consists of replacing the six-mile pipeline from Provin Mountain to the Route 5 rotary at the South End Bridge, as well as the installation of 11 valves, 13 air valve chambers, and 12 drainage areas through multiple wetlands. The project cost is estimated



at \$24 million. Once completed, the new pipeline is expected to reliably supply water for the next 80 to 100 years. As of December 2015, approximately four miles of pipeline has been installed and returned to service.

The Commission continued to invest in infrastructure, replacing or rehabilitating water and sewer main pipe within multiple streets in the City of Springfield. In FY 15, the Commission substantially completed a project to replace 9,950 feet and rehabilitate 2,880 feet of sewer main pipe, and replace 9,640 feet of water main pipe. The total project cost was approximately \$7 million. The Commission also began a project to construct additional infrastructure improvements including rehabilitation of 8,345 feet and replacement of 334 feet of sewer main, and replacement of 80 feet of water main. This project is expected to be completed in FY 16 at an estimated cost of \$1.6 million.

The Commission began construction of its Main Interceptor Rehabilitation and Combined Sewer Outfall Improvements Project in FY 15. The Main Intercepting Sewer (MIS) is one of the most critical pipes in the wastewater collection system, carrying flows for more than 60% of the City of Springfield. Inspection of the MIS indicated that the pipe required rehabilitation in order to continue to provide service. The project consists of rehabilitating 3,200 feet of 60- and 66-inch diameter sewer pipe and associated manholes, and work to rehabilitate and repair three Combined Sewer Outfall structures. Construction began at the end of FY 15 and is expected to take approximately 18 months to complete. The total project cost is estimated at \$20.1 million.

In 2015, the Commission's Integrated Wastewater Plan (IWP) received final approval from the State. Development of the comprehensive plan was mandated by the U.S. Environmental Protection Agency (EPA) in order to define a strategy for Combined Sewer Overflow (CSO) compliance with federal Clean Water Act requirements. The IWP seeks to balance regulatory

The Commissioners (from left to right): William Leonard, Daniel Rodriguez, and Vanessa Otero.

compliance with responsible and sustainable investment in the Commission's wastewater infrastructure. Critical components of the plan include a detailed CSO alternatives analysis, a long-term Capital Improvement Plan for wastewater and water functions, and a Financial Capability Assessment and Affordability Analysis that determines implementation scheduling. The Commission's IWP was the first of its type to be submitted under the EPA's integrated planning framework.

The Commission continued to support economic development in the City of Springfield by reviewing development and redevelopment projects for several public, industrial, and commercial sites, with regard to their water and sewer services. This year, the Commission worked closely with MGM Springfield and its representatives to determine the necessary water and sewer improvements in the casino project area. Commission staff continues to work closely with MGM and project participants, to review plans for replacements, upgrades, and discontinuances, and perform water and sewer work inspections.

In FY 15, the Commission responded to 64 water main breaks; inspected 3,924 hydrants; operated 3,194 valves; flushed nearly 104 miles of pipe; installed 5,908 water meters; performed over 50,000 water quality tests; responded to 759 sewer backups; performed 2,765 mark-outs for water and sewer services; answered more than 15,000 customer inquiries; and the Ludlow Reservoir hosted more than 27,000 visitors. West Parish Filters produced 10.4 billion gallons of water, and the wastewater treatment facility cleaned 13.7 billion gallons of wastewater.

The Commission is committed to meeting our responsibility to reliably serve our consumers, renew our infrastructure, comply with environmental laws and regulations, and conserve and protect our water resources for future generations, all while maintaining the lowest possible rates.

Sincerely,

**Daniel Rodriguez**  
Chairman

**Vanessa Otero**  
Commissioner

**William Leonard**  
Commissioner

# The Commission Welcomes a New Executive Director



**Joshua D. Schimmel**  
**Experience**

22 Years with The Commission and The City  
SWSC Director of Wastewater Operations  
2009-2016

**Education**

B.S. Environmental Science  
University of Massachusetts

**Professional Licensure**

Grade 4 Wastewater Treatment Operator  
Grade 4 Wastewater Collection System

**Memberships**

APWA NACWA NEWEA WEF

In December 2015, the Board of Commissioners appointed Joshua D. Schimmel as Executive Director of the Springfield Water and Sewer Commission effective in February 2016, upon the retirement of previous Executive Director Katherine J. Pedersen. The appointment followed a comprehensive selection process that began in September 2015.

Mr. Schimmel has been with the Commission and the City of Springfield for over 22 years. Prior to his appointment as Executive Director, Mr. Schimmel was the Commission's Director of Wastewater Operations since 2009. He holds a B.S. in Environmental Science from the University of Massachusetts and maintains a Grade 4 Wastewater Treatment Operator License and a Grade 4 Wastewater Collection System License in the Commonwealth of Massachusetts. Mr. Schimmel currently serves on the Board of Directors for the Massachusetts Coalition for

Water Resources Stewardship and is active in professional organizations including the Water Environment Federation (WEF), New England Water Environment Association (NEWEA), American Public Works Association (APWA), and the National Association of Clean Water Agencies (NACWA).

Ms. Pedersen retired in February, with 31 years of service. During her tenure with the Water Department and the Water and Sewer Commission, she served in various leadership roles, most recently as Executive Director since February 2012. During her career, Ms. Pedersen was actively involved in the drinking water community and is a recipient of the Water Works Pride Award, the Distinguished Drinking Water Public Involvement Award, the George Warren Fuller Award, and the John H. Chafee Distinguished Public Servant Award. Her expertise and dedication will be greatly missed.

“Josh’s leadership skills, industry knowledge, and commitment to the community have and will continue to be vital in providing high quality and reliable services to the residents of Springfield and surrounding communities. We look forward to working closely with him as the Commission’s next Executive Director.”

“Kathy has been an integral part of operations at the Water and Sewer Commission. As Commissioners, we have come to rely heavily on Kathy’s extensive experience and leadership skills, and we have developed the utmost respect for her. We wish her good health and happiness as she transitions to the next phase of her life.”

*Daniel Rodriguez  
Chairman of the Board*



# Awards and Achievements



## New England's Best Drinking Water Taste Test Winner

The Springfield Water and Sewer Commission won the title of New England's Best Tasting Drinking Water at a blind taste test held at the New England Water Works Association's Annual Conference on September 22, 2015.

Springfield water competed against water samples from nine other communities across New England. Three independent judges ranked the ten entries, and Springfield came out on top as the best tasting and most aesthetically pleasing water.

“We are thrilled to receive this recognition. The *Best Tasting Drinking Water Award* is a testament to the high quality of our water and our employee's diligence and commitment to provide an abundant supply of safe, great-tasting water.”

Katherine J. Pedersen  
Retired Executive Director



## Comprehensive Annual Finance Report Award

As a public entity, the Commission is required to complete financial reports in accordance with Massachusetts General Laws Chapter 40N. The Commission opted to complete and submit a Comprehensive Annual Financial Report (CAFR) for the first time for FY 13 and again for FY 14. The CAFR contains additional financial information, covers a longer time period, and goes beyond what is required by law. For the second consecutive year, the Commission was nationally recognized for its CAFR with a *Certificate of Achievement for Excellence in Financial Reporting* award from the Government Finance Officers Association, the highest form of recognition in governmental financing and accounting.



SWSC accepting the *New England's Best Tasting Drinking Water Award* with Competition Judges (from L - R): David Terry, Retired Director of Drinking Water Program, MA DEP; Kathy Pedersen, Retired Executive Director, SWSC; Joyce Mulvaney, Public Communications Manager, SWSC; Tom LeCourt, Former Director of Drinking Water Operations, SWSC; Jane Downing, Associate Director of Drinking Water, EPA New England Region; Steve Dennis, Vice-President, American Water Works Association.

# The Commission Supports Economic Development

The Commission's Engineering and Technical Services Group reviews new development and redevelopment projects submitted for connection to the water and sewer systems. In order to protect the integrity of the water and sewer systems, projects must comply with the Commission's Rules and Regulations. Each year, over 100 development projects are reviewed, ranging from large-scale development to small, single-family homes. Commission staff reviewed the designs and inspected the water and sewer services for several commercial and industrial redevelopment sites in FY 15. **The following are some major projects reviewed.**

## Springfield

- **MGM Springfield** – There are several water and sewer mains in the MGM project area. The Commission worked closely with MGM and its representatives to determine what water and sewer improvements would be needed, and continues to work closely with MGM and its representatives by reviewing plans for replacements, upgrades, and discontinuances, and by performing inspections to ensure that work is being conducted in accordance with the Commission's Rules and Regulations.
- **Family Dollar Store, 383 Allen Street** – The Commission reviewed new water and sewer services for redevelopment of the property.
- **Balise Hyundai, Balise Ready Credit, and Balise Car Wash, 701 through 683 East Columbus Avenue** – The Commission reviewed water and sewer services for redevelopment of the site, as well as the addition of three new buildings.

- **Dunkin' Donuts, 568 Belmont Avenue** – The Commission completed a review of new water and sewer services for the redevelopment of an existing Dunkin' Donuts.
- **Retail Space, 1400 Boston Road** – The Commission reviewed new water and sewer services for an expanded retail building at Boston Road and Parker Street.
- **Denny's, 1284 Boston Road** – The Commission completed review of water and sewer services for a new Denny's restaurant.
- **Phoenix Charter Academy, 65 Lincoln Street** – The Commission completed review of water and sewer services for a new charter school.
- **Astro Chemicals, Inc., 112 Memorial Avenue** – The Commission reviewed new water and sewer services related to an expansion.

### Commission staff worked on these projects for the City and the Springfield Redevelopment Authority:

- **Mary Troy Park, Liberty Street** – The City Parks Department made improvements, including a new waterspray park. The Commission reviewed plans related to new water services.
- **Camp Star Angelina, Trafton Road** – The City Parks Department made improvements, including a new swimming pool and bathhouse. The Commission reviewed plans related to new water services.
- **Pine Point Library, Boston Road** – The Commission reviewed plans for a new fire suppression water service for the Pine Point Library Branch on Boston Road.

- **Nathan Bill Park, Plumtree Road** – The City Parks Department made improvements, including a new waterspray park. The Commission reviewed plans related to new water services.
- **Union Station, 55 Frank B. Murray Street** – The Commission reviewed new water and sewer services for this intermodal hub which is currently being constructed in Springfield.
- **Balliet Park, Breckwood Boulevard** – The City Parks Department made improvements, including a new waterspray park. The Commission reviewed plans related to new water services.

## Ludlow

- **Stevens Memorial Housing, 12 Chestnut Street** – The Commission reviewed proposed new domestic and fire suppression water services.
- **Ludlow Municipal Complex** – The Commission reviewed plans related to a fire suppression service upgrade at the following locations:
  - **37, 39, and 53 Chestnut Street**
  - **54 Winsor Street**
- **Retail Space, 399 West Street** – The Commission completed review of water services for a new commercial building.

Commission staff continued to review proposed Massachusetts Department of Transportation (MassDOT) roadway and intersection improvement projects for potential impact to the Commission's water and sewer infrastructure. These projects generally take three to five years from design to construction. In FY 15, the Commission worked with the designer of the MassDOT I-91 Viaduct Project to protect SWSC water and sewer infrastructure within the project area.

# Information Technology

Technology plays a centralized role in the Commission's day-to-day operations. The Information Technology (IT) Department is part of the Engineering and Technical Services Group and supports Commission operations and staff by troubleshooting hardware and software issues; continually upgrading computers, servers, and networking equipment; and supporting various technology initiatives.

In cooperation with Engineering, Operations, and an engineering consultant, the IT Group installed new servers and fiber optic cables at West Parish Filters Water Treatment Plant in FY 15 in preparation for the new Supervisory Control and Data Acquisition (SCADA) system. SCADA is an industrial computer system which consists of both hardware and software components that optimize the human and machine interface and enables operators to control treatment processes, monitor operations, collect data and produce reports. The system was brought online in phases with full operation in November 2015.

In February 2015, the Commission installed a new Avaya "Voice over Internet Protocol" (VoIP) Telephone System at the Commission's primary locations. The IT Group supported this effort by installing and testing the Avaya networking equipment and coordinating the installation of the telephony system with the selected vendor, Carousel Industries. The new system provides increased functionality, reliability, and redundancy, resulting in an improved customer experience. The total project cost was approximately \$150,000.



Network racks and servers installed as part of the SCADA system upgrade at West Parish Filters.

In March 2015, VUEWorks was launched Commission-wide. VUEWorks functions as an asset management, work order, and document management system with Geographic Information System (GIS) capabilities. The IT Group supported the rollout from a hardware and software perspective as well as the network delivery of the VUEWorks software to Commission locations.

Technology continues to play a dynamic and growing role in our day-to-day operations. Our IT department supports the Commission's software and hardware infrastructure in order to enhance system performance.

The IT Group supported the installation of a back-up generator at the Commission's administrative offices; installed new blade servers and high performance storage in the datacenter for the Commission's virtual servers; upgraded to a 20MB internet connection; and upgraded its Wide Area Network (WAN) to multipoint-to-multipoint connections.

The Commission also hired an IT Support Specialist in FY 15. This addition to staff will provide added hardware and software support to the organization.



# Engineering and Capital Projects

## West Parish Filters Water Treatment Plant

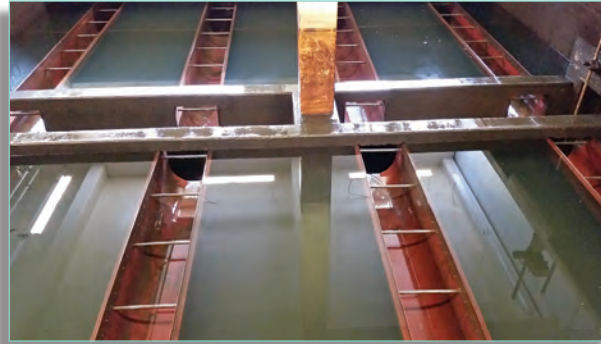
FY 15 saw the completion of the new SCADA system at West Parish Filters Water Treatment Plant. SCADA is an industrial computer system that enables operators to control treatment processes, monitor operations, collect data and produce reports. The new SCADA system has been in full operation since November 2015. The benefits were immediately realized through the user-friendly interface and the timely training of a new generation of operators at the facility. The total project cost was approximately \$1.5 million.

The Commission is in the process of installing new SCADA systems at other Commission facilities including Provin Mountain Storage Tanks and the Worcester Street Booster Pump Station.



SCADA Station

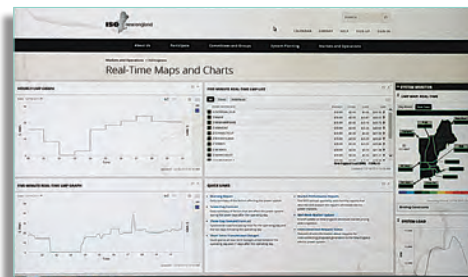
The Commission is planning to replace the fiberglass reinforced plastic (FRP) backwash troughs in the rapid sand filters at the Water Treatment Plant. The existing troughs are exhibiting signs of fatigue after more than 40 years in service. The new troughs for Filters 1, 4, and 6 have been specified and procured by the Commission's Engineering and Technical Services Department and will be installed by a private contractor in FY 16 at an estimated cost of \$240,000. Troughs for Filters 2, 3, and 5 are expected to be replaced in FY 17-18.



Existing FRP Backwash Troughs

## Cobble Mountain Hydro-Power Plant

Water flowing from the Cobble Mountain Reservoir into West Parish Filters Water Treatment Plant is used to generate green electric power at the Cobble Mountain Hydro-Power Plant. Generated power is transmitted to the ISO New England electricity market. Total output for FY 15 was approximately 21,800 Megawatts. Power generation net revenues totaled \$16 million. The Plant is operated and maintained by Holyoke Gas & Electric Department (HG&E) under a five year contract. In FY 15, many upgrades were implemented including completion of new fiber optics to connect the Hydro-Power Plant to the Connecticut Valley Electric Exchange (CONVEX)/HG&E Control Center via Comcast high speed internet, completion of tree clearing



Monitoring Power Market

atop the penstocks and near power lines, preliminary design of new transmission poles between the power station and the substation, installation of two new air compressors, and deep water diving to inspect the inlet trash-racks and perform maintenance. Costs for these projects totaled approximately \$221,300. The Commission is currently in the early design stage for a five-year capital improvement plan to upgrade station controls and electric systems, and to implement timely rehabilitation of generation units' governors, windings, and runners.

## Dams and Reservoirs

As part of its Dams Operations & Maintenance (O&M) program, the Commission continued to monitor and maintain dams and reservoirs in FY 15. The Commission continues to implement vegetation control and tree cutting on slopes and dam spillways. Commission staff also conducted biannual inspections of all dams throughout the year to ensure they are in compliance with Massachusetts Department of Conservation and Recreation (DCR) standards. Phase I Dam inspections are planned for FY 16. Based on the seepage and stability study prepared last year for Dam #3 at West Parish Filters and Cherry Valley Dam in Ludlow, the Commission plans to implement drainage improvements in the next two to three years.

The Commission is also in the preliminary design stages of a project to rehabilitate the Intake Dam, which is downstream from the Cobble Mountain Hydro-Power Station. The plan is to implement rehabilitation of mechanical hydraulic control components followed by structural repairs that will be coordinated with projects at the Cobble Mountain Hydro-Power Station and West Parish Filters Water Treatment Plant. The overall rehab work will be implemented within the next five to ten years.

*(continues on the next page)*

# Engineering and Capital Projects

(continued from previous page)

## South Transmission Main Replacement

The Commission has three main transmission pipelines that carry water from the Provin Mountain Storage Tanks to the distribution system that delivers water to Springfield and Ludlow as well as Agawam, Longmeadow and East Longmeadow. The southernmost of these pipelines, a 54- and 48-inch steel main installed in 1928, delivers water to Agawam prior to crossing the Connecticut River. The reliability of this pipeline is vital to providing dependable and uninterrupted water service to the region.

In 2010-2011, emergency improvements were made to a section of the south transmission main under and adjacent to the Connecticut River. While these emergency improvements were ongoing, a leak-detection survey,

internal inspection, and engineering analysis of the transmission main were performed. These studies identified porosity, poor weld quality, and corrosion issues with the pipe.

In November 2012, there was a large rupture in the upper section of the 54-inch south transmission main. In response to the rupture, the Commission performed emergency repairs and initiated the planning process for a full replacement of the pipeline.

The project consists of replacing the six-mile pipeline from Provin Mountain to the Route 5 rotary in addition to installation of 11 valves, 13 air valve chambers, and 12 drainage areas through multiple wetlands.

Construction began in FY 15 and is expected to be completed by late summer 2016. As of December 2015, approximately four miles of pipeline have been installed and brought back into service. Once completed, the new pipeline is expected to reliably supply water for the next 80 to 100 years.

The project cost is estimated at \$24 million.



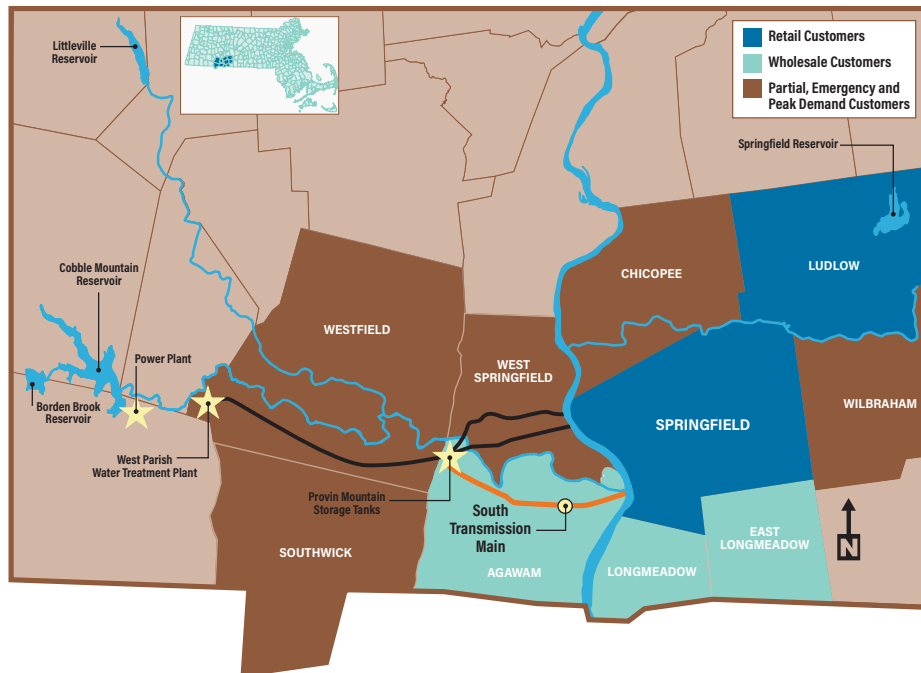
Installation of 48-inch prestressed concrete cylinder pipe (PCCP) along Route 57

## Sewer and Water Infrastructure Improvements

In 2009, the Commission initiated the Wastewater Collection System's Asset Management and Maintenance Program to assess, map, and clean the wastewater collection system. Since the start of the program, the Commission has been able to assess the majority of the system and generate a Prioritized Infrastructure Improvements list, ranking assets by their condition along with risk and consequence of failure. The Commission contracted with Stantec (formerly Fay, Spofford & Thorndike) to initiate the design and construction of infrastructure improvement projects stemming from the list. In FY 15, the Commission initiated and completed several improvements to the wastewater collection system. In some instances, improvements were made to the water distribution system in conjunction with the wastewater system upgrades when warranted by the age and condition of the water main pipe. This combination of work resulted in cost savings for the Commission and renewal of aging infrastructure.

### 2014 Project

Based on the Prioritized Infrastructure Improvements list, the Commission continued a project to construct water and sewer improvements at multiple locations throughout the city. This project consists of replacing 9,950 feet of sewer mains and 3,500 feet of sewer laterals, trenchless rehabilitation of 2,880 feet of sewer mains, trenchless rehabilitation of 35 manholes, installation of 55 manholes, replacement of 9,640 feet of water mains, and replacement of 2,600 feet of water service pipe.



(continues on the next page)

(continued from previous page)

#### Improvements were made at these locations:

- Allen St. from #9 Allen Park Road to #31 Allen St., and from Roosevelt Ave. to Whittum Ave.
- Andrew St. from #42 Andrew St. to #20 Andrew St.
- Armory St. from Magazine St. to #25 Armory St.
- Belmont Ave. from Fort Pleasant Ave. to #102 Belmont Ave.
- Central St. from Maple St. to Pine St.
- Chalmers St. from Sumner Ave. to #37 Chalmers St.
- Cross St. from Main St. to Willow St.
- McKnight St. from Sherman St. to #41 McKnight St.
- Middlesex St. from Norfolk St. to King St./Bristol St.
- Queen St. from Walnut St. to Hancock St.
- Ripley Place from #73 Saint James Ave. to #18 Ripley Place
- Saint James Ave. from #175 Saint James Ave. to #73 Saint James Ave.
- Sherman St. from Bay St. to McKnight St.
- Sumner Ave. from #1173 Sumner Ave. to Powell Ave., from Allen St. to Dayton St., and from Greenleaf St. to Oakland St.
- Walnut St. from Charter Ave. to #470 Union St., and from Oak St. to Pine St.
- Wellington St. sewer extending into Springfield College Campus
- Westminster St. from Saint James Ave. to #112 Westminster St.

This project was substantially completed in early FY 16 and cost \$7 million.

#### 2015 Project

In FY 15, the Commission began performing additional infrastructure improvements throughout the City. These included trenchless rehabilitation of approximately 8,345 feet of sewer main, 44 manholes, and 26 service laterals, and replacement of approximately 334 feet of sewer main, 3 service laterals, and approximately 80 feet of water main.

#### Improvements are ongoing at these locations:

- Walnut St. from Hickory St. to Allen St.
- Eastern Ave. from Monroe St. to Wilbraham Road
- Union St. from Hancock St. to Colton St.
- Quincy St. from #162 Quincy St. to Eastern Ave.
- Quincy St. from Oak St. to Stebbins St.
- Tyler St. from Hancock St. to 252 Tyler St.
- Pendleton Ave. from 148 Pendleton Ave. to Eastern Ave.
- Alden St. from Hancock St. to Eastern Ave.
- Walnut St. from Hancock St. to Brigham St.
- Hancock St. from Walnut St. to Florence St.
- Stockbridge St. at Main St.
- Dwight St. from Worthington St. to Taylor St.

This project is expected to be completed in FY 16 at an estimated cost of \$1.6 million.



Replacement of an 18-inch sewer on Stockbridge St. at Main St.

#### Main Interceptor Rehabilitation and Combined Sewer Outfall Improvements Project

The Main Intercepting Sewer (MIS) is one of the most critical pipes within the wastewater collection system, carrying flows for more than 60% of the City of Springfield. Average flows in the MIS exceed 20 million gallons per day (mgd). Inspection of the MIS as part of the Wastewater Collection System's Asset Management and Maintenance Program indicated that the pipe required immediate rehabilitation in order to continue to provide service. Combined Sewer Outfalls (CSOs) at Worthington Street, Phelps Street, and Longhill Street were also identified as in need of repair.

In general, the Main Interceptor Rehabilitation and CSO Improvements Project consists of rehabilitating 3,200 feet of 60- and 66-inch diameter sewer pipe and associated manholes, and work to rehabilitate and repair three CSO structures along the Connecticut River.



Installation of a 69-inch cured-in-place-pipe (CIPP) to serve as a structural rehabilitation line for a 118 year old sewer that will be used as a temporary bypass for the MIS.

Construction began at the end of FY 15 and is expected to take approximately 18 months to complete. The majority of construction will occur along the Mill River which runs parallel to Locust Street and Mill Street.

The total project cost is estimated at \$20.1 million.



# Watershed Protection

## Watershed Overview

The Little River Watershed, encompassing over 31,000 acres (48.5 square miles), is the source of our drinking water. It includes portions of Becket, Blandford, Granville, Otis, Russell, Tolland, and Westfield, Mass. The Commission owns two large waterbodies in the Watershed: Borden Brook Reservoir and Cobble Mountain Reservoir. Borden Brook Reservoir, along with the many small ponds, wetlands, and streams, feeds Cobble Mountain Reservoir. From Cobble Mountain Reservoir, the water flows to the Intake Reservoir



Ripley Brook

and then to West Parish Filters Water Treatment Plant for treatment. The Watershed offers several immediate benefits as a primary water supply. The rural upland landscape offers a clean water supply that is removed and isolated from the effects of urban growth. Also, by protecting much of the land that abuts the reservoirs, the landscape provides additional protection for the water supply.

## Watershed Land

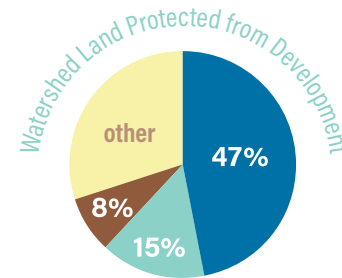
Forest management is important to maintaining a dynamic and growing forest that aids in water supply protection. The Chapter 61 Forest and Land Protection Incentive Program is offered to rural land owners as a means to protect land from development, and encourages sound management practices and forest stewardship. The program, which is renewable every 10 years, offers property tax incentives for owners to protect their land as either forest land, agricultural/horticultural land, or recreational land.

Many private land owners in the Little River Watershed participate in the Chapter 61 Program. Over 3,500 acres of privately held land in the Watershed is temporarily protected from development through Chapter 61. Going forward, the Commission's watershed protection efforts will concentrate on expanding the role of forest stewardship, and encouraging more private land owners to enroll in the Chapter 61 Program.

The Commission continues to partner with the Commonwealth of Massachusetts to protect land in the Little River Watershed. Over the years, the Commission has helped protect approximately 1,600 acres of land through conservation restrictions and restrictive covenants that limit land uses in order to protect the water supply. The recent acquisition of the Bliss property on Henry Brook in Blandford, Mass., will protect 190 acres from future development.

## Community Outreach

The Commission participated in two research studies with regional colleges in FY 15. The University of Massachusetts Water Resources Research Center conducted a wetlands monitoring and assessment study in the Watershed, which included a vegetation survey. The College of the Atlantic conducted a plant and geology study associated with ultramafic bedrock outcroppings. Both colleges will share their findings with the Commission once finalized.



White Tail Deer in the Watershed

- ◆ Commission Owned
- ◆ Government and Non-government Land Conservation Organizations
- ◆ Chapter 61 Protected (*temporary development restrictions*)

## Watershed Operations

Maintenance and repairs to grounds and roadways on Watershed land in FY 15 included:

- **Farnum Road in Granville** – Temporary bridge decking and drainage improvements were installed, drains were cleaned, and roadways were improved.
- **Gate 15 Road in Granville** – Emergency access to Cobble Mountain Reservoir was impeded by diseased hemlock trees that often broke and fell onto the road. This road ran very close to a watershed stream, increasing the risk to the water supply. In response, the diseased hemlock trees were removed and approximately 300 feet of the road was relocated 30 feet away from the stream to the site of the former hemlock stand.
- **Shepard and South Otis Roads in Blandford** – Drainage improvements were installed, drains were cleaned, erosion control measures were installed, and roadways were improved.



Farnum Road improvements

## Watershed Streams

The Commission continues to collect water quality samples from its ten major tributaries to watershed feeder streams that flow into the Borden Brook and Cobble Mountain Reservoirs. These samples are tested regularly in the Commission's laboratory. The results show that the Little River water supply is very clean and demonstrate that watershed protection is critical to maintaining a clean water supply.

# Water Treatment

## The Water Treatment Process

The Commission's primary water source is the Little River in western Massachusetts, with water storage at Borden Brook and Cobble Mountain reservoirs. Back-up supplies are available through the Littleville Reservoir and the Springfield (Ludlow) Reservoir. The water supply is filtered at the West Parish Filters Water Treatment Plant, either through the 40-mgd slow sand filters or the 60-mgd dual media rapid filtration plant.

At the plant, water is filtered and treated to protect public health. The filtration process removes particles and impurities from the water. Then pH is adjusted and corrosion inhibitors are added to protect home plumbing. Finally, chlorine is added for disinfection purposes and the water flows through the distribution system for delivery to our customers.

The Commission continues to add an alternative coagulant on a seasonal basis in half of the rapid sand

filters to assist in continued compliance with the Stage 2 Disinfection Byproducts (DBP) Rule. In May 2015, the Commission submitted its Aluminum Optimization Plan to the U.S. Environmental Protection Agency in accordance with our National Pollutant Discharge Elimination System (NPDES) permit. The plan summarizes the optimization activities that have been conducted by the Commission over the past several years, including improved watershed protection efforts, treatment modifications, and adjustments to storage and distribution operations. The plan is designed to determine the minimum aluminum-based coagulant dosage required to reduce dissolved organic matter for Stage 2 DBP compliance and ensure proper operation of the filters for turbidity removal.



Aerial view of West Parish Filters

The Commission has also completed inventory of its assets from the Cobble Mountain Reservoir through the West Parish Filtration Plant and to the Provin Mountain Storage Tanks and has initiated the comprehensive facilities plan at the treatment plant. The facilities plan considers current and future issues including regulatory compliance, process and energy optimization, reliability, and redundancy.

## Laboratory and Regulatory

The Commission's State Certified Drinking Water Laboratory conducted approximately 50,000 water quality tests in FY 15. Water quality tests are performed daily on water entering and leaving each treatment process at the plant and throughout the Commission's distribution system. In addition, the laboratory performs bacteria testing on new water mains, water main extensions and replacement water main projects. All state and federal regulatory requirements were met during FY 15, including the Total Coliform Rule, the Lead and Copper Rule, the Long Term 2 Surface Water Treatment Rule, the Stage 2 Disinfectants/Disinfection Byproduct Rule and the Consumer Confidence Reporting Rule. Lead and Copper Rule monitoring was successfully completed during 2015, with the next round of tap water sampling to occur in 2018. In April of 2015, the laboratory began a second round of sampling for the Long Term Enhanced Surface Water Rule 2, which will conclude in 2017.



The water's pH is tested daily using this pH meter.



Lab Technician performing a routine laboratory test.

# Water Quality and Consumption

## Water Quality Group

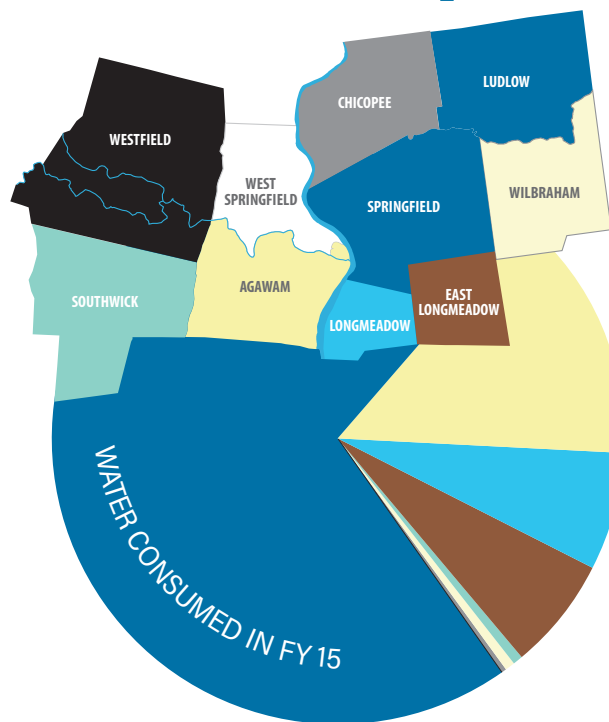
The Commission's Water Quality Group (WQG) is responsible for performing maintenance on valves, hydrants and water mains in the distribution system, and for the Commission's Unidirectional Flushing (UDF) Program. Maintenance of distribution system infrastructure is crucial so that Commission staff may effectively isolate areas to make repairs, to ensure that hydrants will reliably provide water for fire protection, and for the health and reliability of the system as a whole.

This year, the Water Quality Group completed a hydrant identification project which consisted of documenting the manufacturer and model of hydrants in the distribution system, and inputting this data into the Commission's Geographic Information System (GIS).

The Water Quality Group also continued its Unidirectional Flushing efforts, flushing approximately 104 miles of pipe and completing the second 5-year round of flushing in the City of Springfield. UDF is the process of cleaning a pipe by strategically flowing water through water mains in order to remove sediments from the pipe. This cleaning process increases water flow, improves water quality and reduces chlorine demand in the distribution system.

Water Quality Statistics		
Year	FY 15	Total*
Hydrants Inspected	3,924	28,312
Hydrants Rebuilt/Repaired	627	5,062
Hydrants Painted	1,071	9,828
Valves Exercised	3,194	32,875
Pipe Flushed (miles)	103.75	759

\*Since program began, 2006



**10,449,580,600** Total Gallons

Springfield/Ludlow	7,474,109,247
Agawam	1,529,228,832
Longmeadow	692,155,514
East Longmeadow	669,695,801
Southwick	57,351,992
Wilbraham	14,141,655
Chicopee	11,210,084
Westfield	1,687,475
West Springfield	0

## Cross Connection Control

A cross connection is formed at any point where a drinking water line connects to equipment, a system containing chemicals, or water of questionable quality, and backflow may occur into the drinking water line. Some examples of where cross connections may occur are at boilers, air conditioning systems, fire sprinkler systems, irrigation systems, laboratory equipment, plating tanks, or chemical vats. In residences, a common offender is the ordinary garden hose attached to a container with garden chemicals.

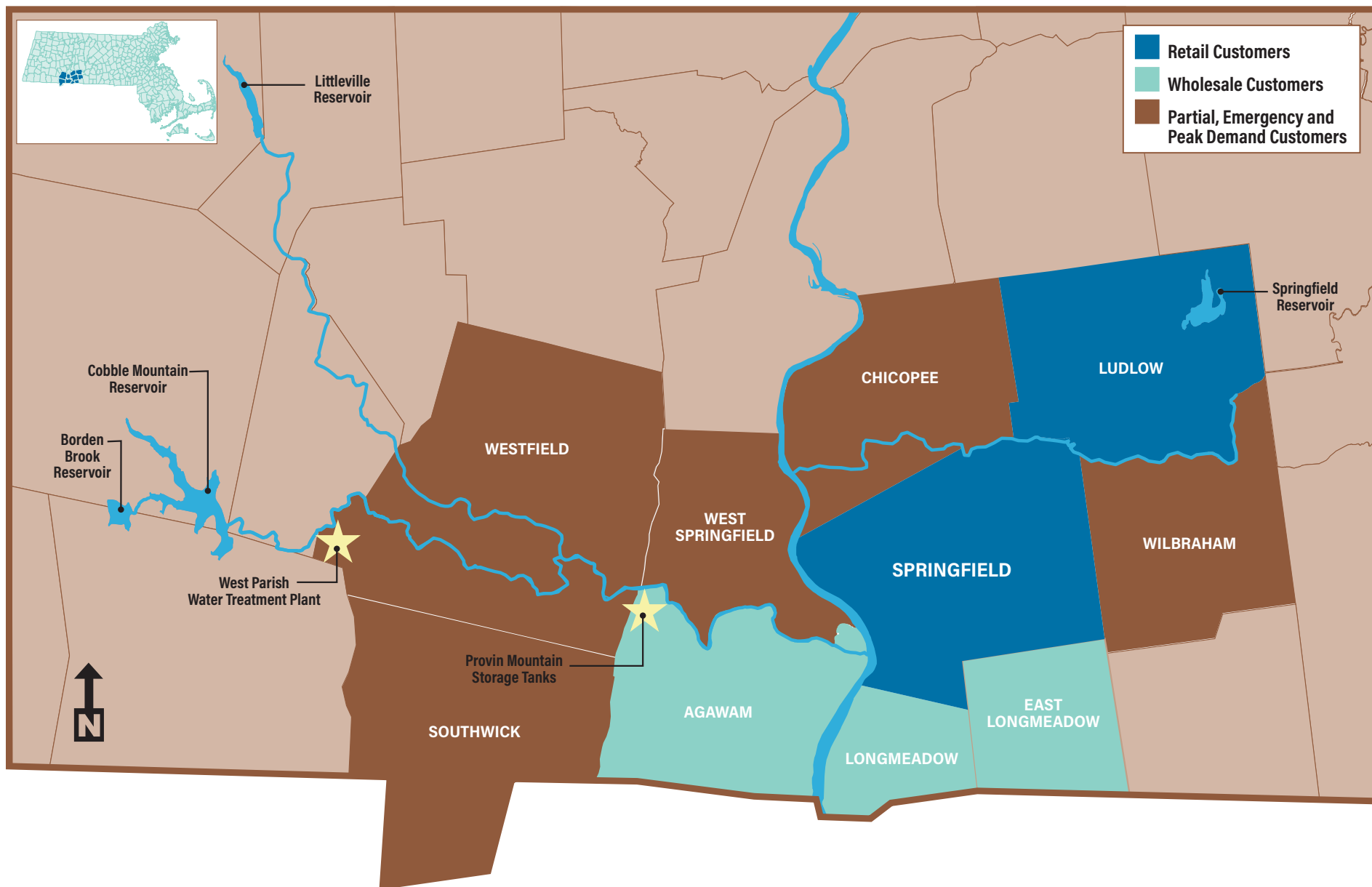
The Commission began a Cross Connection Control Program in 1998 in accordance with Department of Environmental Protection guidelines. The program requires industrial, institutional and commercial properties to have their internal plumbing surveyed for cross connection hazards as well as the installation of backflow devices where appropriate. The Cross Connection Control Program prevents unintended materials from entering the drinking water supply.

Cross Connection Devices	Added in 2015	Total in System
Double Check Assembly Devices	20	972
Reduced Pressure Devices	32	1,844

Key Statistics - FY 15	
Retail Water Accounts	42,687
Miles of Water Pipe	595
Fire Hydrants	6,217
Gallons of Water Supplied	10.4 billion
Water Treatment Plant	1



# Water Supply Map



# Water Distribution

The Water Distribution System is maintained by the Water Construction Group. This group is available 24 hours a day, 7 days a week, to respond to and repair water main and service pipe breaks. They also perform valve and hydrant repairs and replacements and control the Commission's Pavement Management Program.

The Meter and Field Services Group works closely with the Water Construction Group and is responsible for obtaining meter readings by collecting radio frequency data, performing meter change outs as part of the Commission's ongoing meter maintenance program, performing water consumption surveys for residential customers, and responding to customer inquiries regarding their water service.

The Field Customer Service Representatives (CSRs) support these and other groups located at the Joseph J. Superneau Operations Center. CSRs are responsible for customer telephone calls regarding their water service. The group answers questions, processes applications, creates work orders, and routes customers to the appropriate Commission department for service. This year, the Commission launched a comprehensive cross-training program for its Field Customer Service Group. This has facilitated a more consistent understanding of Commission policies and procedures which in turn has improved the overall customer experience. CSRs are able to resolve inquiries in a shorter time period, and the quantity of customer calls that have been transferred to supervisors has decreased.

Water Main Breaks in FY 15			
2014		2015	
Month	# of Breaks	Month	# of Breaks
July	4	January	12
August	2	February	15
September	4	March	11
October	1	April	2
November	7	May	3
December	2	June	1
TOTAL			64



The Water Construction Group works on a water main replacement on Worthington Street.

Meter and Field Service Statistics	
Residential Water Consumption Surveys Performed	391
Primary Meters Installed/Replaced	5,542
Secondary Meters Installed/Replaced	366

Water Distribution System Updates	
New Hydrants	17
Replacement Hydrants	97
New Valves Installed	151
Valves Replaced	45



# Water Distribution

(continued from previous page)

Springfield Water Main Pipe Installed in FY 15	Pipe Installed* (Length in Feet)
Avon Place	47
Bacon Road	10
Bay Street	13
Cedar Street	30
Clarendon Street	101
Commonwealth Avenue	15
Federal Street	27
Florida Street	45
Frank B Murray Street	1,441
Hancock Street	13
Jardine Street	30
Madison Avenue	25
Main Street	11

Springfield Water Main Pipe Installed in FY 15	Pipe Installed* (Length in Feet)
Mc Knight Street	542
Mill Street	54
Morgan Street	30
Pine Grove Street	10
Prospect Street	13
Queen Street	761
Ripley Place	224
Sherman Street	487
St. James Avenue	1,693
Sterns Terrace	61
Switzer Street	183
Westminster Street	885
Worthington Street	122

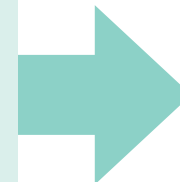


Crews fill in a trench after replacing a section of water main on Worthington Street.

**\*Water Main Pipe Legend:** All installs under 10' not included above = 138'

2014 Water and Sewer Service Mark Outs		
Month	Routine	Emergency
July	227	50
August	257	32
September	289	49
October	319	31
November	167	38
December	56	24
<b>Totals</b>	<b>1,315</b>	<b>224</b>

2015 Water and Sewer Service Mark Outs		
Month	Routine	Emergency
January	17	55
February	16	66
March	121	72
April	322	57
May	185	29
June	239	47
<b>Totals</b>	<b>900</b>	<b>326</b>



Combined Totals	
Routine	Emergency
2,215	550



# Wastewater Collection System

Approximately 37,200 sewer accounts are serviced in Springfield. The sewer collection system consists of 151 miles of combined sewer; 310 miles of separated sewer; 23 combined sewer overflow outfalls; 11,000 manholes; and 33 pumping stations. Wastewater is conveyed to the Springfield Regional Wastewater Treatment Facility (SRWTF) located along Route 5 in Agawam. The SRWTF has a design capacity to treat 67 mgd of sewage.

The Commission is responsible for the operations, maintenance, and regulatory compliance of the collection system. The Commission supports its contract operator, SUEZ Water Environmental Services, Inc., (formerly United Water), which maintains and operates sewage and flood control pumping stations and appurtenances, intercepting sewers, and combined sewer overflow regulating structures.

## Operations and Maintenance

The Commission provides reliable sanitary sewer service to its customers through a combination of maintenance initiatives.

The Wastewater Collection System Asset Management and Maintenance Program consists of cleaning, mapping, and assessing the condition of sewer pipes and assets within the system. This is achieved by effectively utilizing Commission staff and equipment in conjunction with Geographic Information System (GIS) and Asset Management capabilities, and contracted services. Information collected is used to create a prioritized list of sewer rehabilitation and replacement projects.

Commission staff are available 24 hours a day, 7 days a week to respond to sewer emergencies. In addition to emergency response, dedicated staff perform maintenance activities as well as upgrades and repairs to the sewer system and sewer services.

## Regulatory Compliance

Pursuant to EPA mandates, the Commission continued to advance its Capacity, Management, Operation, and Maintenance (CMOM) Program for the collection system. Utilizing advances in the GIS and the Asset Management systems, the cleaning and maintenance programs were improved upon. Reportable sanitary sewer overflows decreased from 122 in FY 08 to 35 in FY 15, a 71% decrease since the program's inception. The reduction is attributed to the Wastewater Collection System Asset Management and Maintenance Program. Commission staff utilized the improved GIS and Asset Management programs to better track and trend problem areas which has resulted in a more effective maintenance operation. Additionally, the Commission's comprehensive Integrated Wastewater Plan received final approval from

state and federal agencies. The plan balances regulatory requirements with infrastructure investment.

## Fats, Oils and Grease (FOG) - Cease the Grease Springfield

FOG is a leading cause of sewer backups into homes and businesses. Sewer backups occur when FOG is improperly disposed of down a sink, drain or toilet.

FOG coats the inside of sewer pipes and builds up over time, eventually causing a blockage and sewer backup.

The Commission is in the fifth year of its informational outreach initiative to educate home owners, tenants, food service establishments, restaurants and the community about the proper disposal of FOG and the hazards of sewer backups. The goal of "Cease the Grease Springfield" is to reduce the amount of sewer backups caused by FOG clogs.

Since the start of the program, the Commission has made over 470 site visits to food service establishments, 60 site visits to Springfield public schools, and over 40 public presentations to neighborhood councils, non-profit groups, and local colleges. Additionally, the Commission delivered approximately 150 FOG information kits to

homes in the vicinity of updated sewer mains. In the future, the program will continue to expand its educational outreach efforts.

### Easy steps to help reduce sewer backups.

- Never pour grease down sinks, drains or toilets.
- Dispose of FOG into a container with a lid. Once the container is full, discard in the trash.
- Use sink strainers to catch food scraps, and empty scraps into the trash as needed.
- Scrape food scraps from dishes, pots and pans into the trash before washing.
- Don't flush wipes.



2015 Collection System Statistics	
Sewer Mains Jetted by the Commission	581,729 ft.
Sewer Mains Jetted by Contractors	161,002 ft.
Service Connections Rodded	284
Sewer Backup Complaints Responded To	759
Sanitary System Repairs	17
House Connection Repairs	129
Standing Mains Cleared	50
Manholes Washed and Cleaned	1,215
Cave-ins Repaired	171
Siphons Checked	266
Siphons Cleared	0

# Integrated Wastewater Plan and Combined Sewer Overflows

## Integrated Wastewater Plan

In 2015, the Commission's Integrated Wastewater Plan (IWP) received final approval from the EPA and the Massachusetts Department of Environmental Protection (DEP). Development of the comprehensive plan was mandated by the EPA in order to define an overall strategy for the continued operation and maintenance of the wastewater system while planning for compliance with federal Clean Water Act requirements. The IWP balances regulatory requirements with responsible and sustainable investment in the Commission's wastewater infrastructure. Major aspects of the plan account for the combined sewer overflows (CSOs), wastewater treatment, and the wastewater collection system. Critical components of the plan include a detailed CSO alternatives analysis, a long-term Capital Improvement Plan for wastewater and water functions, and a financial capability assessment and affordability analysis that provides guidelines for implementation scheduling. The Commission's IWP was the first of its type to be submitted under the EPA's

integrated planning framework. Work performed in 2015 to support this effort included the ongoing Main Interceptor Rehabilitation and Combined Sewer Outfall Improvement Project, the initiation of a basis of design for the Connecticut River Crossing and York Street Pump Station Project, and the ongoing Collection System Asset Management and Maintenance Program.

## Combined Sewer Overflows

Like many older sewer systems, some of Springfield's wastewater collection system is composed of combined sewers. Combined sewers collect and transport sanitary sewage and stormwater together in one pipe. During heavy rains, the combined sewers can fill up beyond capacity. Discharge points are built into the system so that excess flow empties into bodies of water rather than backing up into basements and spilling onto roadways. These discharge points are known as combined sewer overflows (CSOs). In 1994, the EPA mandated that the overflow resulting from CSOs be reduced, and has since intensely regulated communities with CSOs.

Since 1998, the Commission has worked with the EPA toward reduction, and where feasible, removal of CSOs. To date, the Commission has invested more than \$100 million in its CSO program to satisfy unfunded federally mandated projects required through multiple EPA Administrative Orders.

By incorporating the CSO Program into the comprehensive Integrated Wastewater Plan, the

Excavation for flow control structure at intersection of Mill Street, Locust Street, Fort Pleasant Avenue, and Belmont Avenue.



Site preparation for CSO 013 outfall improvements.

Commission will be able to better balance wastewater infrastructure needs with the dynamic nature of regulatory change.

The IWP has a forty (40) year implementation schedule that provides for a more sustainable and financially feasible implementation.

## Projects

The Commission initiated construction of its Main Interceptor Rehabilitation and Combined Sewer Outfall Improvements Project in FY 15. The Main Intercepting Sewer (MIS) is one of the most critical pipes in the wastewater collection system, carrying flows for more than 60% of the City of Springfield. Inspection of the MIS indicated that the pipe required immediate rehabilitation in order to continue to provide service. The project consists of rehabilitating 3,200 feet of 60- and 66-inch diameter sewer pipe and associated manholes, and work to rehabilitate and repair three Combined Sewer Outfall structures. Construction began at the end of FY 15 and is expected to take approximately 18 months to complete. The total project cost is estimated at approximately \$20.1 million.

In FY 15, the Commission initiated the design of a new river crossing and pump station to convey wastewater to the Springfield Regional Wastewater Treatment Facility. The project will result in system improvements and additional CSO control. Construction is expected to begin in 2018.

# Wastewater Treatment

The Springfield Regional Wastewater Treatment Facility (SRWTF) accepts wastewater from the households, businesses, and industries within Springfield and surrounding member communities, including Agawam, East Longmeadow, Longmeadow, Ludlow, Wilbraham, West Springfield and part of Chicopee; provides primary and secondary treatment; and discharges the treated water to the Connecticut River. The SRWTF is one of the largest wastewater treatment facilities in New England and is designed to provide secondary treatment for up to 67 mgd of wastewater per day. In 2015 an average of 35 mgd of wastewater was treated and discharged to the Connecticut River.

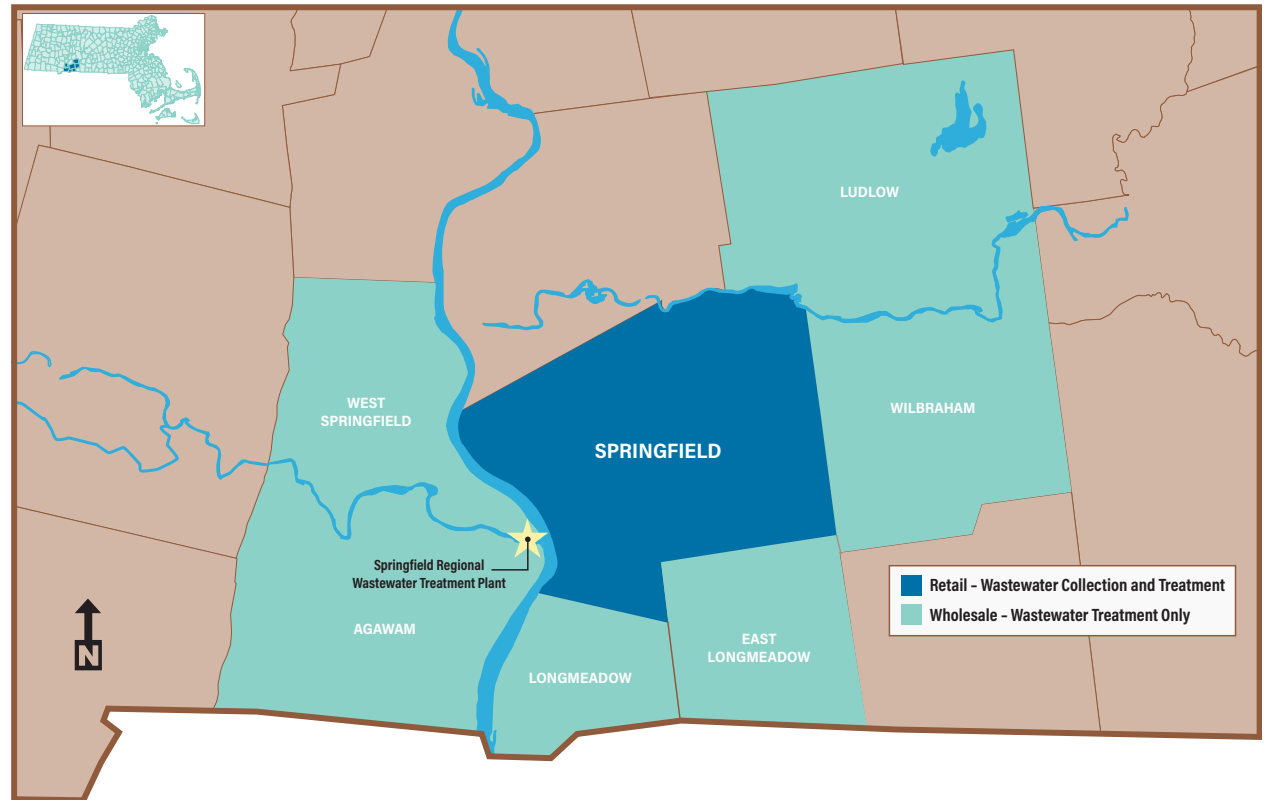


Springfield  
Regional  
Wastewater  
Treatment  
Facility

## SUEZ

During 2015, SRWTF complied with all requirements of applicable regulatory permits when treating wastewater.

SUEZ Water Environmental Services, Inc., (formerly United Water) completed the 15th year of a 20-year service agreement to operate the SRWTF and associated sewage and flood control pumping stations. Capital improvements completed during the year included the replacement of worn slide gates in the last of four secondary flocculation basins in order to improve process control, paving and drainage improvements in the plant courtyard, and initiation of the design of prioritized electrical projects.



Additionally, installation of an emergency generator for the Commission's administration building on Bondi's Island and replacement of underground fuel storage tanks with upgraded double walled and monitored tanks at Phelps Flood Control Station were completed.

## Industrial Pretreatment Program

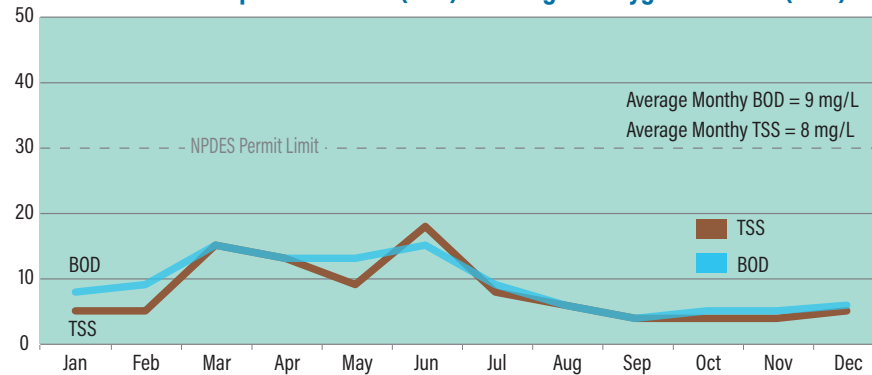
The Industrial Pretreatment Program (IPP) establishes and enforces limits of industrial discharges to protect the collection system and treatment plant from harmful pollutants. The IPP conducts routine audits and inspections at industries to monitor compliance with the pretreatment standard.

Industrial Pretreatment Program Statistics for Calendar Year 2015	
Significant Industrial Users	52
Industrial Wastewater Discharge Permits	56
Inspections Completed	266
Wastewater Samples Collected	208
Registered Sewer Users - Wet	209
Registered Sewer Users - Dry	366
Violations Issued	6

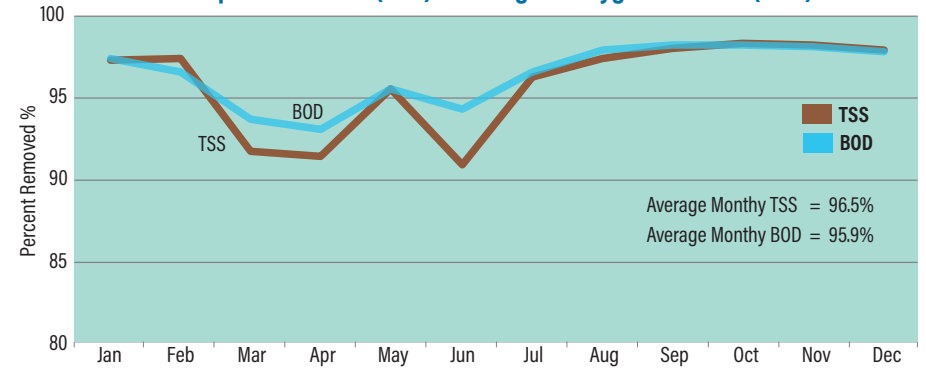


# Wastewater Treatment Data

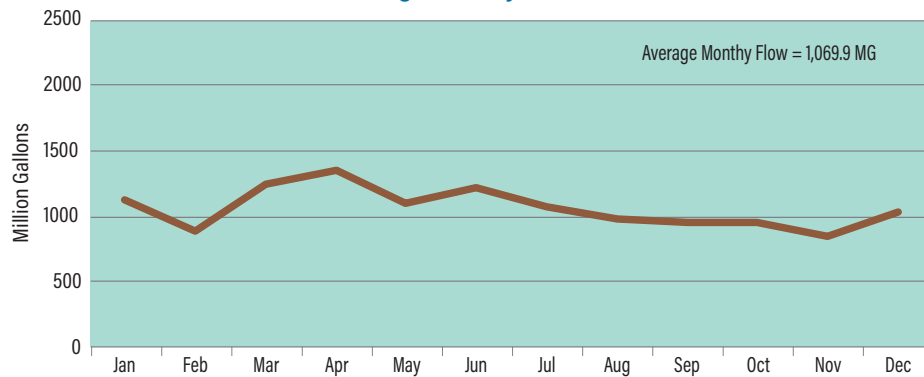
2015 Total Suspended Solids (TSS) & Biological Oxygen Demand (BOD)



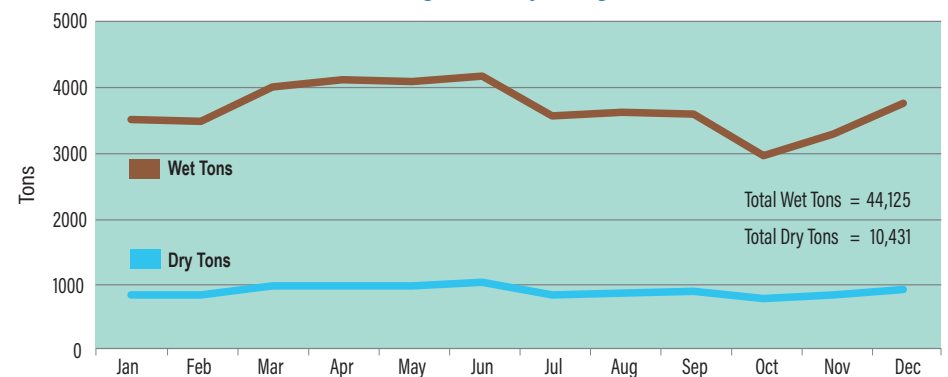
2015 Total Suspended Solids (TSS) & Biological Oxygen Demand (BOD) Removal



2015 Average Monthly Wastewater Treated



2015 Average Monthly Sludge Produced



# Audited Financial Statement

Fiscal Year 2015 – Audited Financial Statement  
by Melanson Heath

## Independent Auditor's Report

To the Commissioners, Springfield Water and Sewer Commission,  
Springfield, Massachusetts

### Report on the Financial Statements

We have audited the accompanying statement of net position of the Springfield Water and Sewer Commission, as of June 30, 2015, and the related statements of revenues, expenses and changes in net position and cash flows for the year then ended and the related notes to the financial statements, which collectively comprise Springfield Water and Sewer Commission's basic financial statements as listed in the table of contents.

### Management's Responsibility for the Financial Statements

The Springfield Water and Sewer Commission's management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America. This includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

---

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the Springfield Water and Sewer Commission, as of June 30, 2015, and the respective changes in financial position and cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### Other Matters

#### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis and Schedules of Funding Progress, the Schedule of Proportionate Share of Net Pension Liability, and the Schedule of Contributions be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with evidence sufficient to express an opinion or provide any assurance.

### Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Springfield Water and Sewer Commission's basic financial statements. The supplementary information appearing on page 38 is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates

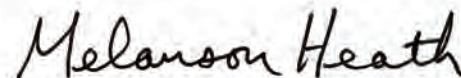
directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the financial statements as a whole.

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Springfield Water and Sewer Commission's basic financial statements. The introductory and statistical section are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on it.

### Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated November 6, 2015 on our consideration of the Commission's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering Commission's internal control over financial reporting and compliance.

November 6, 2015





## Management Discussion and Analysis

As the management for the Springfield Water and Sewer Commission, we offer readers this narrative overview and analysis of the financial activities of the Commission for the Fiscal Year ended June 30, 2015.

### A. Overview of the Financial Statements

The basic financial statements include:

- The Statement of Net Position
- The Statement of Revenues, Expenses and Changes in Fund Net Position
- The Statement of Cash Flows
- Notes to the Financial Statements

The Statement of Net Position is designed to indicate our financial position as of a specific point in time. At June 30, 2015, it shows our net worth of \$120,176,372, which is comprised of \$118,678,008 invested in capital assets, \$36,368,236 restricted for other purposes, namely restricted cash and inventory, and \$(34,869,872) unrestricted.

The Statement of Revenues, Expenses and Changes in Fund Net Position summarizes our operating results. As discussed in more detail below, our change in fund net position for the year ended June 30, 2015 was a change of \$6,842,142.

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

### Requests for Information

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



**Public Communications Manager**  
**Springfield Water and Sewer Commission**  
 P.O. Box 995  
 Springfield, MA 01101-0995

B. Summary of Net Position		
Year	2015	2014
Current Assets	\$ 111,035,248	\$ 76,587,523
Noncurrent Assets	3,057,577	3,168,102
Capital Assets	<u>271,839,662</u>	<u>250,215,656</u>
Total Assets	385,932,487	329,971,281
Deferred Outflows	<u>69,219,783</u>	<u>3,485,237</u>
<b>Total Assets and Deferred Outflows</b>	455,152,270	333,456,518
Current Liabilities	16,550,112	13,494,070
Noncurrent Liabilities	<u>237,674,191</u>	<u>131,432,022</u>
Total Liabilities	254,224,303	144,926,092
Deferred Inflows	<u>80,751,595</u>	<u>75,196,196</u>
<b>Total Liabilities and Deferred Inflows</b>	334,975,898	220,122,288
Net Investment in Capital Assets	118,678,008	124,060,618
Restricted – other purposes	36,368,236	31,651,795
Unrestricted	<u>(34,869,872)</u>	<u>(42,378,183)</u>
<b>Total Net Position</b>	<u>\$ 120,176,372</u>	<u>\$ 113,334,230</u>
Operating Revenues	\$ 67,421,360	\$ 64,332,287
Operating Expenses	<u>(54,893,356)</u>	<u>(51,890,194)</u>
<b>Operating Income</b>	12,528,004	12,442,093
Nonoperating Revenues (Expenses)	(2,998,803)	(3,656,584)
Special Items	<u>(2,687,059)</u>	<u>(13,185,039)</u>
<b>Increase (Decrease) in Net Position</b>	6,842,142	(4,399,530)
Beginning Net Position	<u>113,334,230</u>	<u>117,733,760</u>
Ending Net Position	<u>\$ 120,176,372</u>	<u>\$ 113,334,230</u>

## C. Financial Highlights

The Commission ended the year with operating income of approximately \$12.6 million. The following gives an overview of the year's activities.

It has been the practice of the Commission to establish its rates and charges for water and wastewater services at levels sufficient to produce revenues adequate to defray all operation and maintenance expenses, debt service and reserve deposits projected by the Commission's Consulting Engineers and to maintain net revenues available for debt service in excess of the coverage requirements mandated by the General Bond Resolution. Until FY 10, the Commission had historically adjusted its rates and charges for water and wastewater services on a basis which stabilized rates and charges over a multiyear period. Beginning in FY 11, the Commission has adopted single year rate schedules to more closely match revenues to expenditures.

In FY 15, there was again an increase in collection efforts and an increase in rates, however overall usage was less than anticipated. As a result, wastewater charges revenue and fees were approximately (\$240,000) less than budget. Wholesale water charges and fees were also less than budget by approximately (\$1.6 million). Power generation revenues were greater than estimates by approximately \$50,000. These and other factors resulted in total operating revenue of approximately \$67.4 million in FY 15, approximately (\$1.7 million) less than budget, and \$3 million more than the prior year.

Operating expenses were less than budget by approximately \$3.2 million, primarily as a result of vacant positions and less overtime needed than anticipated. In addition, there was conservative budgeting for general operational expenses and anticipated debt service interest payments that did not materialize.

In FY 15, we continued receiving loan proceeds through the Massachusetts Clean Water Trust (the Trust), which was partially subsidized by Federal funds. In accordance with Trust guidelines, the grant revenue was recognized with the first proceeds and is reflected as nonoperating revenue of \$1.5 million on the statement of revenues, expenses and changes in fund net position. Additional grant revenue will be recognized in FY 2016 as these projects continue.

In FY 11, we implemented FASC 980, *Accounting for the Effects of Certain Types of Regulation*, which essentially adjusts for differences between how revenue / rates are budgeted and how they are accounted for on a Generally Accepted Accounting Principles (GAAP) basis. In the Commission's case, revenue intended to fund capital asset acquisitions is set aside, (deferred) and is recognized equal to the annual depreciation expense on those assets;

depreciation expense on assets funded in other ways (such as through bonds) is removed from the income statement because those costs are not factored into the budget process; conversely, because principal debt repayment costs are funded through the budget, those costs are reflected in the income statement as a reduction to net position. The net effect of these adjustments are reported under the line "Excess revenues to fund deferrals" on the statement of revenues, expenses and changes in fund net position, which was a decrease of (\$2,687,059) for FY 15.

As a result of the key elements described above the activities for the year resulted in a change in net position of \$6,842,142.

## D. Capital Asset and Debt Administration

### Capital assets

Total investment in capital assets at year end amounted to \$271,839,662 (net of accumulated depreciation), an increase of approximately \$21.6 million from the prior year. This investment in capital assets includes land, buildings and improvements, machinery and equipment, and infrastructure.

### Major capital asset events during the current fiscal year included the following:

- Depreciation expense of (\$7.9 million).
- \$2.2 million in Washburn Street CSO separation costs.
- \$11.7 million in South Transmission Main project.
- \$2 million in Main Interceptor design project.
- \$150,000 in hydrant projects.
- \$974,000 in meter replacements.
- \$723,000 in SCADA system projects.
- \$3.3 million in sewer main rehabilitation projects.
- Water main project of \$1.9 million.
- \$338,000 in transmission system rehabilitations.
- \$3.1 million in collection system assessment and rehabilitation.
- New vehicles and equipment purchased of \$1.5 million.
- Computer software and equipment purchases of \$570,000.
- Various general building improvements of \$146,000.
- Land acquisition of \$230,000.
- Various other projects of \$693,000.

Find additional information on the Commission's capital assets at Footnote 10 on page 29.

(Financial Highlights continue on the next page)

## Financial Highlights

(continued from the previous page)

### Change in credit rating

During the fiscal year, Standard & Poors upgraded the Commission's credit rating from A+ to AA-.

### Long-term debt

At the end of the current fiscal year, total bonded debt outstanding was \$179,270,356, all of which was backed by dedicated revenues of the Commission.

Find additional information on the Commission's long-term debt at Footnote 12 on page 30.

## Statement of Net Position

Springfield Water and Sewer Commission

June 30, 2015

Assets: Current		
	Cash	\$47,738,680
	Restricted cash	38,195,968
	Accounts receivable, net of allowance for uncollectibles	8,168,609
	Intergovernmental receivable	16,215,748
	Inventory, net of allowance	716,243
	<b>Total current assets</b>	<b>111,035,248</b>
Assets: Noncurrent		
	Intergovernmental receivable, net of current portion	1,540,214
	Inventory held by others	1,022,136
	Health insurance deposit	495,227
	Capital assets, net of accumulated depreciation	211,681,734
	Land and construction in progress	60,157,928
	<b>Total noncurrent assets</b>	<b>274,897,239</b>
	<b>Deferred Outflows of Resources</b>	<b>69,219,783</b>
	<b>Total Assets and Deferred Outflows of Resources</b>	<b>455,152,270</b>
Liabilities: Current		
	Accounts Payable	4,823,534
	Accrued payroll and withholdings	256,734
	Accrued interest payable	1,794,509
	Current portion of loans payable	9,247,493
	Current portion of capital lease payable	277,714
	Current portion of accrued compensated absences	150,128
	<b>Total current liabilities</b>	<b>16,550,112</b>

(continues at right)

Liabilities: Noncurrent		
	Loans payable, net of current portion	170,022,863
	Capital lease payable, net of current portion	158,328
	Accrued compensated absences, net of current portion	1,189,385
	Net OPEB obligation	2,599,563
	Net pension liability	63,437,281
	Other accrued liabilities	266,771
	<b>Total noncurrent liabilities</b>	<b>237,674,191</b>
	<b>Deferred Inflows of Resources</b>	<b>80,751,595</b>
	<b>Total Liabilities and Deferred Inflows of Resources</b>	<b>334,975,898</b>
Net Position		
	Net investment in capital assets	118,678,008
	Restricted:	
	Reserve for inventory	1,739,379
	Reserve for debt covenants and scholarships	34,628,857
	Unrestricted	(34,869,872)
	<b>Total Net Position</b>	<b>\$ 120,176,372</b>

The accompanying notes are an integral part of these financial statements.



## Statement of Revenues, Expenses and Changes in Fund Net Position

Springfield Water and Sewer Commission  
for the year ended June 30, 2015

Operating Revenues	
Water and sewer usage	\$ 67,168,792
Other	252,568
<b>Total Operating Revenues</b>	<b>67,421,360</b>
Operating Expenses	
Salaries and wages	12,845,594
Employee benefits	9,877,386
Operations	22,166,166
Intergovernmental	540,163
Capital outlay	991,480
Depreciation and amortization	7,951,427
Other	521,140
<b>Total Operating Expenses</b>	<b>54,893,356</b>
<b>Operating Income</b>	<b>12,528,004</b>
Nonoperating Revenues (Expenses)	
Interest income	15,027
Interest expense	(4,738,350)
Grant reimbursement revenue	1,643,475
Other	81,045
<b>Total Nonoperating Revenues (expenses), net</b>	<b>(2,998,803)</b>
<b>Excess revenues before deferral adjustments</b>	<b>9,529,201</b>
Excess revenues used to fund deferrals	(2,687,059)
<b>Change in Net Position</b>	<b>6,842,142</b>
Net Position at Beginning of Year	113,334,230
<b>Net Position at End of Year</b>	<b>\$ 120,176,372</b>

The accompanying notes are an integral part of these financial statements.

## Statement of Cash Flows

Springfield Water and Sewer Commission  
for the year ended June 30, 2015

Cash Flows From Operating Activities	
Receipts from customers and users	\$ 66,624,900
Payments to vendors	(32,680,761)
Payments to employees	(10,302,354)
<b>Net Cash Provided By Operating Activities</b>	<b>23,641,785</b>
Cash Flows from Noncapital Financing Activities	
Intergovernmental reimbursements	283,749
Cash Flows from Capital and Related Financing Activities	
Acquisition and construction of capital assets	(29,394,629)
Proceeds from intergovernmental loans and grants	14,414,715
Proceeds from bonds and loans	45,083,683
Principal payments on bonds and loans	(6,834,756)
Refunding of bonds	(17,102,960)
Issuance of capital leases	786,925
Principal payments on capital leases	(350,883)
Payments of interest	(5,266,411)
<b>Net Cash Provided by Capital and Related Financing Activities</b>	<b>1,335,684</b>
Cash Flows from Investing Activities	
Receipt of investment income	15,027
<b>Net Change in Cash and Short-term Investments</b>	<b>25,276,245</b>
Cash and Short-term Investments, Beginning of year	60,658,403
Cash and Short-term Investments, End of Year	\$ 85,934,648
Reconciliation of Operating Income to Net Cash Provided by (used for) Operating Activities	
Operating income	\$ 12,528,004
Adjustments to reconcile operating income to net cash provided by (used for) operating activities:	
Depreciation and amortization	7,951,427
Changes in assets and liabilities:	
Accounts receivable	(715,415)
Inventory	244,465
Deferred outflows	(101,347)
Accounts payable and accrued payroll	866,311
Accrued compensated absences	(42,371)
Net OPEB obligation	1,338,500
Net pension liability	1,456,743
Other accrued liabilities	115,468
<b>Net Cash Provided By Operating Activities</b>	<b>\$ 23,641,785</b>

The accompanying notes are an integral part of these financial statements.

# Notes to Financial Statements

## 1. Summary of Significant Accounting Policies

The accounting policies of the Springfield Water and Sewer Commission (SWSC, the Commission) conform to generally accepted accounting principles (GAAP) as applicable to governmental units. *The following is a summary of the more significant policies:*

### A. Business Entity

The Commission has the responsibility to provide water and wastewater services on a fair and equitable basis to the City of Springfield (the City) and to provide wholesale water and regional wastewater services to other participating communities.

### B. Regulation and Basis of Accounting

The Commission was created in July 1996 under Massachusetts General Laws Chapter 40N; however, the Commission did not become a separate accounting entity until July 1997. Under Massachusetts General Laws Chapter 40N, the Board of Commissioners, appointed by the Mayor of the City of Springfield, establishes policies for accounting and other matters. The Board regulates the rates that the Commission can charge its customers for water and sewer usage. The rates charged to customers are based on the cash required for the Commission's operations, debt service and reserve contributions.

To comply with the external financial reporting requirements of the Board, the accompanying financial statements are presented on a basis that is consistent with generally accepted accounting principles (GAAP) for proprietary (enterprise) funds.

To accommodate the rate making process, the Commission follows the accounting standards set forth in Governmental Accounting Standards Board Statement No. 62 ("GASB 62"), *Codification of Accounting and Financial Reporting Guidance Contained in PreNovember 30, 1989 FASB and AICPA Pronouncements*. GASB 62 allows certain board approved (a) revenues provided for future allowable costs to be deferred until the costs are actually incurred (deferred inflows) and (b) costs incurred to be capitalized if future recovery is reasonably assured (deferred outflows).

Proprietary funds distinguish operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating revenues of the enterprise fund are charges to customers for sales and services. Operating expenses for enterprise funds include the cost of sales and services, administrative expenses and depreciation on capital assets.

All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

### C. Cash and Short-term Investments

For purposes of the statement of cash flows, the Commission considers investments with original maturities of three months or less to be cash equivalents. These are reflected in the following accounts reported on the statement of net position: cash and restricted cash.

### D. Inventory for Consumption

Gasoline and diesel fuel purchased and unused at year end is stated at cost, and materials inventory is stated on the first in/first out basis.

### E. Inventory Held by Others

Under the terms of a privatization agreement with United Water Environmental Services, Inc., the Commission transferred custody of certain inventory to United Water. The value stated was a negotiated value, which will be replaced by United Water at the expiration of the privatization contract in October 2020.

### F. Capital Assets

Capital assets, which include property, plant, equipment, and infrastructure assets are defined by the Commission as assets with an initial individual cost of more than \$5,000 (for land, vehicles and equipment), \$10,000 (for buildings and improvements) and \$20,000 (for infrastructure) and an estimated useful life in excess of two years. Such assets are recorded at historical cost or estimated historical cost if purchased or constructed. Donated capital assets are recorded at estimated fair market value at the date of donation.

The costs of normal maintenance and repairs that do not add to the value of the asset or materially extend assets lives are not capitalized.

Major outlays for capital assets and improvements are capitalized as projects are constructed. Interest incurred during the construction phase of capital assets would be included as part of the capitalized value of the assets constructed.

Capital assets are depreciated using the straightline method over the following estimated useful lives:

Assets	Years
Building Improvements	20 - 50
Water / Sewer Infrastructure	50 - 100
Vehicles	5 - 15
Office and Computer Equipment	5 - 10

## G. Compensated Absences

It is the Commission's policy to permit employees to accumulate earned but unused vacation and sick pay benefits. All vested sick and vacation pay is accrued when incurred. Sick pay benefits are payable upon death or retirement, with certain limits, for all employees employed over six months.

## H. Net Position

Net position represents the difference between assets/ deferred outflows and liabilities/ deferred inflows. Net investment in capital assets, consists of capital assets, net of accumulated depreciation, reduced by the outstanding balances of any borrowing used for the acquisition, construction or improvement of those assets. Net position is reported as restricted when there are limitations imposed on their use either through the enabling legislation adopted by the Commission or through external restrictions imposed by creditors, grantors, or laws or regulations of other governments. The remaining net position is reported as unrestricted.

## I. Use of Estimates

The preparation of basic financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures for contingent assets and liabilities at the date of the basic financial statements, and the reported amounts of the revenues and expenditures/expenses during the fiscal year. Actual results could vary from estimates that were used.

# 2. Stewardship, Compliance and Accountability

## Budgetary Information

At the June meeting of the Commission, the Commissioners review and approve an operating and capital budget for the proposed expenditures of the fiscal year commencing the following July 1. The original budget may be amended during the fiscal year at Commission meetings as required by changing conditions.

At year end, appropriation balances lapse, except for certain unexpended capital items which will be honored during the subsequent year.

A budget and actual comparison of operating expenditures is presented as a supplementary schedule.

## 3. Cash and Short-term Investments

Custodial credit risk, as defined under GASB Statement No. 40, is the risk that in the event of a bank failure, the Commission's deposits may not be returned to it. As of June 30, 2015, \$456,671 of the Commission's bank balance of \$87,540,483 was exposed to custodial credit risk as uninsured, uncollateralized, and/or collateral held by the pledging bank's trust department not in the Commission's name.

Massachusetts General Law Chapter 44, Section 55 limits deposits "in a bank or trust company or banking company to an amount not exceeding sixty per cent of the capital and surplus of such bank or trust company or banking company, unless satisfactory security is given to it by such bank or trust company or banking company for such excess." The Commission's deposits are within this limitation.

## 4. Restricted Cash

The Commission issues debt under a General Bond Resolution which requires cash reserves to be maintained. These reserves are reported as restricted cash.

The reserves include an Operating Reserve Fund (equal to 1/6 of the Commission's annual operating budget), a Renewal/Replacement Fund (\$1 million), a Debt Service Fund (equal to principal and interest, payable on an accrual basis at June 30), and a Debt Service Reserve Fund (equal to the highest principal and interest due in any subsequent year). In addition, the Bond Resolution establishes several other reserves which may be activated in future years.

The restricted cash balance reported in the financial statements is comprised of the following at June 30, 2015:

Reserve Funds	
Operating Reserve Fund	\$ 7,619,584
Renewal / Replacement Fund	1,000,000
Debt Service Fund	12,963,845
Debt Service Reserve Fund	12,963,845
Other Funds	
Project Accounts	3,567,111
Scholarship Trust Fund	81,583
<b>Total</b>	<b>\$ 38,195,968</b>



## 5. Accounts Receivable

Accounts receivable consist of the following at June 30, 2015:

Customer Accounts	
Billed water, sewer and wastewater regional	\$ 4,374,664
Less: allowances	<u>(610,773)</u>
<b>Total billed</b>	3,763,891
Unbilled water (including power generation) and sewer	5,008,796
Adjustment to wastewater regional and sewer pump station for actual usage through June 30, 2015	<u>(604,078)</u>
<b>Total Customer Accounts</b>	<u>\$ 8,168,609</u>

## 6. Intergovernmental Receivables

The balance in this account represents the following:

	Current	Non Current
Massachusetts Clean Water Trust loan funds not yet requested (or expended on project costs) as of June 30, 2015. These funds are expected to be drawn down as project costs are incurred in FY 16.	\$ 16,105,223	–
Amount due from Town of Wilbraham under an agreement signed in June 2007 whereby the Town agrees to reimburse the Commission a portion of the costs/debt incurred to enable the Town to enter the sewage disposal system. Future amounts to be paid by the Town are anticipated to coincide with certain debt issued by the Commission, which mature in fiscal years 2026 through 2038.	<u>110,525</u>	<u>1,540,214</u>
<b>Total Balance June 30, 2015</b>	<u>\$ 16,215,748</u>	<u>\$ 1,540,214</u>

## 7. Inventory for Consumption

This inventory balance at June 30, 2015 consists of the following:

Consumables	
Fuel inventory (gasoline and diesel)	\$ 54,362
Materials inventory (parts and supplies)	831,598
Less adjustment for obsolete and slow moving materials inventory	<u>(169,717)</u>
<b>Total</b>	<u>\$ 716,243</u>

## 8. Deferred Outflows and Inflows

To accommodate the rate-making process, the Commission follows the accounting standards set forth in Financial Accounting Standards Codification Section 980 (FASC 980), *Accounting for the Effects of Certain Types of Regulation*. FASC 980 allows certain board approved (a) revenues provided for future allowable costs to be deferred until the costs are actually incurred (deferred credits) and (b) costs incurred to be capitalized if future recovery is reasonably assured (deferred charges).

### Deferred Outflows

Deferred outflows of resources represent the consumption of net position by the Commission that is applicable to future reporting periods. Deferred outflows of resources have a positive effect on net position, similar to assets.

Deferred charges consist of costs incurred to privatize and upgrade the wastewater regional plant facility, accrued sick, vacation and other compensated absences, accrued workers compensation costs, net

The following is a summary of deferred outflow of resources balances as of June 30, 2015:

Unamortized refunding of debt	\$ 951,580
Net difference between projected and actual pension plan investment earnings	101,347
Deferred charges	68,166,856
<b>Total Deferred Outflows</b>	<u>\$69,219,783</u>

OPEB obligation, and net pension liability. The privatization costs will be funded through adjustments to regional wastewater member town assessments over the life of the privatization contract, which ends in FY 2021. Other costs will be recovered through future rates or matched against credits related to the specific costs in the future.

### Deferred Inflows

Deferred inflows of resources are the acquisition of net position by the Springfield Water and Sewer Commission that are applicable to future reporting periods. Deferred inflows of resources have a negative effect on net position, similar to liabilities.

Deferred inflows consists of the balance of deferred credits.

Amounts raised through rates specifically earmarked for capital improvements and debt repayment are recorded as deferred credits and will be reversed through the statement of revenues, expenses and changes in fund net position over the depreciable life of the asset and related debt repayment.

The application of FASC 980 results in certain revenues and expenses being removed from the statement of revenues, expenses and changes in fund net position and reflected in the statement of net position as deferred outflows or deferred inflows. The revenues and expenses that have been removed from the statement of revenues, expenses and changes in fund net position and added to the statement of net position appear in the line "Excess revenues used to fund deferrals" on the statement of revenues, expenses and changes in fund net position. The detail of changes to and components of these amounts are as follows:

	6/30/14 Restated	Increase (Decrease)	6/30/15
<b>Deferred Charges</b>			
Accrued workers compensation	151,303	115,468	266,771
Accrued compensated absences	1,381,884	(42,371)	1,339,513
Net OPEB obligation	1,261,063	1,338,500	2,599,563
Net pension liability	61,980,538	1,456,743	63,437,281
Privatization costs	623,487	(99,759)	523,728
<b>Total deferred charges</b>	<b>\$ 65,398,275</b>	<b>\$ 2,768,581</b>	<b>\$ 68,166,856</b>
<b>Deferred Credits</b>			
Capital improvements, net of depreciation	33,993,833	(1,165,376)	32,828,457
Principal debt payments	40,707,136	6,720,775	47,427,911
Group insurance deposit	495,227	-	495,227
<b>Total deferred credits</b>	<b>\$ 75,196,196</b>	<b>\$ 5,555,399</b>	<b>\$ 80,751,595</b>
Net change for year		(2,786,818)	
Less privatization costs included in amortization expense		99,759	
Excess revenues used to fund deferrals		<u>\$ (2,687,059)</u>	

## 9. Health Insurance Deposit

The Commission participates in the Hampshire County Group Insurance Trust (the Trust) to provide health insurance coverage to its employees. When the Commission joined the Trust, they were required to place on deposit the equivalent of three months (estimated) claims expense. This deposit reserve affords the Commission voting rights in the Trust and would only be used to fund the residual claims in the event the Commission withdraws from the Trust.

## 10. Capital Assets

Capital asset activity for the year ended June 30, 2015 was as follows (in thousands):

	Beginning Balance	Increase	Decreases	Convert to Capital Assets	Ending Balance
<b>Capital Assets, being depreciated</b>					
Furniture and fixtures	\$ 6,734	\$ -	\$ -	\$ 1,336	\$ 8,070
Vehicles and equipment	8,405	787	(480)	850	9,562
Buildings and improvements	6,361	-	-	2,393	8,754
Infrastructure	273,285	-	-	55,325	328,610
<b>Total Capital Assets, being depreciated</b>	<b>294,785</b>	<b>787</b>	<b>(480)</b>	<b>59,904</b>	<b>354,996</b>
<b>Less accumulated depreciation for</b>					
Furniture and fixtures	(3,928)	(601)	-	-	(4,529)
Vehicles and equipment	(6,697)	(887)	480	-	(7,104)
Buildings and improvements	(1,509)	(298)	-	-	(1,807)
Infrastructure	(123,808)	(6,066)	-	-	(129,874)
<b>Total accumulated depreciation</b>	<b>(135,942)</b>	<b>(7,852)</b>	<b>480</b>	<b>-</b>	<b>(143,314)</b>
<b>Total Capital Assets, being depreciated, Net</b>	<b>158,843</b>	<b>(7,065)</b>	<b>-</b>	<b>59,904</b>	<b>211,682</b>
<b>Capital Assets, not being depreciated</b>					
Land	5,103	-	-	318	5,421
Construction in progress	86,270	28,689	-	(60,222)	54,737
<b>Total Capital Assets, not being depreciated</b>	<b>91,373</b>	<b>28,689</b>	<b>-</b>	<b>(59,904)</b>	<b>60,158</b>
<b>Capital Assets, Net</b>	<b>\$ 250,216</b>	<b>\$ 21,624</b>	<b>\$ -</b>	<b>-</b>	<b>\$ 271,840</b>

## 11. Capital Lease Obligations

The Commission is the lessee of certain equipment under capital leases expiring in various years through 2017. Future minimum lease payments under the capital leases consisted of the following as of June 30, 2015.

2016	\$284,244
2017	<u>160,270</u>
Total minimum lease payments	444,514
Less amounts representing interest	<u>(8,472)</u>
<b>Present value of minimum lease payments</b>	<b>\$ <u>436,042</u></b>

## 12. Long-term Debt

### A. Debt Issued through the City of Springfield

At the time of its creation, the Commission assumed general obligation certificates of indebtedness and State revolving loans of the City pertaining to the water and sewer systems. Payments of principal and interest are made directly to the City in accordance with the original maturity and interest schedules. As of June 30, 2015, all the debt issued through the City of Springfield has been paid in full.

### B. Revenue Bonds

Certain debt issued after separating from the City has been issued as Revenue Bonds. Under the terms of these loans, all operating revenues of the Commission are deposited in a dedicated operating reserve account and from which prescribed reserves are established (see restricted cash footnote). In addition, all bond proceeds have been deposited in separate project accounts that are under the lender's controls. These project accounts may be accessed only to fund project related costs.

A summary of the long-term debt outstanding as of June 30, 2015:

	Serial Maturities Through	Interest Rate(s) %	Loan Balance Outstanding as of 6/30/15	Bond Premium Amortization	Total Balance 6/30/15
<b>Issued Through SWSC</b>					
Sewer (MCWT 94-24 / 95-07 / 98-133)	08/01/20	1.00 - 2.75	2,357,516	-	2,357,516
Sewer (United Water)	10/01/20	Various	493,957	-	493,957
Revenue bonds (refunding)	11/01/21	4.0 - 5.0	5,210,000	-	5,210,000
Sewer CSO (MCWT CW-01-39)	08/01/22	1.00 - 2.75	1,628,425	-	1,628,425
Revenue bonds	07/15/26	4.25 - 5.0	1,730,000	-	1,730,000
Revenue bonds	07/15/26	3.0-5.0	15,245,000	2,751,683	17,996,683
Revenue bonds	10/15/28	4.0 - 5.75	11,060,000	30,577	11,090,577
Sewer CSO (MCWT CW-08-36)	07/15/30	2.00	8,094,018	-	8,094,018
Revenue bonds	11/15/30	3.0-5.0	21,840,000	1,751,067	23,591,067
Sewer CSO (MCWT CW-08-36A)	07/15/32	2.00	5,635,582	-	5,635,582
Sewer CSO (MCWT CW-10-06)	07/15/32	2.00	1,575,637	-	1,575,637
Sewer CSO (MCWT CW-11-01)	07/15/32	2.00	5,877,700	-	5,877,700
Sewer CSO (MCWT CW-11-22)	01/15/33	2.00	1,520,811	-	1,520,811
Revenue bonds	07/15/34	3.0-5.0	25,615,000	1,472,000	27,087,000
Sewer CSO (MCWT CW-12-03)	01/15/35	2.00	19,660,542	-	19,660,542
Sewer CSO (MCWT CW-13-16)	01/15/35	2.00	21,645,275	-	21,645,275
Sewer CSO (MCWT CW-06-27)	07/15/37	2.41	<u>24,075,566</u>	-	<u>24,075,566</u>
<b>Total Long-term Debt</b>			<b>\$ <u>173,265,029</u></b>	<b>\$ <u>6,005,327</u></b>	<b>\$ <u>179,270,356</u></b>



### C. State Revolving Loan

The U.S. EPA sponsors a low interest rate loan program. The loans are administered by the States and are used by local communities to improve their public water and sewer systems.

Some of the Commission's loans are administered through the Massachusetts Clean Water Trust (the Trust) Revolving Loan Program (previously known as the Massachusetts Water Pollution Abatement Trust). The following is a summary of the Trust loan balances at June 30, 2015:

Loan Number	Issue Date	Original Loan Balance	Principal Subsidy	Balance 6/30/15
94-24 (Part II)/95-07/98-133	11/01/00	\$ 6,572,640	\$ (1,262,515)	\$2,357,516
CW-01-39	11/26/02	4,365,122	(660,576)	1,628,425
CW-06-27	12/18/07	27,763,102	-	24,075,566
CW-08-36	07/08/10	12,352,073	(2,607,968)	8,094,018
CW-08-36A	06/13/12	6,200,000	-	5,635,582
CW-10-06	06/13/12	3,176,651	(1,110,353)	1,575,637
CW-11-01	06/13/12	7,304,701	(695,563)	5,877,700
CW-11-22	05/22/13	1,860,000	(203,737)	1,520,811
CW-12-03	12/31/13	20,497,831	(837,289)	19,660,542
CW-13-16	05/30/15	21,645,275	(942,314)	21,645,275

### D. Future Debt Service

The annual payments to retire all general obligation long-term debt outstanding (including bond premium amortization) as of June 30, 2015:

	Principal	Interest	Total
2016	\$ 9,247,493	\$ 4,460,129	\$ 13,707,622
2017	9,486,239	4,207,932	13,694,171
2018	9,721,633	3,966,388	13,688,021
2019	9,943,638	3,708,605	13,652,243
2020	10,207,772	3,447,635	13,655,407
2021 - 2025	49,226,034	12,777,087	62,003,121
2026 - 2030	45,109,773	6,095,298	51,205,071
Thereafter	36,327,774	1,906,302	38,234,076
<b>Total</b>	<u>\$ 179,270,356</u>	<u>\$ 40,569,376</u>	<u>\$ 219,839,732</u>

### E. Long-term Debt Activity

2015 summary of activity in long-term obligations:

	Balance 07/01/14 Restated	Increase	Decrease	Balance 06/30/15	Less Current Portion	Equals Long-term Portion
<b>Long-term Debt (in thousands)</b>						
<b>Loans Payable</b>						
Issued through Commission	\$ 136,062	\$ 66,730	\$ (23,522)	\$ 179,270	\$ (9,248)	\$ 170,022
Issued through City	417	-	(417)	-	-	-
<b>Other</b>						
Capital lease payable	-	787	(351)	436	(278)	158
Accrued compensated absences	1,382	195	(238)	1,339	(150)	1,189
Net OPEB obligation	1,261	1,339	-	2,600	-	2,600
Net pension liability	61,981	1,457	-	63,438	-	63,438
Accrued Workers compensation	151	116	-	267	-	267
<b>Total</b>	<u>\$ 201,254</u>	<u>\$ 70,624</u>	<u>\$ (24,528)</u>	<u>\$ 247,350</u>	<u>\$ (9,676)</u>	<u>\$ 237,674</u>

---

## F. Bond Covenants

The Commission's General Bond Resolution contains various restrictive covenants including, among other things, restrictions on incurring both short-term and long-term debt in certain circumstances and restrictions on selling, mortgaging, leasing or otherwise disposing of any part of the system. The Bond Resolution requires the Commission to establish water and sewer rates at least sufficient to pay current expenses, pay principal and interest of indebtedness, create and maintain reserves required by bond resolutions, and pay the cost of all necessary repairs, replacements, and renewals of the system. It also requires certain accounts to be established and maintained (Note 4), the balances of which are restricted to various operating, debt service, capital expenditure, and renewal and replacement purposes. The Commission has pledged all cash accounts and revenues as collateral for the debt.

In addition the Commission is required to comply with certain bond covenants which require that "net revenues" as defined in the General Resolution, for each fiscal year shall equal at least 125% of the Debt Service Requirement.

The Commission was in compliance with all bond covenants for the year ended June 30, 2015.

## G. Advance Refunding

On October 24, 2014 the Commission issued refunding revenue bonds in the amount of \$15,245,000 (interest rate ranging from 3% 5%), to advance refund \$5,180,000 of 2003 bonds with an interest rate of 4% and \$11,605,000 of 2006 bonds with an interest rate of 5%. The 2003 and 2006 bonds mature on July 1, 2023 and July 15, 2026 and are redeemable July 1, 2013 and July 15, 2016, respectively. The refunding bonds were issued at 119% and, after paying issuance costs of \$167,437, the net proceeds were \$17,996,683. The net proceeds were used to purchase U.S. government securities and those securities were deposited in an irrevocable trust with an escrow agent to provide debt service payments until the 2003 and 2006 bonds are called on November 24, 2014 and July 15, 2016, respectively. The advance refunding met the requirements of an in-substance debt defeasance and the refunded bonds were removed from the Commission's financial statements.

As a result of the advance refunding, the Commission reduced its total debt service cash flow requirements by \$2,408,285 which resulted in an economic gain (difference between the present value of the debt service payments on the old and new debt) of \$2,193,000.

Defeased debt still outstanding at June 30, 2015 is \$11,605,000.

## 13. Restricted Net Position

The balance in restricted net position of \$36,368,236 represents the restricted cash balance for required reserves and scholarships of \$34,628,857 and the total value of inventory of \$1,739,379.

## 14. Subsequent Events

**Debt** - In May 2015, the Commission signed an interim anticipation note for a CSO project through the Massachusetts Clean Water Trust. The loan amount is \$20,148,628, carries an interim interest rate of 0.09% and must be converted to a permanent loan by December 2016.

## 15. Commitments and Contingencies

**Grants** - Amounts received or receivable from grantor agencies are subject to audit and adjustment by grantor agencies, principally the federal government. Any disallowed claims, including amounts already collected, may constitute a liability of the applicable funds. The amount of expenditures which may be disallowed by the grantor cannot be determined at this time, although the Commission expects such amounts, if any, to be immaterial.

**Outstanding Legal Issue** - There is a pending legal issue in which the Commission is involved. The amount of the claim is material to the Commission's financial statements; however, the outcome cannot be determined at this time. As a result, no liability has been recorded in the Commissions financial statements.

**Sewer Overflow** - In September of 2014, the Commission was issued Administrative Order Docket No. 14-007 (AO) by the EPA. The AO details acceptance of the Commission's comprehensive Integrated Wastewater Plan (IWP) that addresses all wastewater infrastructure as it relates to operation and maintenance, sustainable renewal, and regulatory compliance. The AO specifically required the submittal of a work plan for the Phase 2 York Street Pump Station and River Crossing CSO Project by December 31, 2014. That work plan was submitted on time. The AO further requires completion of the project by December 31, 2020. The Commission has contracted with engineers and has begun the design of this project and anticipates project completion pursuant to the December 31, 2020 requirement. The Commission is also required to and intends to provide a work plan for the Phase 3 Locust Transfer Structure and Flow Optimization of the Mill River CSO Project by December 31, 2019. Additionally, the Commission has initiated other projects identified in the IWP but not identified in the AO. These projects include annual system renewal projects as well as the Main Intercepting Sewer Rehabilitation and CSO Outfall Improvements Project. Both projects address needs based on prioritization of risk and other key factors utilizing the Commission's asset management system.

**Workers Compensation Liability** – The financial statements include an estimate of future benefit costs/settlements for employees currently receiving workers compensation benefits.

**Self-Insurance** – The Commission participates in the Hampshire County Group Insurance Trust to provide health insurance coverage to its employees. The Trust is funded by member assessments, which are calculated in a manner similar to commercial insurance premiums. As of June 30, 2015 the Trust contracted with an insurance carrier for excess liability coverage which takes effect when an individual claim exceeds \$200,000.

If the Trust were to experience a cash deficit, each member would be required to contribute additional funds. At June 30, 2015, according to the Trust's unaudited financial statements, after accruing an estimated liability for incurred but unreported claims of approximately \$3.7 million, the Trust was in a surplus position of approximately \$24.3 million.

## 16. Post Employment Health Care and Life Insurance Benefits

GASB Statement 45, *Accounting and Financial Reporting by Employers for Post-Employment Benefits Other Than Pensions*, requires governments to account for other post-employment benefits (OPEB), primarily healthcare, on an accrual basis rather than on a pay-as-you-go basis. The effect is the recognition of an actuarially required contribution as an expense on the statement of activities when a future retiree earns their post-employment benefits, rather than when they use their post-employment benefit. To the extent that an entity does not fund their actuarially required contribution, a post-employment benefit liability is recognized on the statement of net position over time.

### A. Plan Description

In addition to providing the pension benefits described in Note 17, the Commission provides post-employment healthcare benefits for retired employees through the City of Springfield's plan administered through the Group Insurance Commission (GIC). The GIC is a quasi-independent state agency that administers an agent multi-employer defined benefit OPEB plan. As of December 31, 2013, the actuarial valuation date, approximately 142 retirees and 230 active employees meet the eligibility requirements. The plan does not issue a separate financial report.

### B. Benefits Provided

The Commission provides medical and prescription drug coverage to retirees and their covered dependents. All active employees who retire from the Commission and meet the eligibility criteria will receive these benefits.

### C. Funding Policy

Retirees contribute 25% of the cost of the health plan, as determined by the Commission. The Commission contributes the remainder of the health plan costs on a pay-as-you-go basis.

### D. Annual OPEB Costs and Net OPEB Obligation

The Commission's fiscal 2015 annual OPEB expense is calculated based on the annual required contribution of the employer (ARC), an amount actuarially determined in accordance with the parameters of GASB Statement No. 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover the normal cost per year and amortize the unfunded actuarial liability over a period of thirty years. The following table shows the components of the Commission's annual OPEB cost for the year ending June 30, 2015, the amount actually contributed to the plan, and the change in the Commission's net OPEB obligation based on an actuarial valuation as of December 31, 2013 (in thousands):

Annual required contribution (ARC)	\$ 1,586
Interest on net OPEB obligation	44
Adjustment to ARC	(37)
Annual OPEB cost	1,593
Contributions made	(254)
Increase in net OPEB obligation	1,339
Beginning of year Net OPEB obligation	1,261
End of year Net OPEB obligation	\$ 2,600

The Commission's annual OPEB cost, the percentage of annual OPEB cost contributed to the plan, and the net OPEB obligation were as follows:

Fiscal Year Ended	Annual OPEB Cost	% of OPEB Cost Contributed	Net OPEB Obligation
2015	\$ 1,593	16%	\$2,600
2014	\$ 1,494	16%	\$1,261



## E. Funding Status and Funding Progress

The funded status of the plan as of December 31, 2013, the date of the most recent actuarial valuation was as follows (in thousands):

Actuarial accrued liability (AAL)	\$ 15,837
Actuarial value of plan assets	-
Unfunded actuarial accrued liability (UAAL)	\$ 15,837
Funded ratio (actuarial value of plan assets/AAL)	0%
Covered payroll (active plan members)	N/A
UAAL as a percentage of covered payroll	N/A

Actuarial valuations of an ongoing plan involve estimates of the value of reported amount and assumptions about the probability of occurrence of events far into the future. Examples included assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents multi-year trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

In August 2015, the Commission voted to establish an OPEB trust fund under Massachusetts General Law Chapter 32B, Section 20 and made an initial transfer of approximately \$430,000 into the fund.

## F. Actuarial Methods and Assumptions

Projections of benefits for financial reporting purposes are based on the plan as understood by the Commission and the plan members and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the Commission and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

In the December 31, 2013, actuarial valuation, the projected unit credit cost method was used. The actuarial value of assets was not determined as the Commission has not advance funded its obligation. The actuarial assumptions included a 3.5% investment rate of return and an initial annual healthcare cost trend rate of 6.5%, which decreases to a 5% long-term rate for all healthcare benefits after ten years. The amortization costs for the initial UAAL is a level percentage of payroll for a period of 30 years, on a closed basis. This has been calculated assuming the amortization payment increases at a rate of 4.5%.

## 17. Retirement System

The Commission follows the provisions of GASB Statement No. 68, Accounting and Financial Reporting for Pensions – an amendment of GASB Statement No. 27, with respect to the employees' retirement funds.

### A. Plan Description

Substantially all full-time employees participate in the City of Springfield Contributory Retirement System (the System), a cost-sharing, multiple-employer, defined benefit pension plan administered by the City of Springfield Retirement Board. The pension plan provides pension benefits, deferred allowances, and death and disability benefits. Chapter 32 of the Massachusetts General Laws establishes the authority of the System, contribution percentages and benefits paid. The System Retirement Board does not have the authority to amend benefit provisions. The System issues a publicly available financial report which can be obtained through the City of Springfield Retirement System, 70 Tapley Street, Springfield MA 01104.

### B. Benefits Provided

The System provides for retirement allowance benefits up to a maximum of 80% of a member's highest three-year average annual rate of regular compensation. Benefit payments are based upon a member's age, length of creditable service, level of compensation and group classification. Members become vested after 10 years of creditable service. A retirement allowance may be received upon reaching age 65 or upon attaining 20 years of service. The plan also provides for early retirement at age 55 if the participant (1) has a record of 10 years of creditable service, (2) was on the City payroll on January 1, 1978, (3) voluntarily left City/Commission employment on or after that date, and (4) left accumulated annuity deductions in the fund. A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and a portion of the interest they generate constitute the annuity. The difference between the total retirement allowance and the annuity is the pension. The average retirement benefit is approximately 80-85% pension and 15-20% annuity.

Per Chapter 176 of the Acts of 2011, for members who retire on or after April 2, 2012, if in the five years of creditable service immediately preceding retirement, the difference in the annual rate of regular compensation between any two (2) consecutive years exceeds 100 percent, the normal yearly amount of the retirement allowance shall be based on the average annual rate of regular compensation received by the member during the period of 5 consecutive years preceding retirement.

Employees who resign from service and who are not eligible to receive a retirement allowance or are under the age of 55 are entitled to request a refund of their accumulated total deductions. In addition, depending upon the number of years of creditable service, such employees are entitled to receive zero, fifty, or one hundred percent of the regular interest which has accrued upon those deductions. However, effective July 1, 2010, members voluntarily withdrawing with less than 10 years of service get credited interest each year at a rate of 3% and do not forfeit any interest previously earned on contributions.

### C. Contributions

Participants contribute a set percentage of their gross regular compensation annually. Employee contribution percentages are specified in Chapter 32 of the Massachusetts General Laws. The employee's individual contribution percentage is determined by their date of entry into the system. In addition, all employees hired after January 1, 1979 contribute an additional 2% on all gross regular compensation over the rate of \$30,000 per year. The percentages shown at right:

Before 01/01/75	5%
01/01/75 - 12/31/83	7%
01/01/84 - 06/30/96	8%
Beginning 07/01/96	9%

Employers are required to contribute at actuarially determined rates as accepted by the Public Employee Retirement Administration Commission (PERAC).

The Commission's contribution to the System for the year ended June 30, 2015 was \$3,902,120, which was equal to its annual required contribution.

### D. Summary of Significant Accounting Policies

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the System and additions to/deductions from System's fiduciary net position have been determined on the same basis as they are reported by System. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with benefit terms. Investments are reported at fair value.

### E. Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2015, the Commission reported a liability of \$63,437,281 for its proportionate share of the net pension liability. The net pension liability was measured as of December 31, 2014, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of January 1, 2014 (or as of that date).

The Commission's proportion of the net pension liability was based on a projection of the Commission's long-term share of contributions to the pension plan relative to the projected contributions of all participating employers, actuarially determined. At June 30, 2015, the Commission's proportion was 8.67 percent.

For the year ended June 30, 2015, the Commission recognized pension expense of \$1,355,396. The Commission reported deferred outflows of resources of \$101,347 for the net difference between the projected and actual earnings on pension plan investments.

Deferred outflows of resources related to pensions resulting from contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended June 30, 2016. Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended June 30	
2016	\$ 25,337
2017	25,337
2018	25,337
2019	25,336
<b>Total</b>	<b>\$ 101,347</b>

**Actuarial assumptions** - The total pension liability in the January 1, 2014 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	Not explicitly assumed
Salary increases	4.0% per year
Investment rate of return	7.875%

Mortality rates were based on RP-2000 table with scale AA (gender distinct).

The actuarial assumptions used in the January 1, 2014 valuation were based on the results of the most recent actuarial experience study, which was for the period ending December 31, 2013.

The long-term expected rate of return on pension plan investments was selected from a best estimate range determined using the building block approach. Under this method, an expected future real return range (expected returns, net of pension plan investment expense and inflation) is calculated separately for each asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return net of investment expenses by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major class are summarized in table on the following page.

Asset Class	Target Asset Allocation (%)	Long-term Expected Real Rate of Return (%)
Large Cap Equities	14.50	7.75
Small/Mid Cap Equities	3.50	8.00
International Equities (Unhedged)	16.00	8.25
Emerging International Equities	6.00	9.50
High-Yield Bonds	1.50	6.00
Bank Loans	1.50	6.25
EMD (External)	1.00	7.00
EMD (Local Currency)	2.00	7.25
TIPS	3.00	4.50
Long Treasuries	10.00	4.25
Private Equity	10.00	9.75
Private Debt	4.00	8.25
Real Estate (Core)	10.00	6.50
Hedge Funds	9.00	7.00
Timber/Natural Resources	4.00	6.88
Portfolio Completion	4.00	N/A
<b>Total</b>	<b>100.00%</b>	<b>7.14 %</b>
Inflation		Not explicitly stated
Expected arithmetic nominal return		7.14 %

**Discount Rate** – The discount rate used to measure the total pension liability was 7.875%. The projection of cash flows used to determine the discount rate assumed that the plan member contributions will be made at the current contribution rate and that employer contributions will be made at contractually required rates, actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments to current active and inactive plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

**Sensitivity of the proportionate share of the net pension liability to changes in the discount rate** – The chart (above right) presents the Commission's proportionate share of the net pension liability calculated using the discount rate of 7.875 percent, as well as what the Commission's proportionate share would be if calculated at a discount rate 1 percentage-point lower or higher (in thousands):

Fiscal Year Ended	1% Decrease (6.875%)	Current Discount Rate (7.875%)	1% Increase (8.875%)
June 30, 2015	\$ 72,706	\$ 63,437	\$ 55,429

**Pension plan fiduciary net position** – Detailed information about the pension plan's fiduciary net position is available in the separately issued System financial report.

## 18. Transactions with City of Springfield

Other than the retirement system contribution noted above, the Commission's FY 15 transactions with the City consist of payments for Police Department services of \$796,880, for retiree health insurance of \$230,836, and other City department services and fees totaling \$1,055.

## 19. Wastewater Regional Operations Management

In August 2000, the Commission entered into an agreement with United Water, Springfield LLC (now United Water Environmental Services, Inc.) to operate the Commission's wastewater regional operations effective October 1, 2000 and for a term of 20 years. The pertinent conditions of the agreement are as follows:

- All assets remain the property of the Commission.
- Equipment/inventory used over the 20-year term is to be replaced/ reimbursed by United Water.
- The Commission continues to control the customer billing process.
- The Commission agreed to incur a maximum of \$10.3 million for the initial capital improvements to the facility. These improvements became the property of the Commission upon acceptance of the work performed.
- United Water bills the Commission monthly for the cost of providing service and an administrative fee. The monthly cost as of June 2015 was approximately \$900,000.
- In September 2000, United Water reimbursed the Commission for approximately \$1.9 million of costs incurred in the privatization process. The Commission is repaying this amount through the monthly billing process.
- Under the contract, United Water must provide a guaranteed letter of credit to the Commission as security for operating performance and capital asset management. The letter of credit is adjusted annually to maintain a value equal to 150% of the contract value, which changes based on a number of factors. At June 30, 2015, the letter of credit was approximately \$20.4 million.



## Required Supplementary Information (Unaudited)

Springfield Water and Sewer Commission for the year ended June 30, 2015

### Schedule of Funding Progress

#### Other Post-Employment Benefits

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)-Entry Age (b)	Unfunded AAL (UAAL) (b a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b a)/c]
12/31/13	-	\$15,836,718	\$15,836,718	0.0%	N/A	N/A

### Schedule of Proportionate Share of the Net Pension Liability

Springfield Retirement System		2015
Proportion of net pension liability for the most recent measurement date		<u>8.67%</u>
Proportionate share of the net pension liability for the most recent measurement date		<u>\$63,437,281</u>
Covered-employee payroll for the most recent measurement date		<u>12,459,783</u>
Proportionate share of the net pension liability (asset) as a percentage of its covered-employee payroll		<u>509.14%</u>
Plan fiduciary net position as a percentage of the total pension liability		<u>28.83%</u>

### Schedule of Contributions

Springfield Retirement System	2015
Contractually required contribution for the current fiscal year	\$3,902,120
Contribution in relation to the contractually required contribution	<u>3,902,120</u>
Contribution deficiency (excess)	<u>\$ -</u>
Covered-employee payroll for the current fiscal year	<u>10,512,190</u>
Contributions as a percentage of covered-employee payroll	<u>37.12%</u>

Schedules are intended to show information for 10 years. Additional years will be displayed as they become available. For all Required Supplementary Information, please see Independent Auditors' Report

## Schedule of Operating Expenditures Budget and Actual

Springfield Water and Sewer Commission  
for the year ended June 30, 2015

	Original Budget	Final Budget	Actual	Variance Favorable (Unfavorable)
<b>Expenditures and Other Uses</b>				
Salaries and wages	\$ 13,821,930	\$ 13,701,930	\$ 12,971,621	\$ 730,309
Employee benefits	6,695,030	6,890,030	6,837,186	52,844
Operations	22,797,250	22,797,250	22,232,596	564,654
Intergovernmental	568,014	568,014	540,163	27,851
Capital outlay	459,650	459,650	362,789	96,861
Depreciation and amortization	7,854,330	7,854,330	7,951,427	(97,097)
Other	657,342	732,338	506,150	226,188
Interest	<u>5,746,342</u>	<u>5,746,342</u>	<u>4,100,694</u>	<u>1,645,648</u>
<b>Total Expenditures</b>	<b>\$ 58,599,888</b>	<b>\$ 58,749,884</b>	<b>\$55,502,626</b>	<b>\$ 3,247,258</b>

## Notes to Supplemental Schedule Schedule of Operating Expenditures - Budget and Actual

### Budgetary Basis

The appropriation appearing to the left of this page of the financial statements represents the operating budget of the Commission that was originally authorized in June 2014.

### Budget/GAAP Reconciliation

The budgetary data is based upon accounting principles that differ from generally accepted accounting principles (GAAP). Therefore, in addition to the GAAP basis financial statements, the results of operations are presented in accordance with budgetary accounting principles to provide a meaningful comparison with budgetary data.

The following is a summary of adjustments made to the actual expenditures to conform to the budgetary basis of accounting.

Operating Expenditures (GAAP basis)	\$54,893,356
Nonoperating Expenditures (GAAP basis)	4,738,350
Reverse capital expenditures appropriated in a prior fiscal year	(628,691)
<b>Reverse the effect of prior year and current year GAAP accruals of:</b>	
Inventory	(14,990)
Deferred outflows	(100,250)
Accounts payable and accrued payroll	(80,752)
Interest on long-term debt	(537,406)
Accrued compensated absences	42,373
Net OPEB obligation	(1,338,500)
Net pension liability	(1,355,396)
Accrued Workers compensation	<u>(115,468)</u>
<b>Budgetary basis</b>	<b>\$ 55,502,626</b>



**Cobble Mountain Reservoir**



**Ludlow Reservoir**



# Springfield Water and Sewer Commission

P.O. Box 995 / Springfield, Mass. 01101-0995

