

Portland Water District



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Portland Water District Budget – Reader’s Guide

Welcome to the Portland Water District’s 2020 Budget document. This document is intended to provide practical and pertinent information about the Portland Water District’s (PWD’s) financial planning, policies, goals and priorities for 2020 and beyond. The book holds a wealth of information including how water and wastewater revenues are used to support infrastructure and fund future years’ development.

This Budget is a Policy Document.

It describes financial and operating policies, goals, and priorities for every fund and department of PWD for the coming year and for our 5-year planning horizon. Our Mission Statement, Strategic Goals, and Board Established Guidelines are found in the Introduction section. Significant Financial Policies are described in the section with that title.

This Budget is a Financial Plan.

It describes the costs of the services provided by PWD and how they are funded. The Revenue section presents the projected revenues from water sales, wastewater assessments, interest and other income. The Departmental Expense section details expenditures by category and also by department for the Water Operations, Wastewater Operations, Environmental Services, Engineering Services and Administrative Services Departments. The Capital Expenditures section presents details of major projects planned for 2020 and projected projects through 2024. The multi-year financial plan is included in the Appendix.

This Budget is a Means of Communication.

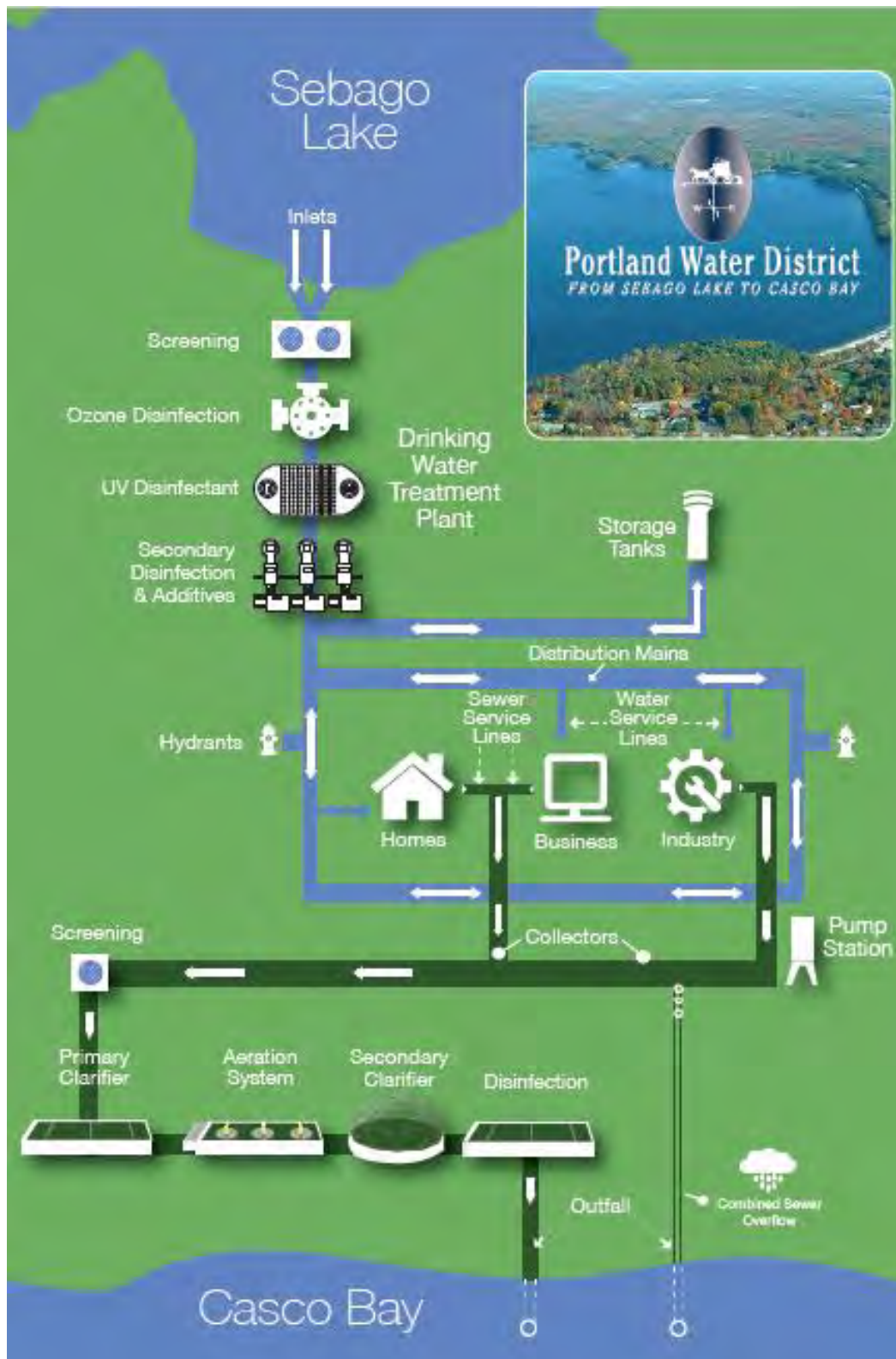
This budget is an easy-to-read document with summary information in charts and graphs that complement the details in the text. The Letter from the General Manager and Treasurer presents an organizational and financial overview of PWD. The budget for each fund- one water fund and six wastewater funds, one for each community served- is described in detail. Supporting information about the Portland economy, water benchmarks and results of the 2017 Customer Satisfaction Survey are included in the Appendix.

This Budget is an Operations Guide.

It shows each Department’s organizational chart and budget overview, followed by a detailed budget which includes goals, performance benchmarks and accomplishments for each. Current year projects and initiatives are described in detail. Following the operating budgets are sections for Human Resources, Capital Finance and Financial Policies.

Overview of the Water and Wastewater System

The diagram provides a schematic of the District system with common infrastructure terms.





Portland Water District

From Sebago Lake To Casco Bay

October 29, 2019

To the Members of the Board of Trustees,

On behalf of the entire Management Team, we are pleased to submit for your consideration the Portland Water District's Comprehensive Annual Budget Proposal for 2020. The document is designed to present the comprehensive financial framework for all District activities for the budget year. As you consider the budget for our upcoming 112th year, please reflect on our accomplishments, present challenges and opportunities, and future aspirations. Our dedicated staff of 182 employees works every day to ensure that clean and healthy tap water is delivered to the 210,000 inhabitants of Greater Portland, that adequate water is available for fire protection, and that wastewater is treated to remove pollution and protect the environment.

Water Services

Water Services ensures that safe, clean and healthy drinking water is delivered throughout the 11 communities in our water service area. It all starts at the Sebago Lake. Because of the excellent raw water quality and strong watershed protection program, the District was granted a waiver from filtration by the Environmental Protection Agency. The District's continued compliance with the terms of this waiver saves ratepayers the significant costs of financing, constructing and operating a filtration plant. At the Sebago Lake Water Treatment Facility (SLWTF), over 22 million gallons of water are treated each day using the powerful disinfectants of ozone and ultraviolet light.

After treatment, drinking water is distributed through a system of 1,000 miles of water mains, three major pump stations, and ten storage facilities. Infrastructure age, cold winter temperatures, and the underground location of many of our assets challenge staff to operate and maintain the system with minimal disruption. Since 2010, we have invested over \$51 million in water main renewal.

In 2020, initiatives include utilizing the standby generator with newly upgraded emissions system to "peak shave" at SLWTF, purchase a larger vacuum excavator to accomplish digging jobs more quickly and with less pavement restoration required, and on-site testing runs of the new portable pumper to ensure it is ready to provide emergency service. A staff of 56 and a proposed operating budget of \$9.2 million and capital budget of \$10.9 million supports these activities.

Wastewater Services

Wastewater treatment is a vital community service that protects public health and the environment. Four wastewater treatment plants operated by the District remove, on average, nearly 95% of the

pollution from the 21 million gallons of wastewater that is received at the plants daily from the six communities served. The clean water is safely released into the aquatic environment and much of the biosolids that remain are converted into compost and energy. Staff manages the collection system consisting of 118 miles of pipe and 76 pump stations that convey wastewater to the plants.

In 2020, initiatives include continued effort on nutrient optimization, the transition to UV disinfection at Cape Elizabeth, and participating in finalizing the City of Portland's Integrated Planning effort. A staff of 39 and operating and capital proposed budgets of \$10.1 million and \$17.2 million, respectively, support these activities.

Engineering Services

The Engineering Services Department provides engineering and maintenance services to internal customers (Water, Wastewater and Administrative Departments) and collaborates with external customers, including communities and developers. They oversee design and construction of water and sewer infrastructure, support long range planning, operate and maintain facilities, and support instrumentation. These functions are carried out with an asset management approach to infrastructure acquisition and maintenance.

In 2020, Engineering Services efforts include implementing the first phase of the Computerized Maintenance Management System upgrade project, management of \$7.0 million of water main replacements (of which \$500,000 has been set aside for small mains), supporting design and construction of Maine Turnpike infrastructure crossings and major capital projects including the design of the Windham Water Storage Tank, start-up of the Cape Elizabeth Wastewater Treatment Facility UV Treatment installation and design and construction of wastewater pump stations. A staff of 31 and a proposed budget of \$4.3 million support these activities.

Environmental Services

The District's Environmental Services Section of the Engineering Services Department monitors and protects water quality from watershed to tap and wastewater from collection to discharge. The Water Resources Group champions the protection of Sebago Lake through source protection, environmental education and outreach, and security. The Laboratory Services Group provides certified analytical testing and operational support to water and wastewater treatment plants and oversees the Industrial Pretreatment Program.

In 2020, Environmental Services initiatives include re-accrediting laboratory testing methods for all reportable parameters, renewing expiring Industrial Pretreatment permit (44% of which will expire in 2020), full compliance with Risk and Resiliency Assessment and Emergency Response Plan components of America's Water Infrastructure Act, collaborating with partners in source protection and environmental education and outreach. A staff of 16 and proposed budget of \$2.1 million support these activities.

Administrative Services and Employee Services Departments

The Administrative and Employee Services Departments support the Engineering, Water and Wastewater Services Departments. In addition, Corporate Counsel and the Public Relations Manager stand ready to serve the District and our customers. Within the Administrative Services Department, the Information Services group provides computer system and technology oversight and maintenance. Financial Services provides purchasing, payroll and financial transaction processing and the Customer

Service Group maintains a call center and provides billing services. The Employee Services Department handles employee recruitment and development, benefits administration and safety.

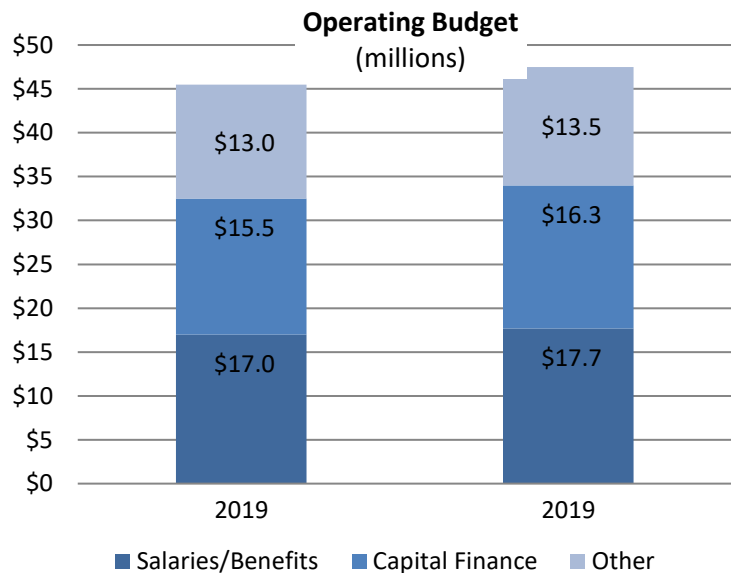
In 2020, Administrative Services will focus on maintaining current service levels while playing a major role in the design and start-up of the new billing and customer relationship system. Customer Service will emphasize training, documentation and procedures for the new system. Information Services will focus on the infrastructure needed for the new systems to perform well, including expanding Wi-Fi networks. Financial Services will ensure that payroll, billing, inventory and transportation data will be available in the financial software system. In 2020, Employee Services will complete a non-union market survey, implement revisions to the non-union planning and performance evaluation process, and will continue to promote safety, supervisory workshops and reviewing and updating policies. A staff of 44 and a proposed budget of \$6.1 million support these activities.

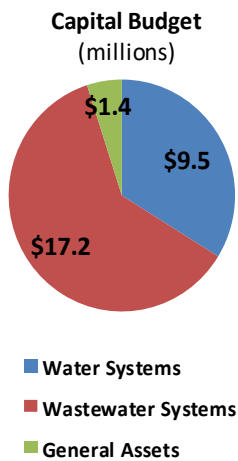
Financial Overview

The proposed budget for 2020 recommends \$47.5 million for operations and \$28.1 million for the first year of a five-year Capital Improvement Plan. The operating budget consists of three major expense categories – salaries/benefits (37%), capital finance (34%) and all other materials and services (29%). Salaries reflects an increase of 4 in the number of employees, 186, and a wage adjustment of 3.0% (\$642,000). Benefit costs increased \$57,000, primarily due to higher pension costs. Capital financing costs are \$0.8 million higher primarily due to debt service on bonds issued to finance water main renewals and upgrades at the Cape Elizabeth and Westbrook wastewater treatment plants. Total other expenses increased \$512,600, or 3.9%, from the prior year.

The significant changes in specific other expense line items include:

- Higher electricity costs (\$179,000) reflecting an increase in Central Maine Power delivery and Constellation energy charges
- Higher chemical costs (\$72,000) due to expected price increases, and
- Higher biosolids disposal costs (\$47,000) reflecting higher volume of material being generated by the wastewater plants and additional surcharge added by the disposal company to reflect industry concerns related to PFAS,





The \$9.5 million water capital budget includes \$7.0 million replacing aging water mains and \$1.0 million transmission line improvement in the 407 Zone.

The \$17.2 million wastewater capital budget includes \$11.3 million of upgrade at the Westbrook treatment plant, \$1.8 million upgrade of the electrical system at Portland's East End treatment plant and \$2.0 million upgrade of the Baxter Boulevard pump station in Portland.

Additionally, the capital budget includes an investment of \$1.4 million in general assets such as vehicles, computer system and Douglass Street main office.

BUDGET HIGHLIGHTS		
NEW INITIATIVES	BUDGET SUMMARY	CHALLENGES AND ISSUES
Investing \$7.0 million in water main renewal; including \$2.0 million through capital reserve fund	The Operating Budget is proposed to be \$47.5 million, an increase of \$1.9 million or 4.3%.	Nutrient optimization approach to manage nitrogen at wastewater facilities
Upgrades to the Portland's East End and Westbrook Regional Wastewater Treatment Plants (\$13.8 million)	Total Revenues are projected at \$47.5 million, which assumes a 3.5% water rate increase and wastewater assessments that meet the municipalities' expectations, except for Cumberland..	Aging infrastructure requires asset replacement
Implementation of new Asset Management and Customer Billing system with a scheduled live date of October 2020.	The Capital Budget is proposed at \$28.1 million. It continues commitment to invest in water mains and wastewater facilities renovations.	Recruiting and retaining new employees and training existing employees to adjust to needed workforce skills
	Full-time positions increase to 186.	Stronger regional economic growth should in time improve revenue growth from new customers.
	The proposed budget continues funding to implement technology solutions for knowledge management, continues to invest in staff training, and provides incentives for multi-skill development.	

Customer Impact

The proposed budget assumes a 3.5% rate adjustment effective May 1, 2020. The increase is consistent with the Board's intent to adopt gradual, annual water rate adjustments annually. For a typical customer, the impact is \$8.64 a year or \$0.72 a month. Of the 3.5% rate adjustment, 2.5% will be used for general operation and 1% will be dedicated to fund the capital reserve account that will support a \$2 million bond issue dedicated to main renewal replacements.

Assessments to wastewater communities meet or are lower than municipal expectations, except in Cumberland. The Assessment for Cumberland increased by 6.6%, which was higher than expected due to the higher costs from the town of Falmouth for treatment services and additional staff time planned. Cape Elizabeth's, Gorham's, Portland's, Westbrook's and Windham's assessments increased by 2.1%, 8.4%, 2.4%, 2.0%, 11.1% and 6.1% respectively. Falmouth's assessment remained the same as the prior year.

The 2020 budget guidelines established by the Board of Trustees are mostly met in this budget proposal.

- Operating fund expenses are increasing less than 4.4%,
- Wastewater assessments meet the municipal expectations, except for the town of Cumberland,
- Water rates are affordable and sufficient to meet operational needs,
- Full-time positions are optimized to meet the workload, and
- Investment in our infrastructure continues as planned.

We strive to successfully execute PWD's mission statement and meet corporate goals while providing the best value to our ratepayers both today and into the future.

Carrie Lewis
General Manager

David M. Kane
Treasurer

Community

Connections

The Portland Water District is proud to serve the public. As an integral part of the community, we strive to support various causes aligned with our company values and vision.



\$1,500 DiPietro Memorial Scholarships

In 2019, one scholarship was awarded to Keith Nelson of South Portland. He is attending

the Southern Maine Community College and is the first in his family to go to college.

Environmental Education



Through our environmental education program, we connect with thousands of students-- teaching about our water resources and encouraging stewardship. The program is active in area schools and routinely offers fun and interactive activities and events throughout the year.

Lifeline Water Rates

PWD offers qualified residential customers discounted lifeline water rates.

Portable Potable Water

The Portland Water District provides various potable water solutions for community events including a portable water fountain, igloo containers, eco cups, and reusable water bottles

Annual Giving

Along with an active internal giving campaign that involves payroll deductions and a raffle, the Portland Water District hosts a Charity Golf Classic. Thanks to all the generous sponsors, participants, and volunteers, the Portland Water District's 18th Annual Charity Golf Classic raised over \$8,500 for Maine-A-Wish Maine and other worthy causes.



Water Bottle Filling Fountain Grants

The Board of Trustees awarded nine grants in 2019: Boys and Girls Clubs of Southern Maine, Cape Elizabeth Community Services, Helena Dyer Elementary School, East End Community School, Frank I Brown School PTA, Oxford Cumberland Canal School, Skillin Elementary School, State Street Housing Preservation, Greater Portland Health.

Volunteer Day

We hosted our first Volunteer Day in partnership with Portland Trails. Over 30 employees spent an afternoon giving back to the community and making a positive impact on our environment and our local water resources by conducting trail work at the Presumpscot River Preserve.



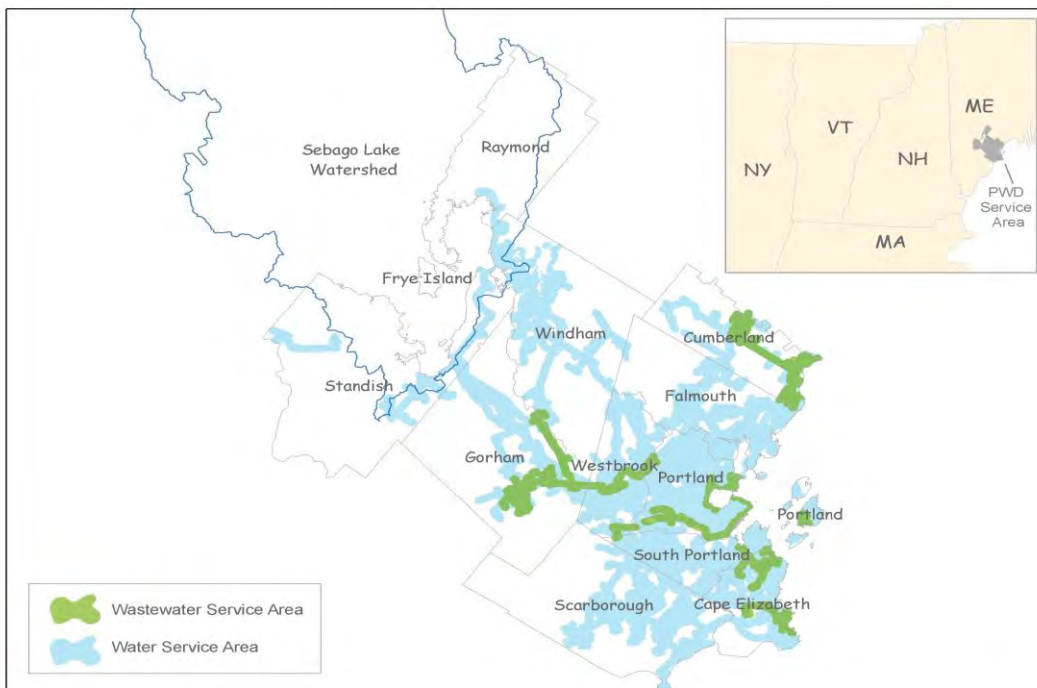
Introduction

The Portland Water District (PWD) is a quasi-municipal utility authorized by state charter to provide water service to eleven Greater Portland communities and wastewater treatment and interception services to six of those communities. Water service is provided to 55,400 customers. Sebago Lake provides virtually all the water delivered. A network of 1,000 miles of water mains delivers water from Sebago Lake to customers. The system provides fire protection through 5,100 fire hydrants and 2,300 sprinkler systems. PWD provides additional wastewater-related services through contracts with the communities. Additional services include sewer billing and collector/storm drain system operations.

Summary of Wastewater Services Provided:

Community	By Charter:			By Contract:		
	Customers	Treatment	Interceptors	Collectors	Storm Drains	Billing
Cape Elizabeth	2,368	Yes	Yes	No	No	Yes
Cumberland	1,185	No	Yes	Yes	No	Yes
Falmouth	1,984	No	No	No	No	Yes
Gorham	1,879	Yes	Yes	Yes	No	Yes
Portland	17,136	Yes	Yes	Peaks Island (only)	Peaks Island (only)	Yes
Scarborough	405	No	No	No	No	Yes
South Portland	7,912	No	No	No	No	Yes
Westbrook	4,697	Yes	Yes	No	No	Yes
Windham	55	Yes	Yes	Yes	No	Yes

Service Territory



History

In 1862, a group of citizens foresaw the necessity of improving the Greater Portland water supply to support continued growth. Private wells were no longer sufficient for domestic and fire protection use. This group formed the Portland Water Company. In 1869, the first water flowed from Sebago Lake to Portland, and the first water service was turned on in Portland on Thanksgiving Day.

In 1908, the Portland Water District bought the Portland Water Company and the Standish Water and Construction Company, and began serving water to Portland and South Portland. PWD later acquired the Gorham Water Company and the Falmouth Water Company. In the years that followed, Cumberland, Falmouth, Westbrook, Cape Elizabeth, Scarborough, Gorham, and the islands of Casco Bay also began receiving public water from the Portland Water District.

During the next 45 years, Greater Portland grew to be the industrial and financial hub of the state. Growth in the Portland area required several upgrades of the Portland Water District's system, including the construction of water supply systems to serve North Windham, Steep Falls, and Standish. The North Windham system was later decommissioned, partly due to the threat of MtBE contamination.

As a logical extension of its role as the regional water supplier, in the 1960s, the Portland Water District offered to handle and treat the region's wastewater. Since then, PWD constructed treatment plants in Portland (1979), Westbrook (1978), Little Falls (1987), Cape Elizabeth (1987), and Peaks Island (1993). In addition, PWD began providing wastewater maintenance and operating services to the town of Cumberland (1984) and now accepts septage from several Sebago Lake region communities.

During the 1990s water utilities around the country faced tighter regulatory requirements, more informed customers who expected a better product, and the emergence of newly detected contaminants and pathogens, which did not exist or were unidentified in years prior. The Portland Water District rose to meet these challenges with a state-of-the-art ozonation facility (built in 1994), a technologically advanced staff with expanded skills, more sampling and monitoring, and an emphasis on honest and ample communication.

The decade starting in 2000 also witnessed the aging of PWD's wastewater treatment facilities and an increased emphasis on odor control. Portland's East End Wastewater Treatment Facility started undergoing renovations to upgrade the facility and control odors, while a complete evaluation of the Westbrook/Gorham Wastewater Treatment Facility was conducted and upgrades began. Both facilities through the 2010's continue to address aging equipment with the focus in the next couple of years being the aerations systems. The East End project was completed in 2017. The proposed capital improvement plan includes a \$7.9 million Westbrook/Gorham/Windham upgrade in 2020.

In 2001, the Town of Raymond became the tenth member of the District; water service in the town began in 2002.

A focus on aging water mains began in 2011 when the Board committed to double the main renewal budget by 2016. In

2014, the Board established a capital reserve fund to provide an additional \$2 million available for main renewal. A \$7.0 million investment in water main replacement is budgeted for 2020. Also, new regulations required a second water treatment process be installed. In 2014, an ultraviolet process was added along the existing ozonation process.

Top Reasons to Choose Portland, Maine Now

Portland is Maine's business, financial and retail capital and the largest city in the state. Seascapes and cityscapes blend harmoniously in Portland, perched on a peninsula, jutting out into island-studded Casco Bay. The metropolitan hub of Maine's south coast region, Portland is a progressive, lively city incorporating the character of yesteryear into a modern urban environment. Historic architecture blends gracefully with the new as you stroll along her working waterfront or the cobblestone streets of the restored Old Port section of the city. With a metro population of 210,000, the Greater Portland area is home to almost one quarter of Maine's total population.

High quality water delivered to homeowners/businesses and cleaned wastewater delivered back to the environment are a key expectation of our customers. Being a desirable place to visit during the summer contributes to variance in water consumption by almost 40% between winter and summer months. With a high concern for the environment, customers support our efforts to protect our watershed and realize the importance of wastewater treatment in protecting our coastal waters.

Portland: Yes. Life's good here.™

South Portland lands on Money magazine's list of 100 Best Places to Live in U.S. for 2017 9/2017

Portland was named 2014's 19th Most Educated Metro Area in a recent study from the personal finance outlet WalletHub.com.

Portland Named One of America's Most Learned Cities *Back-to-School Report gives high ranks for Portland's educated residents.*

CardHub released its Back-to-School Report, which identifies cities and states with the best learning environments for children. The report listed Portland, Maine is one of twenty cities in the country that had the most highly educated citizens. 9/4/2013

Parenting Magazine named the City of Portland the 3rd Best City in the U.S. for Families. Citing the city's low crime, quality education, and active family living, the magazine described Portland as a "tranquil, kid-friendly city to call home." 7/17/ 2012

Concerned About the Environment

Portland Ranked Seventh "Greenest City" in the United States, according to the readers of Travel & Leisure Magazine. 4/4/2012

Women's Health Magazine ranks Portland #10 - reflecting efforts to make it easy to live healthy active lives in Maine's largest city.
01/18/2013

Great Place to Visit

When it comes to being a food-lovers' city, Portland is no longer a small side dish – it's the main course. Bon Appetit magazine has chosen Portland, Maine, as its "City of the Year," calling it "one of the most unexpected culinary destinations in the country." 9/2018

Portland, Maine is 2018 Restaurant City of the Year, Bon Appetit magazine. August 2018

In total, Portland officials expect cruise ships will bring as many as 172,184 passengers this year, the majority in September and October, an 82 percent increase over 2015.

Economic Hub of Maine

Portland was listed as the ninth best city in America for female entrepreneurs and the fifth best city overall for starting a business by NerdWallet in 2016.

Forbes Ranks Portland Area in Top 10 for Job Prospects. 3/3/2012

Techie.com Lists Portland, Maine as One of its 10 Most Unexpected Cities for High-Tech Innovation Techie.com asked innovators, entrepreneurs, and city leaders this question: "What are the most unexpected cities that are leading the high-tech revolution?" 4/8/2013

The Regulatory Environment in Which We Function

The Portland Water District functions in a highly regulated environment. Its operations are regulated by federal, state, and local governments, and by a variety of government agencies. The laws and regulations created and implemented by these layers of government affect not only the District's direct operations in a regulatory sense, but its budget as it complies with various government directives.

The District's water operations are governed at the federal level by the Safe Drinking Water Act (SDWA). Originally enacted in 1974, the SDWA allows the Environmental Protection Agency (EPA) to promulgate national primary drinking water regulations to regulate contaminants that may pose health risks and that are likely to be in the public water supply. Under the SDWA, the EPA establishes a maximum contaminant level standard that regulates physical, chemical, biological and radiological substances in the drinking water supply. The best available technology and treatment techniques that are economically and technically feasible must then be used to meet this standard.

The SDWA allows the EPA to delegate to states the primary oversight and enforcement of the law, or primacy, to the state if the state meets certain requirements. The state of Maine has received primacy and its oversight and enforcement program is administered by the Department of Health and Human Services Drinking Water Program.

Wastewater regulation falls under the provisions of the federal Clean Water Act (CWA). Passed in 1972, with significant amendments in 1977 when it became known as the CWA, it is implemented and enforced by the EPA and the Army Corp. of Engineers. The CWA establishes the basic structure for regulating pollutants discharging into the waters of the United States. It gives the EPA authority to implement pollution control programs, such as setting wastewater standards for the industry. The CWA makes it unlawful to discharge a pollutant into navigable waters without a permit (National Pollutant Discharge Elimination System Permit (NPDES)).

As with the SDWA, the CWA provides that the EPA will create rules to implement the law, and will delegate to the state the administration and enforcement of the law on a day-to-day basis. In Maine, the Department of Environmental Protection (DEP) has been delegated this function, with EPA retaining concurrent authority to take enforcement action. The DEP has more stringent monitoring requirements for biosolids, whole effluent toxicity and mercury than the requirements established by the EPA. The District's treatment plants must obtain a discharge permit issued by the DEP utilizing those stricter requirements.

In addition to the environmental regulations which govern the District's operations, the District's water business is also partially regulated by the state Public Utilities Commission under a system of Maine law found in Title 35-A of the Maine Revised Statutes. In 2014, the state legislature passed a bill, An Act to Reform the Regulation of Consumer-Owned Water Utilities (2014 P.L. 2014 chapter 573) which authorized the Commission to grant exemptions of certain portions of Title 35-A. The District filed exemption requests from certain regulations. Effective January 1, 2016, the District is exempt from the Public Utilities Commission regulation related to its water rates and standards of service. Historically, the Public Utilities Commission regulated the District's water business operations through review and approval of the District's Terms and Conditions of Service, and established the rates the District charges

The Regulatory Environment in Which We Function (continued)

for its water services rate adjustments, finance transactions and terms & conditions of service; this function is now performed by the District's elected Board of Trustees.

Local government regulations affect the District's construction activities, as the District must comply with street opening requirements in the municipalities where it conducts construction or repair operations.

The annual costs for the District's wastewater operations are assessed pursuant to the terms of its charter, enacted by the Maine Legislature (Ch. 84, P. & S.L. 1975 as amended through Ch. 18, P. & S.L. 2009). The District's charter provides that prior to January 15 of each year, the District shall determine the total anticipated amount to be raised from the participating municipalities based on the trustees' best estimate of the cost to operate the wastewater and sewage systems for the fiscal year. The amount assessed to the municipalities includes: regional costs, financing costs, and operation and maintenance costs. Municipalities are advised of their yearly assessments by the District and establish their respective sewer user rates considering the District's assessment and the costs of maintaining their respective sewer collection systems. The District's charter governs the manner of assessing participating municipalities and the treatment of any surplus funds existing at the end of a calendar year.

Act to Reform Regulation of Consumer-Owned Water Utilities

In 2014, a state law was enacted allowing the State Public Utilities Commission to exempt certain individual utilities from state regulation, if requested by the utility, or classes of utilities (PUC Rule 6114).

The District filed for exemptions from certain state regulations and the ability to implement local review and rules.

The changes include allowing water rate changes and bond issuance authorizations to be approved solely by the District's publicly elected officials without state commission review.

The exemption request was approved and became effective January 1, 2016.

Water Rate Change Process

In 2020, the District's Board of Trustees will consider a 3.5% rate adjustment. The chart on the next page outlines the process the District will follow in 2020. The District will continue the same Board and public review process and does not require Maine Public Utilities Commission approval.

A Public Utilities Commission rule (chapter 675) allowed for the creation of a capital reserve fund starting in 2014. The fund can be used to pay costs related to water infrastructure. For utilities our size, an additional 10% over other costs may be included in justifying proposed water rates. A system infrastructure assessment (SIA) must be submitted prior to getting approval to fund the reserve. The SIA would include the list of infrastructure projects that will be funded from the reserve. Annual updates of the status of the projects and reserve fund balances are required. The District filed the SIA in October 2013 and has incorporated funding the reserve by designating 1% of the proposed 3.5% rate adjustment for the reserve.

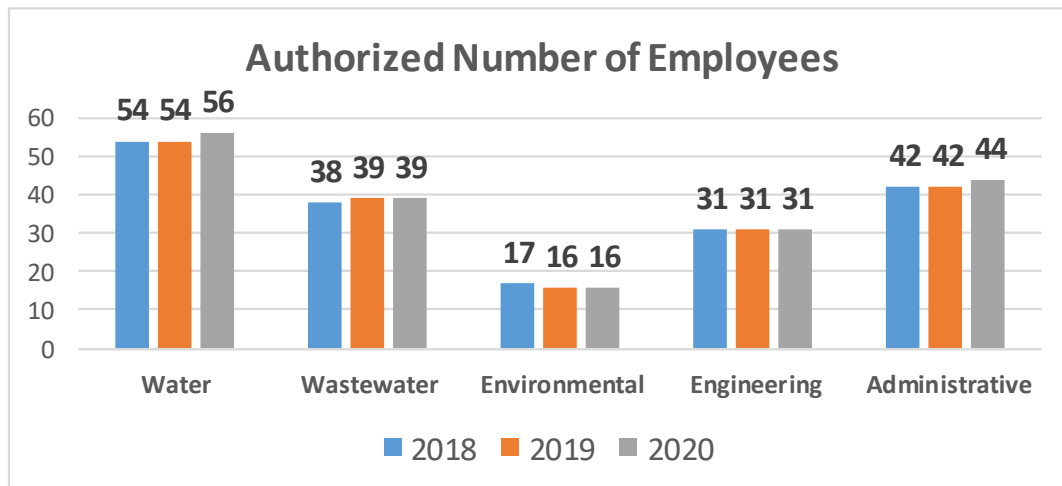
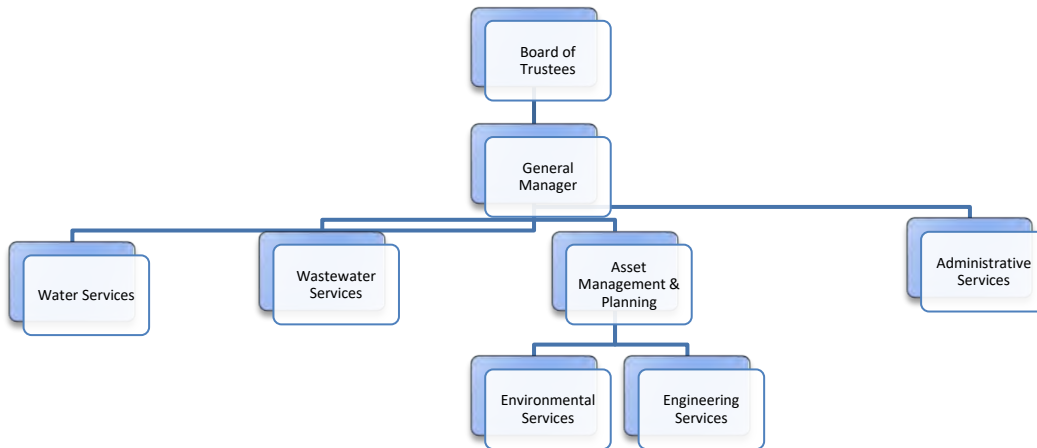
Water Rate Case Process

The proposed schedule to implement the next year's rate adjustment is as follows:

November 25, 2019	Board approves 2020 Budget.
January 13, 2020	Administration and Finance Committee reviews and makes final recommendation to be sent to customers. Finance staff will provide up-to-date financial information and revenue projections.
January 27, 2020	Board considers approving Administration and Finance Committee's recommendation.
February 10, 2020	Supporting documentation for rate adjustment is available to the Public
February 24, 2020	Publish notice of rate adjustment and provide notice to all customers. Notice is mailed to all customers and includes an invitation to attend the public hearing.
March 9, 2020	Special public hearing on proposed rate adjustment. General Manager and Treasurer provide information supporting the rate adjustment. Public has an opportunity to ask questions and provide feedback to the Board as they consider the proposed rate schedule.
March 23, 2020	Board business meeting – Approve final rate schedule. The final rate schedule incorporates changes based on the public hearing and Board's feedback.
April 24, 2020	File final rate schedule based on public hearing and Board review. Rate schedule is distributed to Maine Public Utilities Commission for informational purposes only.
May 1, 2020	Rate adjustment are effective date.

Organization Structure

The Portland Water District is overseen by an 11-person Board that is publically elected. The Board appoints a General Manager, who oversees the daily operation of the District. Operation is comprised of five departments – Water Services, Wastewater Services, Environmental Services, Engineering Services and Administrative Services.



- **Water Services** provides water treatment and distribution system operation and maintenance. Added Water System and Equipment operators.
- **Wastewater Services** provides wastewater treatment and interception/collector system operation and maintenance services. Added Associate Engineer in 2019.
- **Environmental Services** provides watershed protection and laboratory services. Decreased the number of Environmental Scientist by one in 2019.
- **Engineering Services** provides general engineering, facility and vehicle maintenance services.
- **Administrative Services** provides customer, computer, finance and general management services. Added Employee and Information Services employee.

A more detailed organization chart and description of services provided are located in the Operating Expense section. The Human Resource section provides more details on the proposed number of employees and 2020 changes.

Annual Planning/Budget Process

An outcome of the annual planning/budget process is a document that outlines the financial and operational plan for the upcoming fiscal year. The resulting annual operating and capital plan provides an overview of the resources expected to be available and how those resources will be used. Decisions made in developing the annual plan incorporate information from other planning processes and sources including the following:

Other Planning Processes and Information Sources:	Budget Document Location:
Mission Statement and Strategic Goals. At the beginning of the annual budget process, management reviews and updates our mission statement and strategic goals. One focus of the review was to identify how resources allocation decisions should be different.	Introduction Section, Mission Statement and Strategic Goals
Annual Budget Guidelines by Board. Board guidelines were established providing important budget parameters.	Introduction Section, Board Established Annual Budget Guidelines
External Factors. A review of the industry, economic, and stakeholders' trends provided information to make better planning decisions.	Introduction Section, External Factors Impacting the Budget
Multi-Year Ratemaking Revenue Projections. Water revenues and wastewater assessments projections are made for three years to assist in rate making. The proposed budget is consistent with the projections.	Individual Fund Projection in the Budget by Fund Section. Summary is included in the Appendix.
Capital Master Plans and Asset Evaluations Studies. The proposed budget incorporates recommendations from the various infrastructure plans/studies.	Capital Expenditures Section, Infrastructure and Operational Evaluation Plans
Customer Satisfaction Survey. A review of the customer satisfaction survey's results provided guidance on how best to allocate resources in the upcoming year.	Appendix Section, Customer Satisfaction Survey
Workforce Management. As part of the review of current employee demographics and future employees' needs, action steps were identified. The budget incorporates those action steps.	Human Resource Section, Workforce Management
Financial Policies. Financial policies were reviewed to assure budget decisions were made consistent with good financial standards.	Financial Policies Section
Employee Satisfaction Survey/Comments. General Manager's forum was held to receive input from all employees. A formal survey was conducted in 2018	Human Resource Section, Introduction Section

Planning/Budget Process Calendar

The outline below illustrates the process used to arrive at an adopted budget. The only legal requirement is that wastewater communities must be assessed the budgeted operating budget by January 15th.

May

- 1 Senior Management Team reviews budget process and timeline, stakeholders input, external factors impacting the budget, major policy and resource allocation issues, significant budget uncertainties, and long-term and short-term goals.
- 27-31 Senior Managers host meetings with Department Managers to review budget parameters and process

June

- 17 Department Managers submit first draft Operating Budget and conceptual-level Capital & Non-capital projects and initiatives
- 17 Board reviews the Staff's recommended guidelines and provides policy and high-level direction for the Budget

July

- 16 Senior Management Team provides feedback on first draft submittal and Board feedback
- 19 Department Managers submit second draft Operating Budget and preliminary-level Capital & Non-capital projects and initiatives.

Aug

- 16-20 Department Managers present second draft Operating and Capital budget to the Senior Management Team.

Sep

- 1 Department Managers submit third draft Operating Budget and Capital & Non-capital projects and initiatives. Finance and Managers meet to discuss the status of the current year CIP.

Oct

- 28 Budget is presented to the Board of Trustees.

Nov

- 11 Departments present Operating Budget and Capital & Non-Capital projects and initiatives to their respective Board Committee. The Full Board reviews the Five-Year Capital Improvement Plan.
- 25 Board considers adopting budget.

Board Committees' Department Review Responsibility

Administration and Finance – Executive Office, Customer Services, Information Services, Financial Services and Employees Services.

Operations – Water Services and Wastewater Services

Planning – Environmental Services and Engineering Services

Wastewater Communities: The proposed Wastewater Assessment for each municipality is presented and reviewed with each municipality at meetings scheduled between October 29 and November 24. By January 15, 2020, the District notifies each municipality of their certified assessment amount.

Mission Statement

The District's mission is to protect public health, safety, and the environment by providing our customers with reliable and affordable water, wastewater and related services. In order to fulfill the mission, the following six strategic goals have been established.

Goal 1 - Public Health:

The District will provide products and services that meet all federal, state and local quality standards.

Goal 2 - Public Safety:

The District will design and maintain its water system to meet modern firefighting needs.

Goal 3 - Environment:

The District will promote the sustainability of natural resources within Casco Bay watershed.

Goal 4 - Reliability:

The District can be trusted to provide its products and services in a manner that meets all reasonable customer expectations.

Goal 5 - Affordability:

The District will balance the delivery of products and services with customers' ability to pay water and wastewater rates and charges.

Goal 6 - Employees and Work Environment:

The District will have well trained and satisfied employees who will work in a safe and work environment conducive to productive work.

Strategic benchmarks have been created to indicate the District's performance over the long-term. The impact of variations in benchmarks performance is best understood looking at the long-term trend. Additional background explanations of the strategic goals and benchmarks with the impact to the budget are provided on the next six pages.

Annual objectives and tactical benchmarks are established to guide and monitor annual performance towards meeting our strategic goals - see individual departments' objectives and benchmarks in the Operating Expenses section.

Strategic Goals

Strategic Goal 1: Public Health

The District will provide products and services that meet all federal, state and local quality standards.

Background

The District's water operations are governed at the federal level by the Safe Drinking Water Act (SDWA). Ensuring compliance with the SDWA requires short- and long-term initiatives aimed at protecting, monitoring, and treating for water quality from the source to the tap. Protecting the source begins with protecting the watershed, and protecting the watershed begins with protecting the forest's natural ability to produce clean water. Therefore, the District's approach to protecting public health includes programs aimed at promoting forest conservation, monitoring and inspecting development in the watershed, monitoring the water quality of the lake and its tributaries, providing security of the area around the intakes, and performing education/outreach to keep the public involved in the process.

Strategic Benchmarks (updated periodically):

The District is in compliance with all drinking water regulatory standards. Two key measures are the quality of the source water in Sebago Lake and the ability to maintain an adequate level of disinfectant throughout the distribution system. The state of the lake is indicated by the Trophic State Index - an index that tracks water clarity along with the amounts of phosphorus and algae in the water. The current trophic state for Sebago Lake is good for drinking water quality. Chloramines are added to maintain a level of disinfectant throughout the distribution system. The level of chloramines is measured weekly at forty-three locations throughout the service area, and the treatment process is adjusted continuously to maintain desired levels.

Benchmarks:	1998	2003	2008	2013	2018
Percent of Days in Compliance with Water Regulations	100%	100%	100%	100%	100%
Water Quality: Sebago Lake Trophic State Index (goal – 24 to 32)	31	27	30	32	29
10th Percentile Chloramine Residual (goal 0.4 mg/L)	N/A	N/A	0.2 mg/L	0.3 mg/L	0.77 mg/L
Land in Conservation in the Watershed (acres)	N/A	0	350	1100	5826
Service Area Communities served by Education/Outreach Programs	N/A	N/A	10	11	10
Security (violations per 1000 visitors)	N/A	N/A	12	7	12

Current Status, Challenges and Impact to Current Budget:

A new water storage tank station in the 407 zone (Windham and Gorham) will be constructed in 2020.

Continue to allocate money to work with watershed partners to prevent non-point pollution into Sebago Lake. Continue developing the Sebago Clean Water coalition to generate funds to protect watershed land.

Strategic Goal 2: Safety

The District will design and maintain its water system to meet modern firefighting needs.

Background

One of the original reasons the District was created was to provide adequate water volume and pressure to combat fires.

A common benchmark measuring the fire-fighting capability is the community's public protection classification, a numerical grade given by the Insurance Service Office (ISO). The classification is developed based on grades given the community's fire department (60%) and water supply (40%) systems. The District is mainly responsible for the water supply system within our service territory. The classification is developed by the ISO, an international firm that provides information regarding property and liability risk.

Strategic Benchmarks (periodically by ISO):

The 2003 Comprehensive Water System Strategic Plan identified infrastructure and operational changes that would improve the water system rating within our service territory. The date indicates the last time the rating has been updated by ISO.

Benchmarks:

Stable or Improving Communities' ISO rating for Water Systems - Communities Improve/Stable Rating

Municipality	Percent of Municipality Served by the District	Water System (maximum = 40%)	ISO Rating Date
Cape Elizabeth	78%	36.54%	1995
Cumberland	43%	22.89%	2001
Falmouth	50%	32.93%	1992
Gorham	32%	34.20%	1993
Portland	94%	37.48%	2000
Raymond	3%	27.28%	2002
Scarborough	40%	32.46%	1991
South Portland	90%	37.35%	1999
Standish	13%	25.25%	1996
Westbrook	79%	36.84%	1996
Windham	37%	25.73%	2004

Current Status, Challenges and Impact to Current Budget:

The Capital Improvement Plan includes funding to replace water mains and hydrants, including \$6.1 million to continue upgrading the 407 zone, an area in Gorham and Windham, over the next 5 years. Additionally, staff will continue meeting with the municipal fire departments to identify action steps to improve. Annual inspection of all hydrants will be done and any inoperable hydrants will be fixed promptly.

Strategic Goal 3: Environment

The District will promote the sustainability of natural resources within the Casco Bay watershed.

Background

The District treats and returns to Casco Bay watershed 23 million gallons of wastewater each day. The discharged wastewater must meet certain wastewater regulations. Wastewater regulations fall under the provisions of the federal Clean Water Act (CWA). Passed in 1972, with significant amendments in 1977 when it became known as the CWA, it is implemented and enforced by the EPA and the Army Corp. of Engineers. The CWA establishes the basic structure for regulating pollutants discharging into the waters of the United States. It gives the EPA authority to implement pollution control programs, such as setting wastewater standards for industry. The CWA makes it unlawful to discharge a pollutant into navigable waters without a permit called the National Pollutant Discharge Elimination System Permit (NPDES).

The CWA provides that the EPA will create rules to implement the law, and will delegate to the state the administration and enforcement of the law on a day-to-day basis. In Maine, the Department of Environmental Protection (DEP) has been delegated this function, with EPA retaining concurrent authority to take enforcement action. The DEP has more stringent monitoring requirements for biosolids, whole effluent toxicity and mercury than the requirements established by EPA. The District's treatment plants must obtain a discharge permit issued by the DEP adhering to those stricter requirements.

Strategic Benchmarks (updated every 5 years):

The District meets the standards required by each plant DEP-issued wastewater discharge permit. The standards include numerous daily, weekly and monthly benchmarks. In addition, the elimination of any discharges of untreated wastewater during dry weather (i.e. – no rain or snow melt) to watershed is a goal.

	<u>2003</u>	<u>2008</u>	<u>2013</u>	<u>2018</u>
<u>Compliance with discharge permit:</u>				
East End Wastewater Treatment Facility	49	22	5	12
Westbrook / Gorham / Windham Treatment Facility	8	8	0	1
Cape Elizabeth Treatment Facility	10	13	2	5
Peak's Island (in Portland) Treatment Facility	0	3	0	8
Dry Weather Overflows	N/A	1	3	10

Current Status, Challenges and Impact to Current Budget:

Many of the non-compliance incidents occur during wet weather when the facilities cannot treat the volume of water resulting in untreated or less treated wastewater to be discharged to the watershed. In 2019, the focus in each system is as follows:

Cape Elizabeth – Assisting the town in identifying the source and solution for the overflow related to the Ottawa Road pump station.

Gorham/Westbrook/Windham – Assisting the city in eliminating combined sewer overflow in the city's collector system.

Portland - Assisting the city in eliminating combined sewer overflow in the city's collector system.

Strategic Goal 4: Reliability

The District can be trusted to provide its products and services in a manner that meets all reasonable customer expectations.

Background

The state has granted the District the exclusive authority to provide public drinking water service and wastewater treatment/interceptor service to customers in our service territory. Customers and regulators assume we will provide appropriate service 24/7. Water service standards are established by the Maine Public Utilities Commission and Department of Human Services; including standards related to customer service and billing. Wastewater service standards are established by the Maine Department of Environmental Protection.

Strategic Benchmarks (updated every 5 years):

The District periodically conducts a formal customer satisfaction survey. Customers expect us to provide two basic services reliably – to provide water to customers' homes and to treat wastewater delivered to District's system.

Current Status, Challenges and Impact to Current Budget:

	2003	2008	2013	2018
Water Service failure per million hours of available service - Total Customer Outage Hrs. / ((51,296 X 365 X 24) / 1,000,000)	15.8	15.7	9.4	13.2
Wastewater Reliability Index – WW Systems infrastructure that is In Service Full (ability to deliver design flow)				
WW Systems and Pumping Stations convey flow to treatment plants	Not available	98.6%	99.6%	Not available
WW Treatment Plants available to treat flow	Not available	100%	100%	Not available
Customer Satisfaction Survey Results	89%	85%	87%	75%

The 2017 customer satisfaction survey was completed and indicates satisfaction continues to be high with 75% of customers indicating they are satisfied or generally pleased with the level, quality and reliability of the water and wastewater services provided. We will continue investing in our 'value of water' campaign and explore offering additional self-help options including advance notification of certain events.

In 2020, the most significant water system project to increase reliability is the \$7.0 million investment in aging water mains, which will reduce main failures. Significant wastewater system projects/programs that will increase reliability include the renovating aging pump stations and treatment facilities.

Strategic Goal 5: Affordability

The District will balance the delivery of products and services with customers' ability to pay water and wastewater rates and charges.

Background

An industry affordability benchmark is to compare the typical household bill as a percent of median household income. The national standard is the utility bill is considered affordable if the annual bill is less than 2% of median income. The District water rates are well below the affordability standard with the typical household paying only 0.46% of median income. The Board established target is not to increase water rates greater than the rate of inflation. Since 1998, water rates are significantly below that target.

The Board's policy is to increase assessment to municipalities for wastewater service at or below the rate of inflation. Costs related to municipal requests for additional/expanded service and federal unfunded regulations may result in a higher assessment.

	1998	2003	2008	2013	2018	
Water Rates for a Typical 3-person household as a percent of Median Income	0.52%	0.42%	0.41%	0.46%	0.42%	
Water Revenue per Typical Customer Actual	\$ 228.12	\$ 210.72	\$ 221.64	\$ 254.16	\$ 292.68	
Inflation Adjusted		\$257.40	\$293.33	\$325.69	\$350.67	
Wastewater Assessments: (inflation 53.7%)						2013 vs 1998
Cape Elizabeth	\$ 944,000	\$ 863,052	\$ 1,049,052	\$ 1,365,084	\$ 1,575,912	67%
Cumberland	\$ 315,800	\$ 498,144	\$ 764,236	\$ 713,940	\$ 905,364	187%
Gorham	\$ 428,200	\$ 490,608	\$ 924,732	\$ 1,084,464	\$ 1,133,436	165%
Portland	\$ 6,972,900	\$ 8,753,220	\$ 9,951,852	\$ 10,540,044	\$ 12,616,080	81%
Westbrook	\$ 1,588,300	\$ 1,599,100	\$ 1,800,540	\$ 2,533,176	\$ 2,539,800	60%
Windham	\$ 46,000	\$ 45,996	\$ 214,320	\$ 351,756	\$ 366,768	697%

Current Status, Challenges and Impact to Current Budget:

Water rates are assumed to increase by 3.5% effective May 1, 2020. Since 1998, water rates have increased the same amount as the long-term inflation rate. The proposed increase is consistent with the Board of Trustees' direction to have small incremental water rate increases annually. Increases are needed to meet the increasing capital costs to replace aging water mains, funding a new capital reserve fund contribution and funding an adequate contingency fund.

In 2020, Wastewater assessments increased on average by 4.0% - higher than rate of inflation but at or below the level each municipality expected, except for the town of Cumberland.

Wastewater assessments have increased above the rate of inflation (53.7%) since 1998 %. The increase is related to meet municipal request for expanded service, additional regulatory requirements, and replacing aging infrastructure. To mitigate the upward pressure on assessments, the wastewater services area has reorganized its staff and continues to review processes and procedures to become more efficient.

Strategic Goal 6: Employees and Work Environment

The District will have well trained and satisfied employees who work in a safe and productive work environment.

Background

Since 1995, a periodic survey of all employees is conducted. The survey provides employee feedback on the work environment including questions related to compensation, management and policies.

The premium paid on workers' compensation is partially based on a modification factor (MOD). The factor compares the District's injury rate with other organizations with similar risk exposure. The District seeks workers' compensation injury rate that is no higher than industry average (i.e. – a rating of 1 or less).

Finding time for training is an important goal. The goal that has been established is an average of 80 training hours per employee.

Strategic Benchmarks (updated every 5 years):

	1998	2003	2008	2013	2018
District's biennial Employee Satisfaction Average Score - Range 1 (lowest) to 6 (highest)	3.52	4.02	4.42	4.48	N/A
Workers' Compensation Modification Factor – 1.00 = Industry average (goal is less than 1)	1.62	0.99	1.06	1.06	087
Average Training Hours Per Employee – current goal is 80 hours	22	55	83	105	82

Note: The employee satisfaction survey format was changed in 2018 so comparable numbers are not available.

Current Status, Challenges and Impact to Current Budget:

In 2017, an employee satisfaction survey was conducted. Based on the survey results, three areas of focus are: inconsistent application of policies, compensation, and improved internal communication. As surveys have traditionally been conducted every other year, another employee survey was held in fall 2019; results were being compiled at the time of this writing.

The current workers' compensation modification factor indicates that our injury rate is below average for our industry. We will continue our efforts to maintaining a rate below 1, which indicates an organization is average.

Management development and consistency of practice efforts continue through our commitment of an average of 80 hours of training per employee. The water and wastewater departments continue an apprentice program to provide a broad education to our new employees.

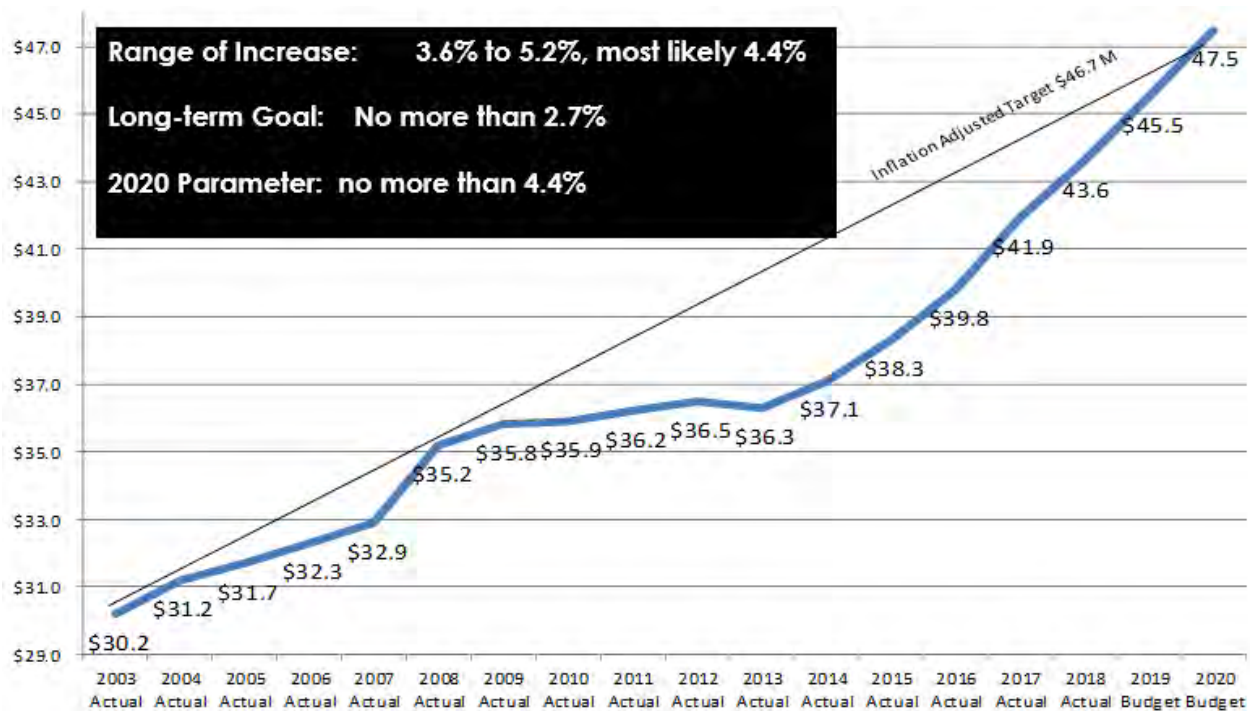
In 2020, an additional staff is proposed for the Employees Services department to continue improving services and programs focusing on employment development and support.

Board Established Annual Budget Guidelines

To help guide staff, the Board of Trustees set four guidelines for the budget process.

<u>Guideline</u>	The Operating Funds' Budget will not increase more than the rate of inflation over the long-term. The annual target is rate of inflation plus any unfunded federal/state/local mandates and funding for water main renewal of up to 1% of water revenues. At their June meeting, the Board established a budget target of \$47.5M. The target would be higher than the long-term average and was accepted due to the increasing capital project needs.
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The Guideline is established to limit growth of the budget to a reasonable growth level not exceeding the inflation rate. The limit can be exceeded if a municipality requests expansion of service or service level. **Proposed budget is \$47.5 million, \$54,000 better than Board guideline.**



<u>Guideline</u>	Capital expenditures will be consistent with the levels recommended in the Water and Wastewater system plans.
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A guideline was established to ensure capital projects are consistent with various plans including the Water Master Plan, Comprehensive Plant and System plans, and Combined Sewer Overflow plans. **The proposed capital expenditures meet the guidelines – see Infrastructure and Operational Evaluation Plans in the Capital Expenditures section for details.**

Board Established Annual Budget Guidelines (continued)

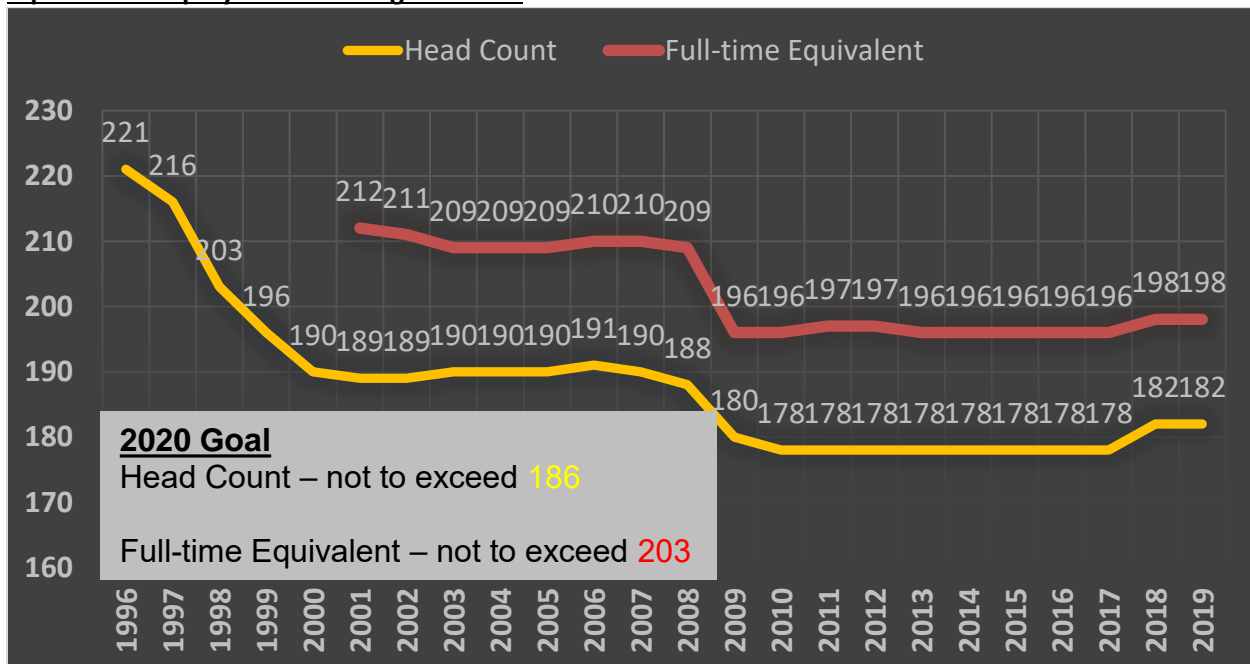
<u>Guideline</u>	Water Revenue Requirement and Wastewater Assessments increases will not exceed the rate of inflation excluding the impact of mutually agreed upon changes in services, capital investments, surplus fund utilization or Board's request to increase surplus balance.
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All Wastewater assessments and Water Rates Increases meet or are below the Board of Trustees and Municipal expectations except Cumberland due to higher system maintenance costs and Falmouth treatment assessment.

	2020 Target		2020 Proposed Budget	
Water	\$25,686,370	3.50%	\$25,684,897	3.49%
Cape Elizabeth	\$1,705,380	8.5%	\$1,705,380	8.4%
Cumberland	\$906,807	0.2%	\$965,292	6.6%
Gorham	\$1,160,707	2.4%	\$1,160,676	2.4%
Portland	\$13,659,198	8.3%	\$12,863,340	2.0%
Westbrook	\$2,880,704	13.6%	\$2,820,768	11.2%
Windham	\$389,421	6.2%	\$389,004	6.1%

<u>Guideline</u>	The number of employees will not exceed 186 and the full-time equivalency (FTE) will not exceed 203.
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Salary and benefits are one of the District's most significant costs. To control costs, a targeted headcount is established. **The proposed budget contains 186 employees and 202.9 full-time equivalent employees – meeting the Goal.**



Employees Suggested Action Items

During the planning stages of the budget development, the General Manager held forums giving all employees an opportunity to share suggestions to be included in the 2020 budget. Each item was identified either as completed, in progress or already in place. The table below identifies some of the significant items and the impact to the 2020 budget in red.

Employee Suggestion:

Completed

Safety-related:

- 4 bright and quiet LED light towers were purchased for Water for night field work. **No additional costs in 2020.**
- LED lighting was installed inside and out on the 2019 crew truck and this will be considered for other vehicles at trade-in. **For each vehicle purchased, it is expected to cost an additional \$200.**
- Powered Air Purifying Respirators (PAPR) have been purchased for SLWTF. **One time cost in 2019 to purchase with no more than \$1,000 of costs to maintain in 2020.**

Benefits-related:

- The weekly amount paid to employees not taking the health insurance will be increased starting January 2020 from \$30 per week to 30% of the single HMO premium amount, which will be \$57.60 per week. **2020 Budget impact is approximately \$2,000.**
- Carhartt winter jackets were made available to field personnel. **In 2019, the employee clothing allowance was increased to \$140 from \$125 to cover the cost of clothing including better winter jackets. Increased costs by approximately \$2,000.**

Staffing-related:

- IT will re-establish a regular visit to remote sites. **Approximately \$500 of additional mileage costs.**
- PWD crews will complete short renewal projects when appropriate. **Any costs incurred will reduce the water fund operating expenses and increase the water capital fund expenditures.**

Work environment related:

- Transition to Google Chrome as default browser is underway. **No additional costs in 2020.**
- Cape and Westbrook access gate control has been moved to East End to streamline entry. Westbrook gate now closes completely with the automatic mechanism. **No additional costs in 2020.**
- The front desk can now be added to Outlook scheduling as a resource so that PWD meeting hosts can be informed of guests and deliveries. **No additional costs in 2020.**
- New boiler has been installed and is functional at East End. **Minor budget reduction due to more efficient boiler.**
- Spare Barnes pump and M-Scope locators have been made stockroom items to improve response to field situations. **One-time cost of approximately \$6,000 in 2019. No additional costs in 2020.**

Employees Suggested Action Items (continued)

Employee Suggestion:

In progress

- Adding safety assessment of climbing gear for standpipes onto the agenda of the Fall Protection Committee. **Estimated cost is \$5000.**
- Additional person has been budgeted for Information Services for 2020 for overall additional computer support and to improve response time on help desk requests. **2020 Budget impact is approximately \$100,000.**
- Water has budgeted to increase staff to keep up with asset needs. **2020 Budget impact is approximately \$150,000.**
- Improving the onboarding process for new employees. **No additional costs in 2020.**
- Departments will share more of their presentations outside the originating group to keep people in other departments better informed. **No additional costs in 2020.**
- Including all PWD facilities in recycling efforts. **Approximately \$2,000 in addition cost.**

Already in place

- All training requests will be considered, whether offered on-line, as individual courses or certificate programs at local colleges/universities, etc. Refer to the Employee Education and Development Program policy. **No additional costs in 2020.**
- Any appropriate documents will be posted on @pwd.org into the document library to make more detailed information available to external customers. **No additional costs in 2020.**
- Desktop IM application capability exists with recently upgraded Mitel phone system. Requests for setup and training can be directed to supervisors. **No additional costs in 2020.**
- Taking of exams for required licenses is allowed on PWD time **No additional costs in 2020.**
- Departments hold meetings on a regular basis. **No additional costs in 2020.**

External Factors Impacting the Budget

Economy

The local economy has rebounded from the last national recession. State unemployment is 2.9% and has been under 4% for 47 months in a row. The unemployment rate is better than the national unemployment rate of 3.5%. Cumberland County's unemployment rate is 1.7%.

Cumberland County's real estate market continues to thrive with total number of home sales are up by 2% and home prices are up 7% over the prior year. In the 2020 budget, the water consumption projection includes the same number of households as of July 31, 2019 and assumes no customer growth. A typical year's growth in new customers is 1.5% (750 accounts).

The national economy continues the trend of keeping interest rates relatively lower than historical levels affecting interest earning on investments.. However, both investment and have risen in the past year. The 2020 budget includes an increase in interest income of \$202,000, or 40%, increase in earnings from operating funds investments as the average rates increase to 2.0% from 1.5%.

The strong equity market returns caused the annual pension costs to be maintained despite the higher pension liability. The 2020 estimated actuarially determined contribution to our pension plans is approximately \$1.1 million, which is the same as the prior year.

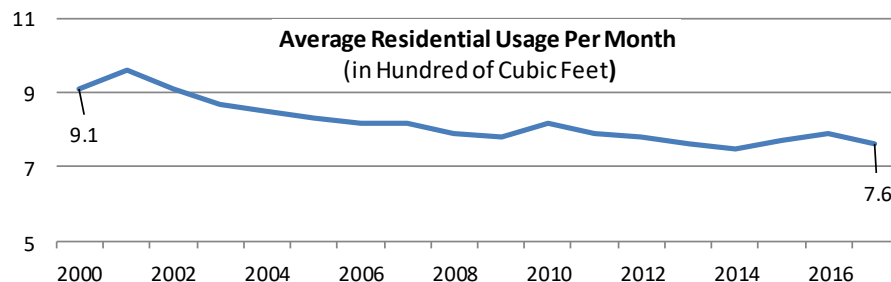
The chemical, metal and fuel commodity market prices are impacted by the economy's health and have been volatile in the past couple of years. Approximately 10% of the District's expenses are related to chemical, metal and fuel markets. The 2020 budget reflects the commodity prices available in mid-2019.

Regulatory Mandates

The water and wastewater industry must comply with various federal and state regulations with two of the most important regulations being the Safe Drinking Water Act (SDWA) and Clean Water Act (CWA). The current regulatory focus is compliance with the long-term surface water disinfection rule under the SDWA and the combined sewer overflow requirements under the CWA. The 2020 Budget includes the impact of debt service of \$13.5 million in capital expenditures and approximately \$200,000 in operating expenses addressing these two focus areas.

Water Consumption

Though the District has ample supply of water, consumers have reduced their water consumption. Since 2000, the average residential household usage (HCF) has declined by more than 16%. Some of the reasons are rising wastewater fees encouraging conservation and the availability of more water efficient household appliances.



Significant Budget Uncertainties

During the budget development, certain assumptions are made. Several budget areas have significant uncertainties including the following:

Salaries and Wages (\$12.15 million or 25.6% of total budget). A new three year union contract was agreed to during the budget process covering wages from November 2018 to October 2021. For 2020 budget purposes, union wage rates were assumed to increase by 3.0% effective in November 2019 and 2020, Non-union pay rates were assumed to increase by 3.0% effective January 1, 2020.

In addition, the budget assumes 17,458 hours of overtime and doubletime pay. The amount of overtime and doubletime is directly related to amount of emergency repair work that is needed. Additional hours were included in the budget to assist in the implementation of the new Asset, Billing and Customer Relations computer system, though the actual hours needed are unknown. For every additional 1,000 hours of overtime/doubletime pay, costs increase by approximately \$40,000.

Purchased Power (\$1.93 million or 4.1% of total budget). Electricity costs consist of delivery charges purchased from Central Maine Power (\$822,401) and energy costs purchased from Constellation Energy (\$1,107,888). Typically, CMP implements a rate adjustment effective July 1st. The amount of the 2020 increase is unknown. The 2020 budget assumes a 3% increase. For every variance of 1%, the budget would be impacted by approximately \$8,000. Energy contracts locks in the prices for the whole year.

The actual amount of electricity used varies primarily based on weather conditions, which impacts the amount of water produced and wastewater processed. Since 2007, the variance between the highest and lowest kilowatt amount of electricity for individual accounts in total is 11%, which would impact the budget by approximately \$200,000.

Chemicals (\$1.22 million or 2.6% of total budget). The chemical contract is put out to bid each December. Prices used for the budget are estimates using the June market prices. Chemical prices have been volatile and have reacted to the global/national economy.

Biosolids Disposal (\$1.72 million or 3.6% of total budget). The volume of material left at the end of the wastewater process can vary significantly based on weather and operational challenges. A key measurement is the percent of solids left after removing as much water as possible from the material. The 2020 budget assumes 21%. In the past 5 years, the average has varied from 18% to 22%. A 1% difference is approximately \$86,000.

Weather The weather is a noteworthy determinant of operating expenses. The timing and duration of below freezing weather impacts the number of water main and service leaks. The amount of snowfall and timing of snow melt and rainfall impacts the amount of storm water that must be pumped to and treated by wastewater plants. The duration of hot summer days impacts the amount of water produced by the water treatment facility. For this budget, the past three-year average of water produced and wastewater treated was assumed for operating expenses projections.

Major Policy and Resource Allocation Decisions

Operating Budget

Personnel. Four (4) new positions are proposed – a Water Operator and Equipment Operator 1 in Water Operations and a IS Business Systems Analyst and Employee Services Consultant in Administrative Services. In addition two (2) positions were reclassified as two Technical Maintenance Person – Mechanical/Electrical positions were replaced by two Technical Maintenance Person positions.

Overall, the budget continues our emphasis on training employees with the continued goal of providing an average of 80 hours training.

New billing/customer relations and computerized maintenance management systems are being configured and integrated with a timeline to go live in the fall 2020. These significant projects will impact every employee at the District, ten of whom are dedicated to the implementation.

Employee Benefits The costliest employee benefits are health insurance and pension benefits. Health insurance premiums decreased by 2.0%. The budget increase of 2.2% (\$53,805) was due to the additions to headcount. The defined benefit plan contributions in the 2020 Budget was relatively unchanged at \$1.12 million. The contribution is consistent with the Board adopted long-term funding policy as estimated by the District's actuary. Overall pension related expenses were up \$58,888 (3.7%) primarily due to the \$50,000 increase the match to employees' defined contribution (457) plans.

Wastewater Sewer Lines Inspection In 2008, a commitment was made to inspect all sewer lines at least once every 10 years. In 2020, \$61,250 was allocated to meet that commitment.

Wastewater Combined Sewer Overflow (CSO) Monitoring To assist the municipalities in meeting their federal CSO requirements, the District remotely monitors the flow. In 2020, \$156,000 was allocated to meet their request.

Water System Flushing Starting in 2012, a renewed effort was made to flush the whole distribution system over a 3-year cycle. Flushing the system improves the water quality in the distribution system. The 2019 budget continues this effort by allocating close to \$89,000.

Partnership for Safe Water Starting in 2016, staff allocates approximately 1,000 hours participating in the water distribution system benchmarking program through the Partnership for Safe Water.

Renewal and Replacement - The annual commitment of current revenue committed to capital projects increased to \$5.56 million which is an increase of \$451,800 over last year's budget.

Major Policy and Resource Allocation Decisions (continued)

Capital Projects

The 2003 water strategic master plan noted that a considerable amount of water mains will be reaching the end of their useful life in the next 20 years. In 2020, the amount dedicated to replace aging water mains will be \$7.0 million. In 2020, part of the \$7.0 million (\$500,000) will be dedicated to replace smaller mains.

Additionally, a \$1.0 million main will be upgraded in the 407 Zone in conjunction with construction of the new Ward's Hill tank. Water Services and Engineering Services staff will allocate significant resources to manage these projects. Water Services has included additional staffing due to the level of effort allocated to water main inspection.

Other significant capital projects include the following:

- Westbrook Regional Wastewater Treatment Plant: In 2020, planning will begin construction on the \$12 million aeration project.
- Portland's East End Wastewater Treatment Plant: Significant upgrades to electrical system is planned (\$1.6 million)
- Pump Station upgrades in Cape Elizabeth (Maiden Cove - \$ 430,000) and Portland (Baxter Boulevard - \$1,950,000)
- Several projects started in previous years will be completed including Ward's Hill water tank construction and Portland's Fore River Wastewater Pump Station.

Revenues

To balance the desire to provide funding for infrastructure improvement and operational needs with keeping water rates affordable, the Board adopted a policy of small modest annual increases close to the rate of inflation. The 2020 budget assumes a 3.5% increase in rates.

The 3.5% increase includes allocating 1.0% to the Capital Reserve fund. The Maine Public Utilities Commission adopted a rule in 2013 allowing the District to increase water rates up to 10% of water revenues and dedicate revenues for capital improvement. After the proposed increase, the percent of water revenue allocated to the Capital Reserve annually will be 6.67%. The proposed budget assumes the additional reserve will be used to pay the debt service of \$2 million bond to finance replacing aging water mains.

2020 Operating Budget Summary

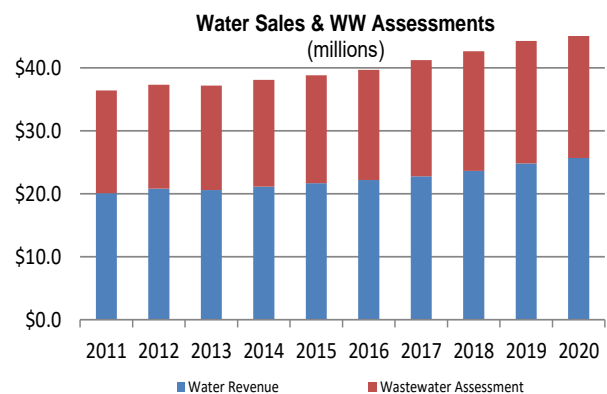
The proposed budget includes \$47.49 million in revenues and expenses.

Revenues

The two major revenue sources are water sales (\$25.7 million or 54.1% of total revenue) and wastewater assessment revenues (\$20.2 million or 42.6% of total revenue). Wastewater revenues have increased from \$16.29 million (24.0%) since 2011 principally due to addressing capital needs requested by municipalities or aging infrastructure.

Water revenues are generated from potable water and sprinkler charges to individual customers, and public fire protection charges to municipalities. The 2019 Budget assumes an increase of 3.5% over current rates effective May 1, 2020.

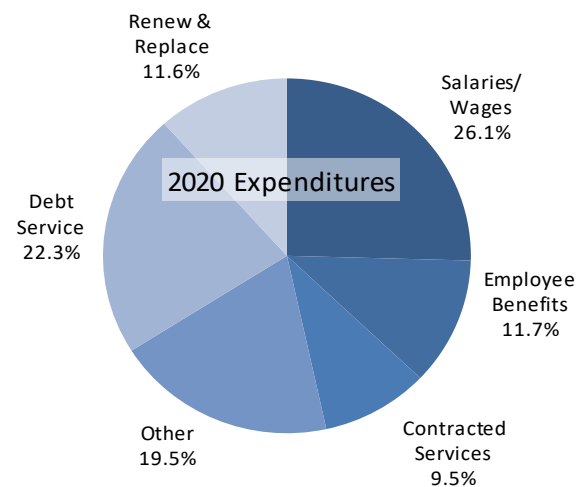
Wastewater assessments are the amounts billed individual municipalities to provide collection, sewer treatment, interception, utility billing services and, by request, collection and billing services. Assessments in 2020 increased 4.0% overall (\$770,100)



Expenses

Operating Expenses increased to \$47.5 million, an increase of 4.3%.

Personnel Costs, (Salaries/Wages and Employee Benefits) which are 38.9 % of the total budget, increased 5.6% due to the average labor rate increase of 3.0% and the addition of four (4) positions. Debt Service (22.3% of expense) increased 2.8% due to new debt issues. Contracted Services (\$4.5 million) increased only 0.8% (\$36,609). Renewal and Replace contributions increased \$451,800 (8.8%) while Other Expense increased \$776,028 (9.1%).



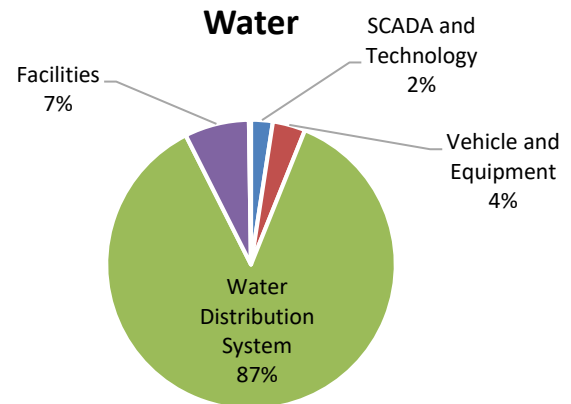
2020 Capital Budget Summary

The proposed Capital Budget is \$28.08 million with projects for the water and wastewater funds of \$10.95 and \$17.13 million, respectively.

Water

Of the \$10.95 million in water capital projects, the largest component (87%) involves the renewal of water distribution assets such as mains, services, meters and hydrants. The other categories include water facilities and security (7%), vehicles and equipment (4%), technology and SCADA (2%) and water supply (<1%). The implementation of a \$4.6 million Billing and Customer Relations & Computerized Maintenance Management software systems, started in 2018, continues to be a significant technology project in 2020.

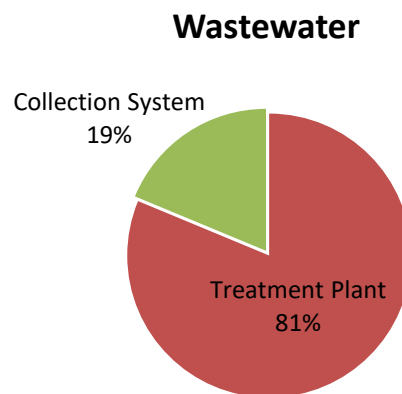
The projects will be funded by issuing \$7 million in bonds and utilizing \$3.95 million in drawdowns from renewal and replacement funds.



Wastewater

The largest project included in the \$17.13 million wastewater capital plan is the \$11.25 million aeration & clarifier upgrade at the Westbrook WWTF. A total of \$3.95 million is planned for the East End WWTF power project that includes connecting the plant to CMP's new substation. Several projects are also in place for WW pump stations/collection, such as: \$1.95 million for upgrades to Baxter Blvd. PS in Portland, \$430k for upgrades to Maiden Cove PS in Cape Elizabeth, and \$300k for force main renewal under Little River Bridge in Gorham.

The projects will be funded by issuing \$11.68 million in bonds and by utilizing \$1.75 million in drawdowns from renewal and replacement funds.



2020 Combined Water and Wastewater Operating Funds

Total revenues are \$47.49 million, \$1.95 million or 4.3% higher than last year's budget. The Budget proposes a 3.5% water rate increase effective May 2020. Wastewater Assessment increases for the full year are budgeted in Cape Elizabeth (8.4%), Cumberland (6.6%), Gorham (2.4%), Portland (2.0%), Westbrook (11.1%) and Windham (6.1%).

Operating Expenses are \$47.49 million, an increase of 4.3%. The following pages provide additional detail.

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Beginning Fund Balance	\$11,270,570	\$11,969,153	\$11,984,793	\$12,888,498		
Water Sales	24,056,708	11,111,241	24,817,595	25,686,370	868,775	3.5%
Assessment Income	19,003,536	9,724,236	19,448,472	20,218,572	770,100	4.0%
Contracted Billing Income	208,440	106,194	212,388	212,460	72	0.0%
Interest Income	637,672	614,553	505,383	707,747	202,364	40.0%
Other Income	772,566	369,651	553,614	664,790	111,176	20.1%
<u>FEMA Reimbursement</u>	<u>-6,293</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>n/a</u>
Total Revenue	44,672,629	21,925,875	45,537,452	47,489,939	1,952,487	4.3%
Salaries & Wages	10,785,763	5,376,970	11,507,789	12,149,805	642,016	5.6%
Employee Benefits	5,397,419	2,575,405	5,520,409	5,577,447	57,038	1.0%
Biosolids Disposal	1,790,923	923,853	1,674,962	1,722,166	47,204	2.8%
Chemicals	1,033,051	623,343	1,149,524	1,221,909	72,385	6.3%
Contracted Services	4,106,137	1,630,701	4,484,961	4,521,570	36,609	0.8%
Deferred Cost W/O	561,101	5,050	10,100	0	-10,100	-100.0%
Heat/Fuel Oil	347,064	205,314	331,981	386,485	54,504	16.4%
Insurance	190,615	97,879	196,845	211,175	14,330	7.3%
Materials & Supplies	1,687,816	720,455	1,752,296	1,760,135	7,839	0.4%
Other Expense	659,070	301,958	782,000	836,146	54,146	6.9%
Purchased Power	1,950,747	981,109	1,751,432	1,930,289	178,857	10.2%
Regulatory/Taxes	228,163	206,205	213,965	244,649	30,684	14.3%
Tele/Other Utilities	384,967	224,723	356,021	365,099	9,078	2.5%
Transportation	1,071,205	536,966	1,139,310	1,167,423	28,113	2.5%
<u>Trans Offset</u>	<u>-775,113</u>	<u>-366,992</u>	<u>-829,454</u>	<u>-840,466</u>	<u>-11,012</u>	<u>1.3%</u>
Department Expense	29,418,928	14,042,939	30,042,141	31,253,832	1,211,691	4.0%
Debt Service & Lease Expense	9,342,054	5,039,612	10,392,178	10,678,552	286,374	2.8%
Renewal & Replacement - Direct	3,932,741	2,120,274	4,240,549	4,477,349	236,800	5.6%
Renewal & Replace - Indirect	850,000	441,906	850,000	1,050,000	200,000	23.5%
<u>Renewal & Replacement - Contracted</u>	<u>52,910</u>	<u>7,500</u>	<u>15,000</u>	<u>30,000</u>	<u>15,000</u>	<u>100.0%</u>
Operating Expense	43,596,633	21,652,231	45,539,868	47,489,733	1,949,865	4.3%
Current Surplus (Deficit)	1,075,996	273,644	-2,416	206		
Transfer to R&R	-368,299	-125,000	0	0		
Transfer to Capital Reserve	-169,596	-63,919	-127,838	-279,927		
Transfer to Land Fund	0	0	0	0		
Land Cash Reserve Expense	0	25,270	0	0		
OPEB Surplus Allocated	160,486	0	0	0		

2020 Combined Operating, Capital and Grant Funds

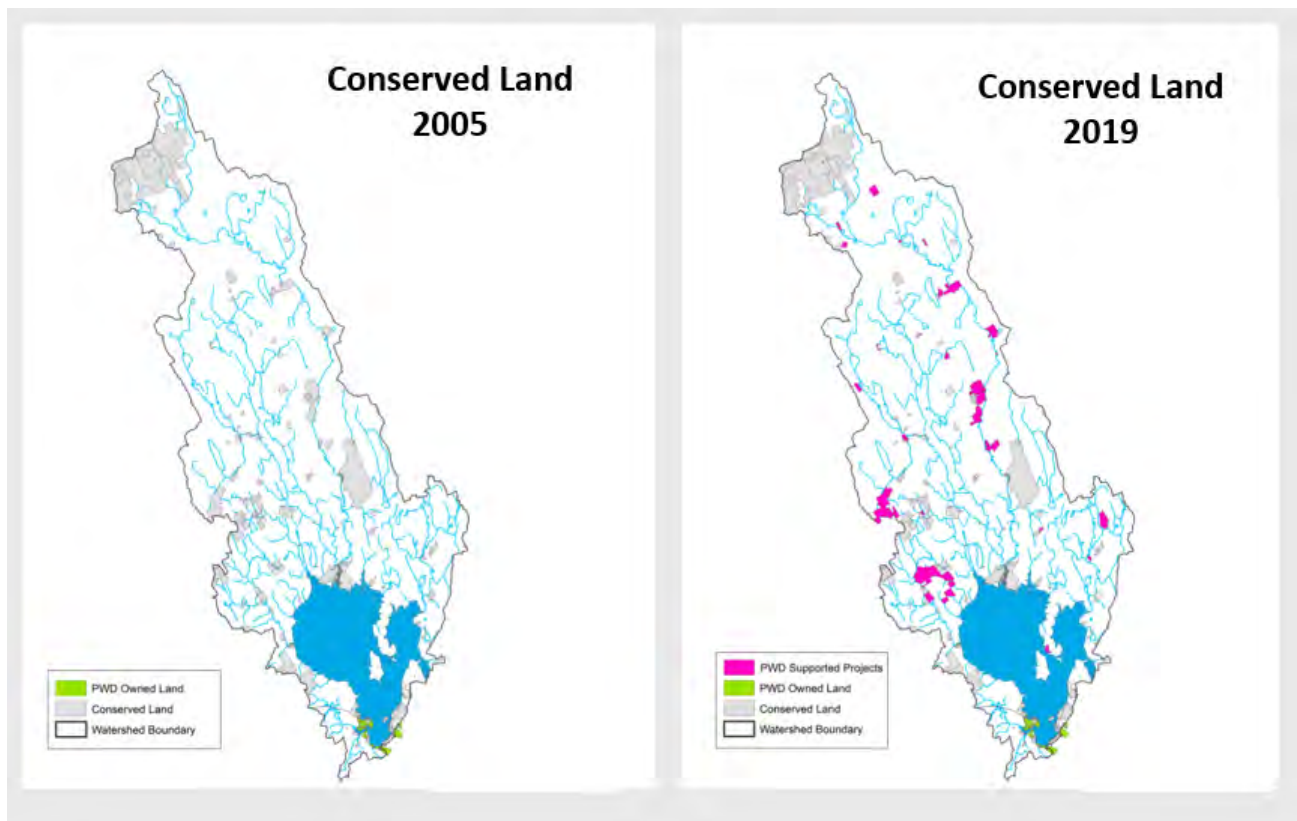
The total combined revenue and funding for 2020 is \$75.6 million, total combined expenditures are \$75.6 million. The combined budgeted surplus for 2020 is \$21,119.

Operating fund details are included in Operating Revenues, Departmental Expense and Human Resources Sections. Capital funds details are included in the Capital Finance and Capital Expenditures Sections. The Budget by Fund Section provides a summary of the Operating and Capital budget by individual enterprise fund – water fund and six (6) wastewater funds for each community provided with wastewater service.

	Operating	Capital	Land Fund	Total
Water Sales	\$25,686,370	-	-	\$25,686,370
Assessment Income	20,218,572	-	-	\$20,218,572
Water Bond	-	7,000,000	-	\$7,000,000
Water R&R	-	3,946,000	-	\$3,946,000
Wastewater Bond	-	15,380,000	-	\$15,380,000
Wastewater R&R	-	1,750,000	-	\$1,750,000
Contracted Billing Income	212,460	-	-	\$212,460
Interest Income	707,747	-	40,914	\$748,661
Other Income	664,790	-	-	\$664,790
Total Revenue	47,489,939	28,076,000	40,914	75,606,853
Salaries & Wages	12,149,805	386,717	-	12,536,522
Employee Benefits	5,577,447	158,752	-	5,736,199
Biosolids Disposal	1,722,166	-	-	1,722,166
Chemicals	1,221,909	-	-	1,221,909
Contracted Services	4,521,570	26,916,187	-	31,437,757
Deferred Cost W/O	-	-	-	-
Heat/Fuel Oil	386,485	-	-	386,485
Insurance	211,175	-	-	211,175
Materials & Supplies	1,760,135	537,300	-	2,297,435
Other Expense	836,146	-	20,000	856,146
Purchased Power	1,930,289	-	-	1,930,289
Regulatory/Taxes	244,649	-	-	244,649
Tele/Other Utilities	365,099	-	-	365,099
Transportation	1,167,423	77,044	-	1,244,467
Trans Offset	(840,466)	-	-	(840,466)
Operating Expense	31,253,832	28,076,000	20,000	59,349,832
Debt Service	10,678,552	-	39,791	10,718,343
Renewal & Replacement - Direct	4,477,349	-	-	4,477,349
Renewal & Replace - Indirect	1,050,000	-	-	1,050,000
Renewal & Replace - Contracted	30,000	-	-	30,000
Total Expense	47,489,733	28,076,000	59,791	75,625,524
Surplus (Deficit)	206	-	(18,877)	(18,671)

Land Fund

In the 2020 budget document, transactions related to protecting the watershed were separated from the Operating Fund on the Combined Funds statement on the adjacent page. The District has \$2.3 million reserved for activities to protect the watershed land including purchasing conservation easements and contributions to organization supporting such efforts. A three-year \$20,000 pledge has been made to Sebago Clean Waters. The 2020 Budget assumes the District issues its first bond in support of the effort – a \$245,000 bond to purchase a conservation easement on a property in Sebago called Tiger Hills.



GFOA Budget Presentation Award

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to Portland Water District, Maine for its annual budget for the year beginning January 1, 2019. In order to receive the award, a government unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communication device.

This award is valid for a period of one year only. We believe our current budget continues to conform to program requirements, and are submitting it to GFOA to determine its eligibility for another award.



GOVERNMENT FINANCE OFFICERS ASSOCIATION

Distinguished Budget Presentation Award

PRESENTED TO

Portland Water District

Maine

For the Fiscal Year Beginning

January 1, 2019

Christopher P. Morill

Executive Director

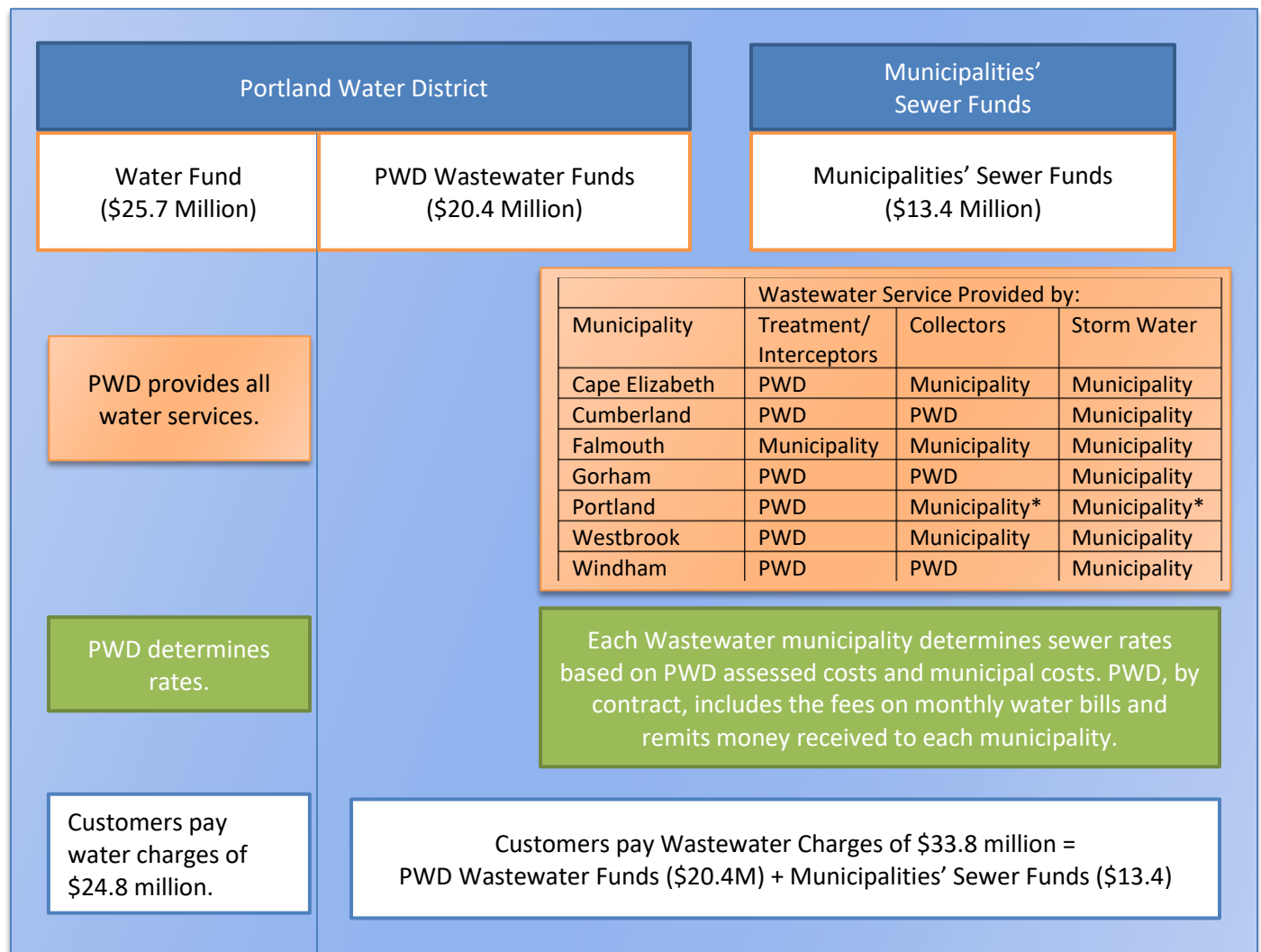
Introduction

The District uses seven enterprise funds – a water fund and six wastewater funds. The six wastewater funds are for the towns of Cape Elizabeth, Cumberland, Gorham and Windham and the cities of Portland and Westbrook. Each of the seven funds has a separate operating and capital budget appropriation. Details are provided for each fund in the Financial Summary section.

Relationship between Portland Water District Funds/Municipalities' Sewer Funds and the Ratepayer

The District provides water service directly to ratepayers. The cost of water service is recorded in a separate enterprise fund. The District bills ratepayers' individual monthly charges to customer.

The District provides certain wastewater services on behalf of six communities – each with a separate enterprise fund. The services provided by the District and Municipality are listed below. The District bills the Municipality for services rendered. The Municipality determines the ratepayers' rates to recover the District bill and their internal costs. The Municipality has requested the District to include these monthly fees on the water bill mailed to the Ratepayers.



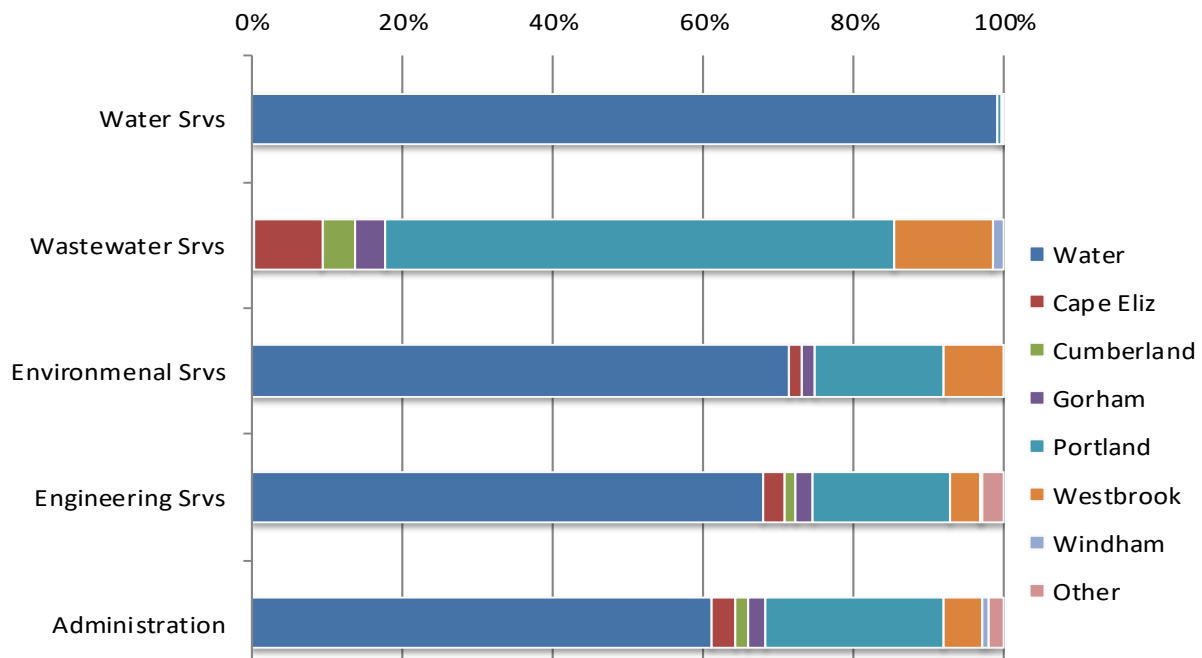
*By contract, the District maintains collectors and storm drain system on Peaks Island, a small part of Portland

Relation of Functional Units (Departments) to Funds

As expenses are incurred, each department charges a cost center, which indicates to what fund the expenditure belongs. The totals below show how the costs for each department are spread across the organization. Not surprisingly, 99.1% of the costs of the Water Services department are assigned to the Water Fund and 99.8% of the Wastewater Services department costs go to the Wastewater funds. The expenditures of the remaining departments assign between 61.0% and 71.5% of costs to the Water Fund with the remaining going to the Wastewater funds.

Department	Dept Exp	Water	Cape Eliz	Cumber	Gorham	Portland	Westbr	Windham	Other
Water Srvs	\$9,207,119	99.1%	0.0%	0.0%	0.0%	0.6%	0.1%	0.0%	0.2%
Wastewater Srvs	10,149,276	0.2%	9.2%	4.2%	4.1%	67.8%	13.0%	1.5%	0.0%
Environmenal Srvs	2,124,837	71.5%	1.7%	0.0%	1.7%	17.0%	7.9%	0.2%	0.0%
Engineering Srvs	4,259,770	67.9%	2.9%	1.3%	2.3%	18.5%	3.9%	0.4%	2.8%
Administration	6,064,147	61.0%	3.1%	1.8%	2.3%	23.6%	5.4%	0.6%	2.2%
Non-Departmental	289,149	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Department Exp	32,094,298								
(less) Trans Exp	(840,466)								
Fund Expense	31,253,832								

Allocation of Costs Between Departments and Funds

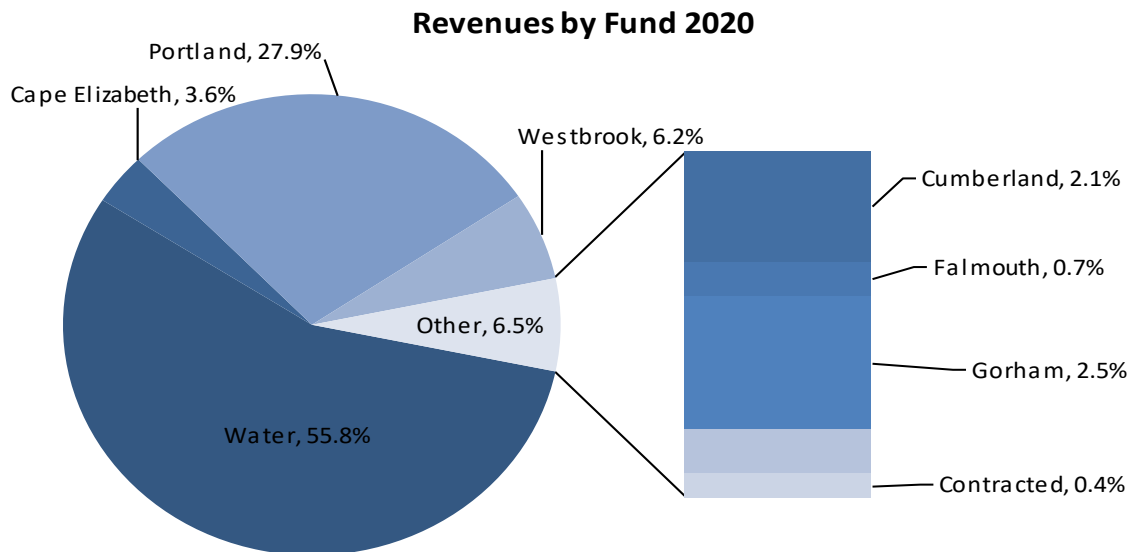


More details on how costs are allocated between departments and funds are included in the Financial Policy section.

2020 Operating Budget by Fund Summary

The table provides a summary of all funds and contract billing cost centers with a grand total. The individual fund information is on the following pages.

	Total	Water	Cape Eliz	Cumber	Gorham	Portland	Westbk	Windham	Falmouth/ Contract
Beg Balance	\$12,888,498	\$7,495,835	\$439,022	\$256,136	\$294,783	\$3,498,825	\$786,814	\$42,317	\$74,766
Water Revenue	25,686,370	25,686,370	-	-	-	-	-	-	-
WW Assess	20,218,572	-	1,705,380	965,292	1,160,676	12,863,340	2,820,768	389,004	314,112
Contract Billing	212,460	-	-	-	-	-	-	-	212,460
Interest Income	707,747	408,100	20,884	13,303	18,455	164,504	72,695	8,103	1,703
Other Income	664,790	426,290	-	-	-	200,000	38,500	-	-
	47,489,939	26,520,760	1,726,264	978,595	1,179,131	13,227,844	2,931,963	397,107	528,275
Depart Expense	31,253,832	16,963,097	1,281,303	589,573	687,208	9,403,596	1,957,943	216,221	154,891
Debt Service	10,678,552	6,094,410	295,350	303,578	378,541	2,507,235	622,953	139,975	336,510
Renew & Repl	5,557,349	3,461,780	149,611	85,444	113,382	1,317,013	351,067	40,911	38,141
	47,489,733	26,519,287	1,726,264	978,595	1,179,131	13,227,844	2,931,963	397,107	529,542
Surplus (Deficit)	206	1,473	-	-	-	-	-	-	(1,267)
Xfer-Cap Resrv	(279,927)	(279,927)	-	-	-	-	-	-	-
Ending Surplus	\$12,608,777	\$7,217,381	\$439,022	\$256,136	\$294,783	\$3,498,825	\$786,814	\$42,317	\$73,499

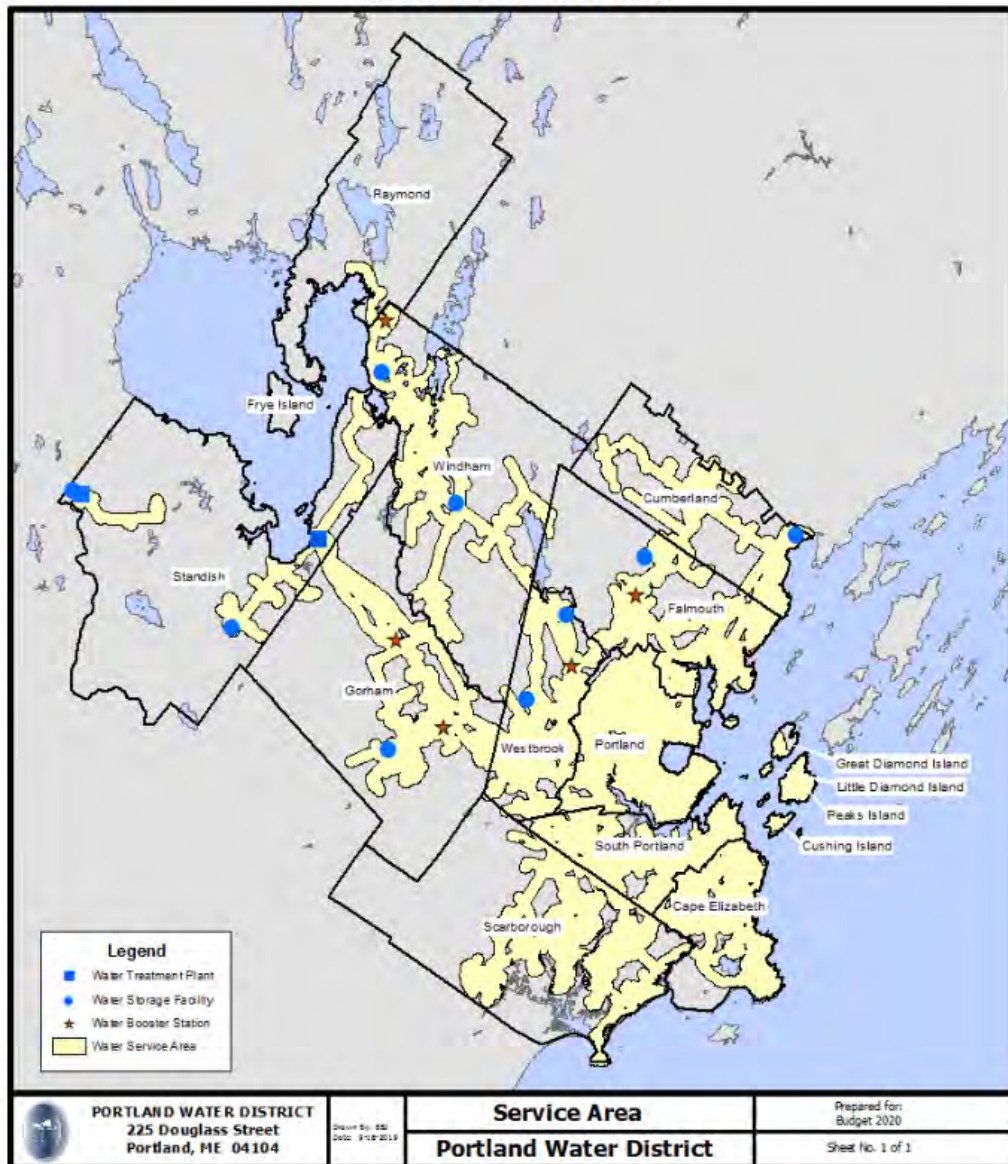


Fund: Water

Background

The Portland Water District's charter authorizes the District to provide service to the inhabitants of 11 cities and towns. Approximately 210,000 inhabitants are served portable drinking water. In addition, water for public and private fire protection is provided. Water operation is regulated by the Department of Health and Human Services for water quality and the Maine Public Utilities Commission. Effective January 1, 2016, the Commission granted a waiver from their rules/laws/rules including the Board review of water rate changes, financing transactions, capital reserve and new customer service line standards.

Portland Water District Service Area



Fund: Water

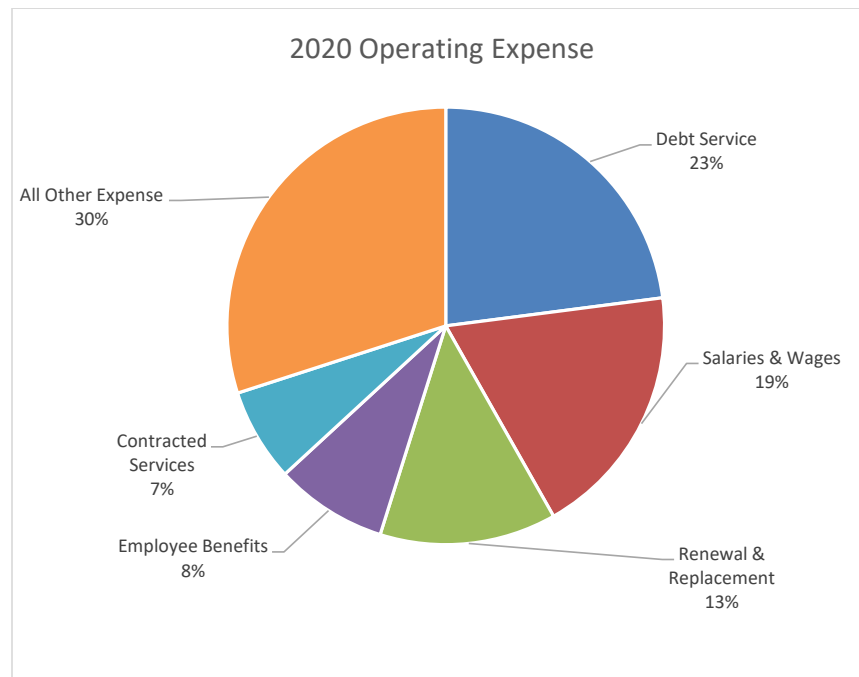
The Portland Water District operates two water systems; the Greater Portland System delivers 22 million gallons of water per day from Sebago Lake and the Steep Falls System delivers 30,000 gallons per day from a single well in Standish. The quality of the water from Sebago Lake is exemplary, and the District was fortunate to receive a waiver from the filtration requirement that is normal for most surface water supplies. In order to maintain this waiver, the District must have an effective source protection program and meet stringent requirements for disinfecting the water.

2020 Financial Summary

The proposed 2020 Operating expense and Capital budgets are \$26,519,287 and \$10,946,000, respectively.

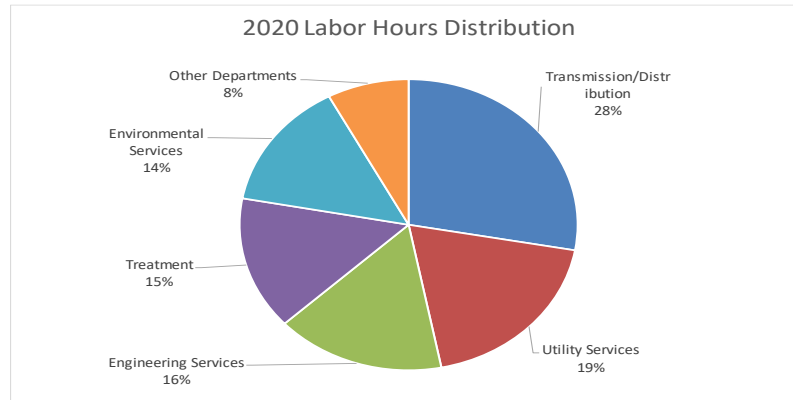
Operating Expense was \$1,044,488 or 4.1%, higher than the previous year. Departmental Expense was up 3.4% (\$557,299) and Renewal & Replacement (direct & indirect) was up \$176,333 (5.3%). Debt Service increased \$310,856 (5.4%) due to newly issued debt.

The Capital budget includes \$7 million for distribution main renewals. The other area of focus is on the Elevation 407 Zone that incorporates Gorham and Windham. After the new Wards Hill Booster Station went into service in 2018, the 2019 CIP addressed the need for a new elevated water storage tank scheduled for construction in 2020. In 2020, the \$1M transmission main improvements will continue the investment in capacity, service and water quality for that area.



2020 Operating Expense Highlights

Salaries/Wages – Wage rates increased an average of 2.4% and total hours increased 2.4% (4,051 hours) due to two additions to the Transmission/Distribution headcount. The result was an overall increase of \$231,832 (4.9%).



Employee Benefits – The benefit rate (including FICA) decreased from 50.51% in 2019 to 48.39% in 2020 due to lower overall employee benefit expenses. However, employee benefits expense in the Water Department increased 0.4% (\$8,356) due to the increase in hours earlier mentioned was more than the decrease in the benefit rate.

Chemicals – Costs are budgeted to decrease \$14,171 (3.0%). This reduction was due to a large decreases in the per unit price for Caustic Soda (37.4%) and Fluoride (15.4%). This is partly offset by an escalation in price for Sodium Hypochlorite (18.8%) and Liquid Oxygen (37.3%).

Contracted Services – This cost for services provided by third party vendors, increased \$59,959 (3.4%). The Waterways Education Program was expanded this year and additional water storage tank cleaning was added to the budget.

Heat/Fuel Oil – This expense, which covers the cost of fuel for the generator at the treatment plant, increased 12.7% (\$12,956) due to a rise in the per gallon cost of heating oil.

Materials and Supplies – This expenses, which is made up of inventory items taken out of the stockroom and asset purchases, increased \$22,257 or 3.2% this year. This is for materials to put a new vacuum truck into service along with purchasing tools and equipment for two additional employees.

Purchased Power – Overall, the budget was up \$43,099, or 12.5%, primarily due to a \$28k increase for the Sebago Lake Water Treatment Facility (SLWTF) energy costs because of a change in rates. Gorham booster station, the now backup to Wards Hill, had actual usage and demand that was higher than expected and demand costs also increased approximately \$1 per KW over last year's budget.

Transportation - Transportation has increased by \$16,067 or 2.1% because aforementioned vacuum truck and an addition to hours this year by Transmission/Distribution Services due to the addition of employees.

Support Services – These costs are related to general work done that cannot be directly charged to a fund as noted above (such as administrative time or training) or work done on behalf of several municipalities at the same time (engineering or laboratory services) that is allocated based on the value to each fund. Overall, Support Services allocated to the Water fund increased \$148,957 or 3.2%. The allocation from Administration increased \$144,248 (4.0%) as two full time positions were added to Admin's head count.

Debt Service/Lease Expense – This is the annual principal and interest payments on bonds issued to finance capital projects. This expense will increase 5.4% (\$310,856) in 2020 due to new debt issued primarily for new main renewal projects and the recognition of a new GASB Lease Standard No. 87 for \$9,186 that was previously in operating expenses.

Renewal & Replacement – These are dollars put aside to fund capital projects. They will increase \$176,333 to help fund capital projects such as main renewals.

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Water Sales	\$24,056,708	\$11,111,241	\$24,817,595	\$25,686,370	\$868,775	3.5%
Interest Income	349,235	329,325	285,521	408,100	122,579	42.9%
Other Income	511,671	171,776	374,114	426,290	52,176	13.9%
FEMA Reimbursement	-384	0	0	0	0	n/a
Total Revenue	24,917,230	11,612,342	25,477,230	26,520,760	1,043,530	4.1%
Salaries & Wages	4,511,670	2,232,034	4,766,758	4,998,590	231,832	4.9%
Employee Benefits	2,191,485	1,035,221	2,193,470	2,201,826	8,356	0.4%
Chemicals	408,705	218,453	466,568	452,397	-14,171	-3.0%
Contracted Services	1,550,432	519,702	1,764,711	1,824,670	59,959	3.4%
Deferred Cost W/O	323,719	0	0	0	0	n/a
Facilities	120,206	56,419	112,013	112,336	323	0.3%
Heat/Fuel Oil	111,488	60,230	102,088	115,044	12,956	12.7%
Insurance	24,691	12,827	25,046	27,449	2,403	9.6%
Materials & Supplies	776,025	308,302	696,096	718,353	22,257	3.2%
Other Expense	133,351	53,144	179,402	187,183	7,781	4.3%
Purchased Power	378,842	173,427	345,785	388,884	43,099	12.5%
Regulatory/Taxes	228,163	206,205	213,965	244,649	30,684	14.3%
Tele/Other Utilities	96,420	53,386	101,532	88,328	-13,204	-13.0%
Transportation	690,942	351,110	782,712	798,779	16,067	2.1%
SS - Administration	3,395,521	1,616,269	3,588,763	3,733,011	144,248	4.0%
SS - Engineering Services	832,687	434,768	890,804	888,615	-2,189	-0.2%
SS - Environmental Services	99,924	44,322	72,618	77,074	4,456	6.1%
SS - Water Services	74,142	40,088	103,467	105,909	2,442	2.4%
Operating Expense	15,948,413	7,415,907	16,405,798	16,963,097	557,299	3.4%
Debt Service & Lease Expense	4,930,896	2,870,061	5,783,554	6,094,410	310,856	5.4%
Renewal & Replace - Direct	2,600,000	1,375,000	2,750,000	2,800,000	50,000	1.8%
Renewal & Replace - Indirect	534,703	277,172	535,447	661,780	126,333	23.6%
Total Expense	24,014,012	11,938,140	25,474,799	26,519,287	1,044,488	4.1%
Current Year Surplus (Deficit)	903,218	-325,798	2,431	1,473		
Transfer to Capital Reserve	-169,596	-63,919	-127,838	-279,927		
Land Cash Reserve Expense	0	25,270	0	0		
OPEB Surplus Allocated	99,955	0	0	0		
Prior Year Surplus	5,990,955	6,824,532	6,996,070	7,495,835		
Accumulated Surplus	6,824,532	6,460,085	6,870,663	7,217,381		

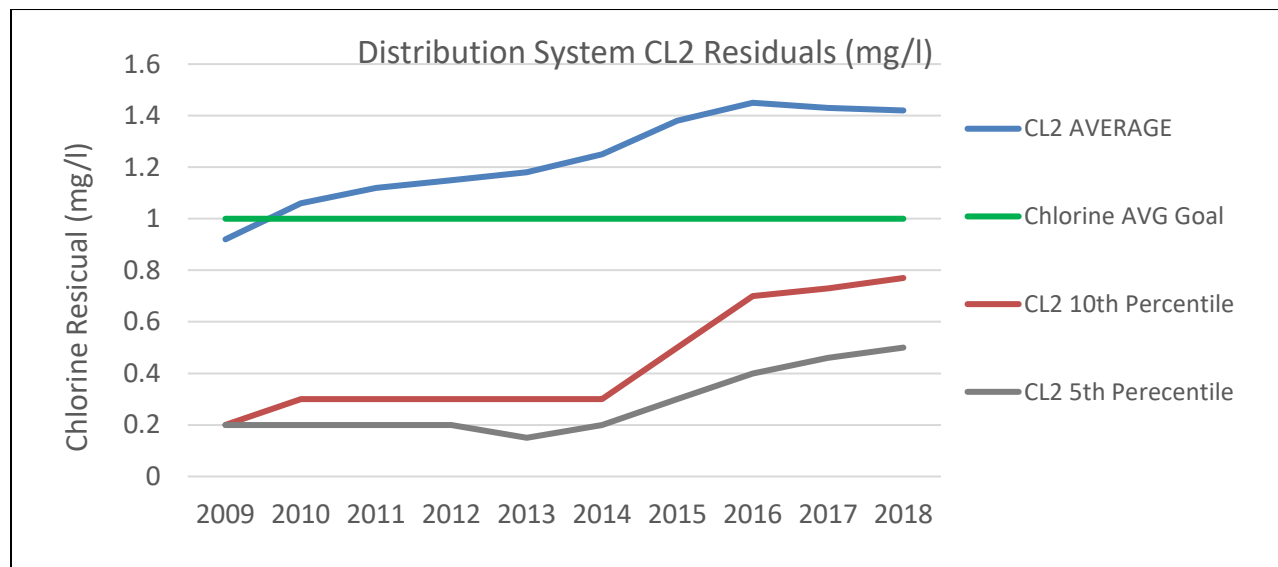
Operation Summary

The current treatment processes at the Sebago Lake Water Treatment Facility (SLWTF) include ozone, ultra-violet energy (UV) and chloramines for disinfection, fluoridation for dental benefit, and the addition of a corrosion control inhibitor. In order to meet the requirements of the new Long-Term II Treatment Rule, the District installed a UV treatment system in 2014. The construction project also included the replacement of the 20-year-old ozone production system.

The District maintains approximately 1,000 miles of water mains that carry the water from Sebago Lake to customer's homes. During the past few years, more efforts are being focused on the renewal of older water mains in our system. In 2020, the District plans to spend \$7.0 million dollars to replace and upgrade these mains, and intends to maintain this level of investment in order to achieve our renewal objectives. In addition, the Transmission/Distribution group performs operation and maintenance procedures to ensure that our customers experience minimal disruptions in water service.

To meet the growing water demand in Gorham, the new Wards Hill Booster Station was constructed and placed in service during 2018. The new station will replace the current booster station at the intersection of Main St. and Libby Ave. The old station, which had received many upgrades over the years, had been continuously in service since constructed by the Gorham Water Company in 1895. The old station is currently still being used as back-up to the new station.

Water quality in the distribution system is constantly monitored by routine sampling and through tracking of water quality inquiries. This information is reviewed and shared monthly with office and field employees to help make water quality everyone's responsibility. One of the most important means of ensuring high quality water is the maintenance of an optimized chlorine residual throughout the distribution system. Staff have been working for a few years to increase the residuals at the far ends of the system. As shown in the chart below, the chlorine residuals have significantly increased since the addition of UV in 2014. This additional level of treatment is having a positive effect on the distribution system.



Operation Summary (continued)

In an effort to improve system operation and prioritize activities, the District joined the Partnership for Safe Water in 2014. The Partnership is a voluntary continuous improvement program that uses optimization methods to improve drinking water systems. Initially, the partnership successfully developed and implemented a self-assessment and optimization program for surface water treatment plants by many organizations; including American Water Works Association, US EPA, Association of Metropolitan Water Agencies, National Association of Water Companies, Association of State Drinking Water Administrators, and the Water Research Foundation.



The District reported basic distribution system data for the first few years. In 2016, District staff began a multi-year process to prepare for what the Partnership refers to as the third-phase submittal. The focus of this work is to help utilities evaluate their own distribution system performance against regulatory requirements and industry Best Management Practices. In areas where improvement is desired, a continuous improvement process supports the creation of short-term and long-term goals

The Distribution System Optimization Program focuses on topics such as maintenance of system chlorine residuals, hydrant and valve maintenance, management of main breaks, water loss, customer complaints, Cross Connection Control Program, main renewal programs, staffing, and funding. The district is not eligible to join the Treatment Plant Optimization Program, because the District has a waiver from filtration.

In future years, the District expects it will adjust and/or change some service standards, develop projects and initiatives to support recommendations, and incorporate industry Best Management Practices into everyday operations.

Capital Summary

A five-year capital plan is updated each year. The projects are prioritized based on operational needs and financing availability. The table below indicates the projects scheduled for the next fiscal year and the funding source of those projects. Detailed descriptions of the projects can be found in the Capital Finance and Capital Expenditures sections. Water only expenditures are for asset exclusively used in the Water Fund. Water allocated expenditures are for assets used in multiple funds. The capital expenditures is recorded in the Water Fund.

Expenditures by CIP Year:

	<u>Prior CIP</u>	<u>2020 CIP</u>	<u>Total</u>
Projects:			
Water Only	\$ 2,500,000	\$ 9,506,000	\$ 12,006,000
Water Allocated		\$ 1,440,000	\$ 1,440,000
Total by CIP Year	<u>\$ 2,500,000</u>	<u>\$ 10,946,000</u>	<u>\$ 13,446,000</u>

Source of Funds:

	<u>R&R Fund</u>	<u>Future Bond</u>	<u>Funding Total</u>	<u>Bond Issue Year</u>
Beginning Balance	\$ 6,256,702			
2020 Contribution	\$ 4,250,000			
Total R&R Balance Available	<u>\$ 10,506,702</u>			
Projects:				
Water Only				
Wards Hill Tank Construction - 3004		\$ 2,500,000		2021
2020 CIP Budget	\$ 2,506,000	\$ 7,000,000	\$ 9,506,000	2020
Water Allocated	\$ 1,440,000		\$ 1,440,000	
Total	<u>\$ 3,946,000</u>	<u>\$ 9,500,000</u>	<u>\$ 10,946,000</u>	
Ending Balance	<u>\$ 6,560,702</u>			

Projections for Rate-Making Purposes

Multi-year projections are made for the water fund to provide an understanding of the future impact on water rates.

Multi-year projections are made for each of the wastewater funds' assessment. The projections provide guidance to the wastewater municipalities to assist them in determining their wastewater sewer rates. A summary of the projection is provided on next page.

Major Assumptions:

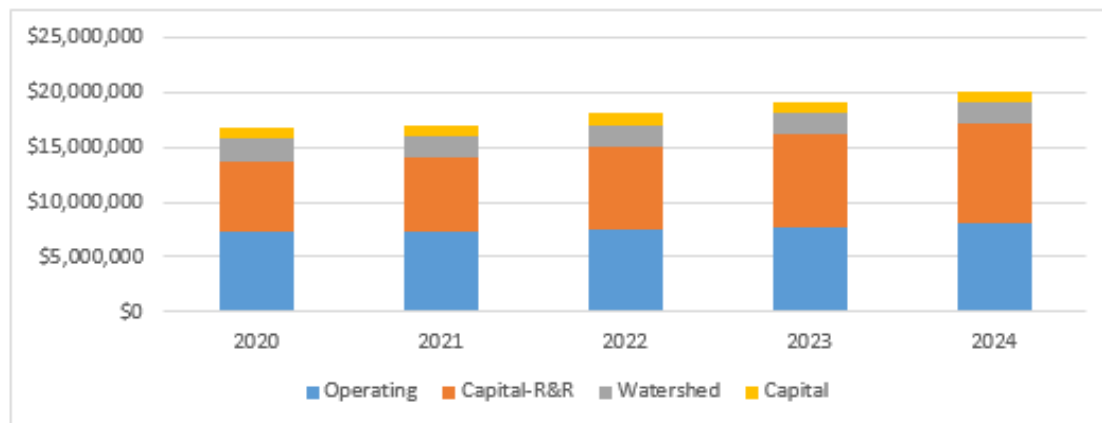
The assumptions incorporated in the projections are as follows:

- Salary increases of 3.0% each year. Additional 1.25 headcount in 2021.
- Benefit increases of 5% each year.
- Biosolids contract expires in 2021; assumed 1.8% increase in unit prices. Contract renewal in 2022 may result in a significant increase but it is unknown so not forecasted.
- Other expenses increase between 2.3% and 3.5% each year.
- New debt service and renewal/replacement fund expenditures consistent with the 2020 5-year capital plan. New debt assumed a 20-year life at 3% interest.

Summary of Projection Impact:

Water Revenue is projected to increase to \$31,773,739 in 2024, a 24% increase over 2020 Budget, with the most significant cost change related to debt service issued to finance capital projects. Operating Reserve balance and Capital R&R balances are above the target balances.

Reserve Fund Balances



Percent of Budget Dedicated to Debt Service – Target: Not to Exceed 35%

2018	2019	2020	2021	2022	2023	2024
21%	22%	23%	23%	25%	26%	28%

Debt Service Ratio – Target: Greater or Equal to 125%

2018	2019	2020	2021	2022	2023	2024
182%	151%	157%	157%	153%	149%	144%

Projections for Rate-Making Purposes (continued)

Water Fund

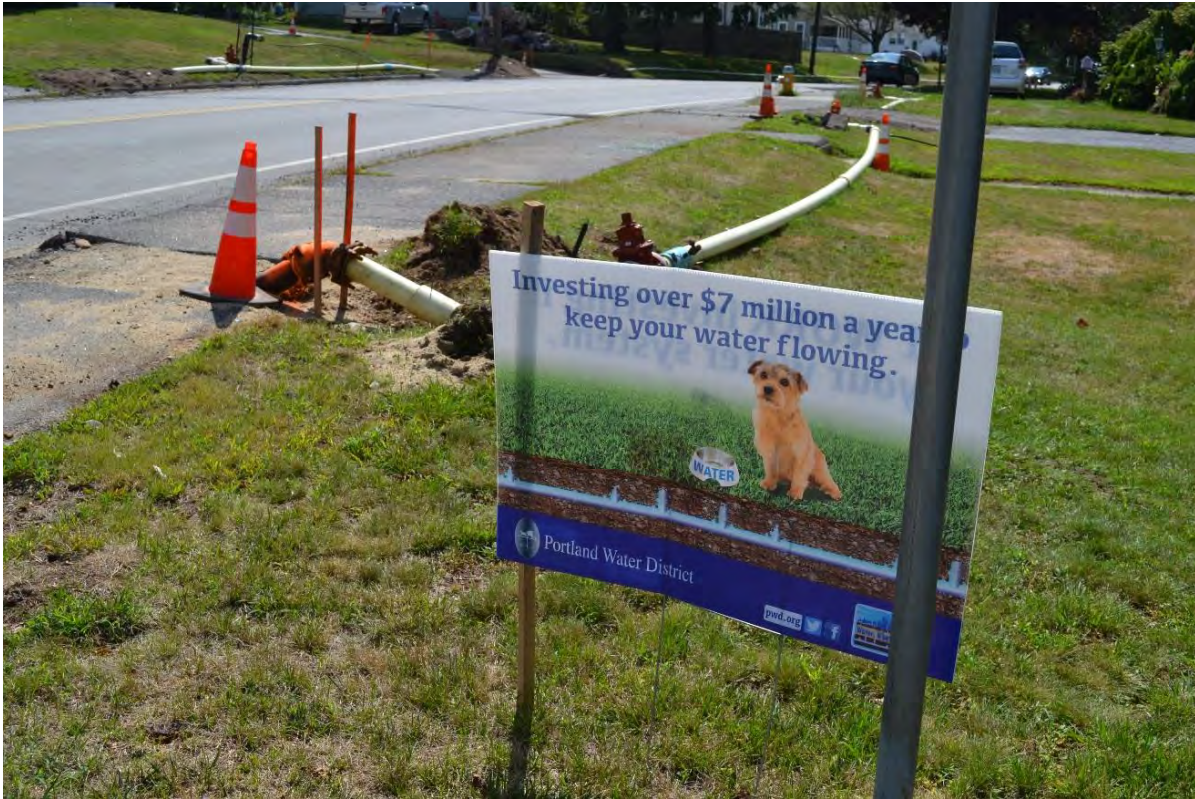
Operating Fund:

	2020 Budget	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast
Revenues:					
Water Sales	25,686,370	27,232,956	28,536,589	30,114,889	31,773,739
Interest Income	408,100	306,075	306,075	306,075	306,075
Other Income	426,290	426,290	426,290	426,290	426,290
Total Revenues	26,520,760	27,965,321	29,268,954	30,847,254	32,506,104
Operating Expenses:					
Salaries & Wages	4,998,590	5,148,548	5,303,004	5,462,094	5,625,957
Employee Benefits	2,201,826	2,311,917	2,427,513	2,548,889	2,676,333
Chemicals	452,397	465,969	479,948	494,346	509,176
Contracted Services	1,824,670	1,866,637	1,909,570	1,953,490	1,998,420
Facilities	112,336	114,920	117,563	120,267	123,033
Heat/Fuel Oil	115,044	119,071	123,238	127,551	132,015
Insurance	27,449	28,080	28,726	29,387	30,063
Materials & Supplies	718,353	734,875	751,777	769,068	786,757
Other Expense	187,183	191,488	195,892	200,398	205,007
Purchased Power	388,884	388,884	388,884	396,273	403,802
Regulatory/Taxes	244,649	250,276	256,032	261,921	267,945
Tele/Other Utilities	88,328	90,360	92,438	94,564	96,739
Transportation	798,779	817,151	835,945	855,172	874,841
SS - Administration	3,733,011	4,036,530	4,170,745	4,309,422	4,452,710
SS - Engineering Services	888,615	994,218	1,026,928	1,060,714	1,095,611
SS - Environmental Services	77,074	79,637	82,285	85,021	87,848
SS - Water Services	105,909	141,430	146,133	150,992	156,012
	16,963,097	17,779,991	18,336,621	18,919,569	19,522,269
Debt Service	6,085,224	6,476,968	7,124,573	8,031,199	8,991,357
Renewal & Replacement - Direct	2,800,000	2,900,000	3,000,000	3,100,000	3,200,000
Renewal & Replace - Indirect	670,966	534,123	534,123	534,123	534,123
Capital Finance Expense	9,556,190	9,911,091	10,658,696	11,665,322	12,725,480
Total Operating Expenses	26,519,287	27,691,082	28,995,317	30,584,891	32,247,749
Current Year Surplus(Deficit)	1,473	274,239	273,637	262,363	258,355
Transfer to Capital Reserve	-279,927	0	0	0	0
Prior Year Surplus	7,495,835	7,217,381	7,491,620	7,765,257	8,027,620
Accumulated Surplus	7,217,381	7,491,620	7,765,257	8,027,620	8,285,975
Target Balance(25% of budget)	6,629,822	6,922,771	7,248,829	7,646,223	8,061,937
Above/(Below)	587,559	568,849	516,428	381,397	224,038

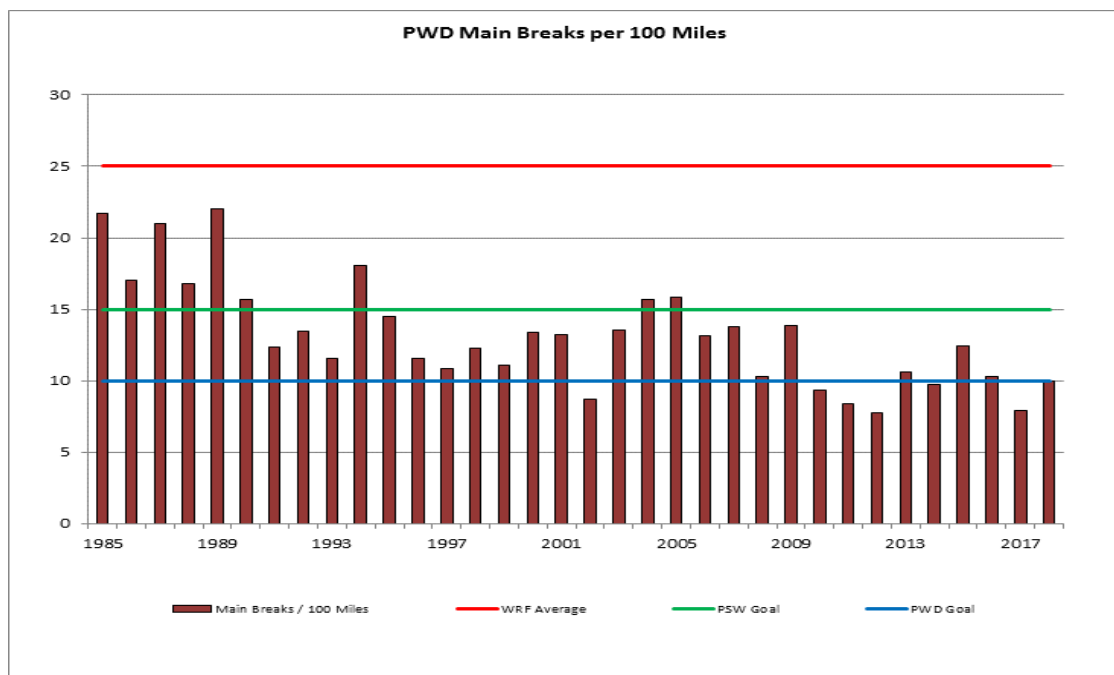
Capital Expenditures: (See details in the Capital Expenditure section) Target Balance: \$3,015,923

	2020 Budget	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast
R&R Balance BOY	\$ 6,256,702	\$ 6,560,702	\$ 6,860,702	\$ 7,585,702	\$ 8,460,702
Contribution	\$ 4,250,000	\$ 4,350,000	\$ 4,450,000	\$ 4,550,000	\$ 4,650,000
Withdrawals	\$ (3,946,000)	\$ (4,050,000)	\$ (3,725,000)	\$ (3,675,000)	\$ (3,950,000)
R&R Balance EOY	\$ 6,560,702	\$ 6,860,702	\$ 7,585,702	\$ 8,460,702	\$ 9,160,702

Water Main Renewals



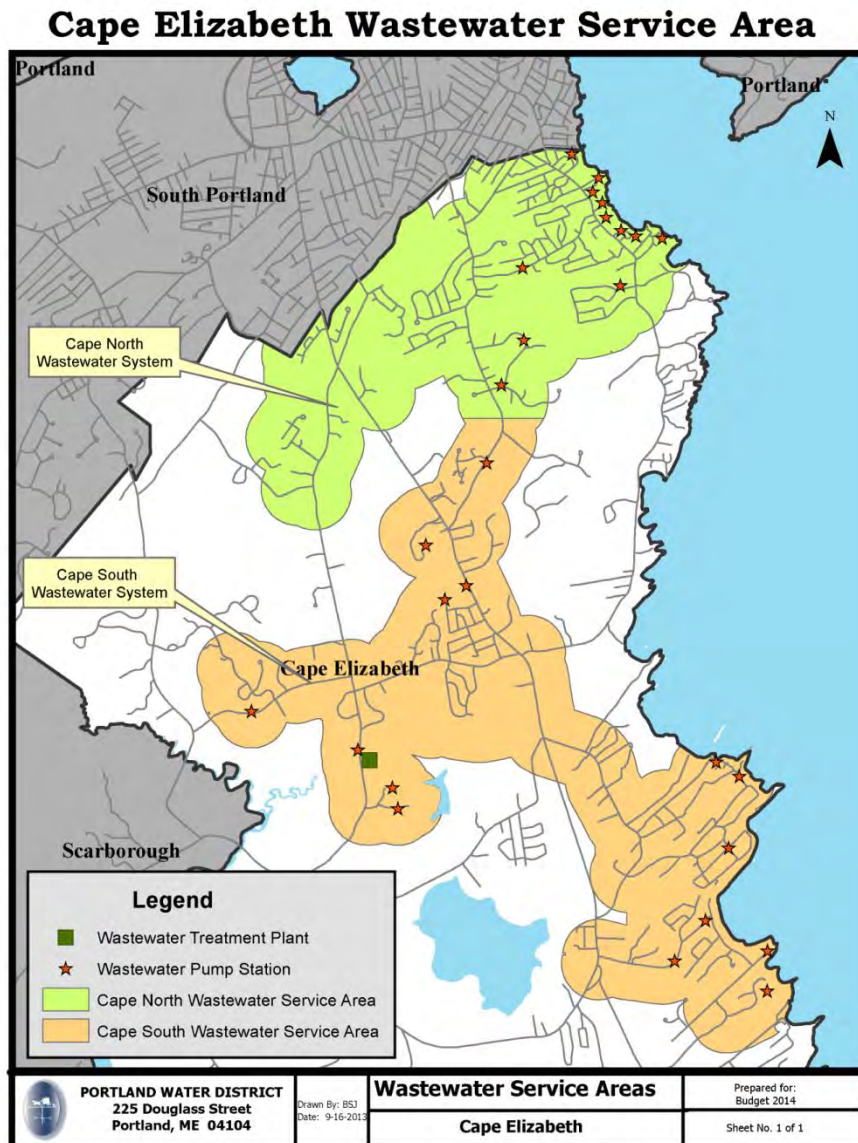
Our commitment to maintain aging water infrastructure includes replacing water mains. The 2020 budget continues this commitment with planned projects totaling \$7.0 million dollars. The projects will be funded with current year's revenue (\$1 million) and bond proceeds (\$6 million). The increased investment in main renewal has impacted the number of main breaks.



Fund: Wastewater - Cape Elizabeth

Background

The Portland Water District's charter authorizes the District to provide wastewater treatment and collection system-interceptors service to the town. The town maintains most of the collection system but has contracted with the District to maintain several pump stations with that system. The District operates a treatment facility that treats wastewater from the southern section of the town and contracts with the City of South Portland to provide treatment services for the northern section of the town. Additionally, by contract, the District provides utility billing services.



Summary of Services Provided:

Treatment:

Cape South 0.52 million gallons/ day

Cape North 0.715 million gallons/day
(by South Portland's plant)

Collection System:

27 Pump Stations with
18.8 miles of pipe

Utility Billing Services:

Annual Billings of
\$2,119,124 on 2,368
Customers (avg.
\$74.58/month)

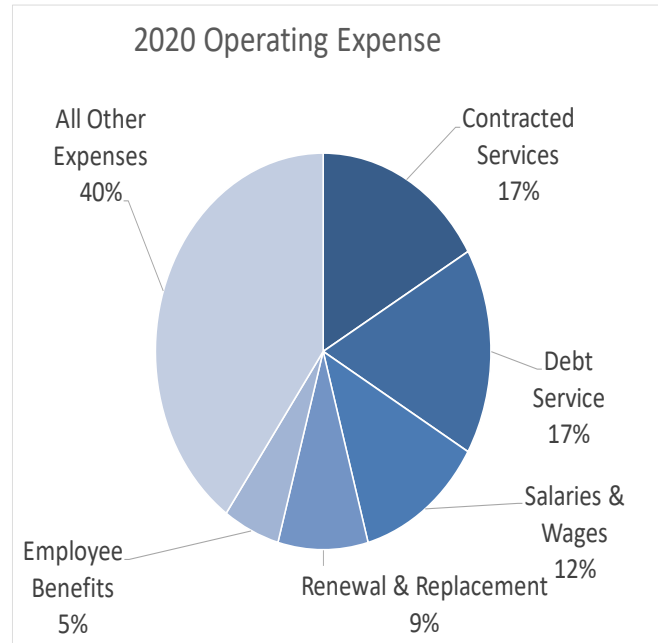
Fund: Wastewater - Cape Elizabeth

2020 Financial Summary

The proposed assessment of \$1,705,380 is an 8.4% increase. The assessment is lower than the forecasted assessment provided to the town last year.

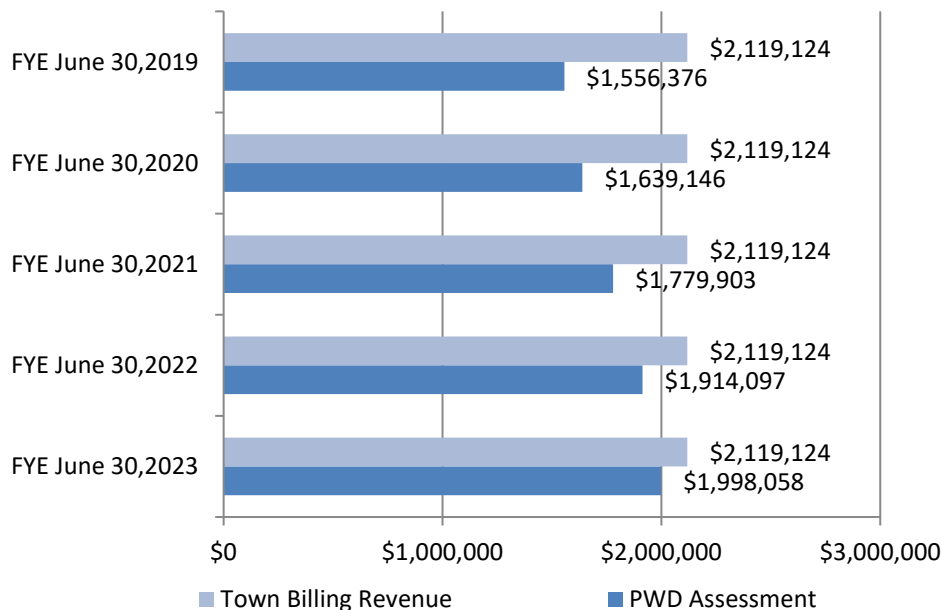
The proposed 2020 Operating Expense and Capital budgets are \$1,726,264 and \$530,000 respectively. The Operating Expense budget increased \$139,209 or 8.8%.

The 2020 Capital budget includes \$430,000 for the construction phase of Maiden Cove pump station's upgrades. This will be bonded with the \$15,000 budgeted for the design last year. An advanced treatment process evaluation to assess the treatment effectiveness of the original plant equipment is planned for the Cape WW Treatment Facility; that budget is \$50,000 and will be funded from renewal and replacement funds.



Assessment Compared to Ratepayers' Billing

The municipality's fiscal year end is June 30, while the District's is December 31. The chart below compares the cash as collected by the District for sewer billing on their behalf and the District's assessment for services rendered. The municipality may incur additional sewer-related costs. The municipality determines when to increase the sewer billing rates.



Revenue Assumptions:

- Consumption is for the 12 months ending June 30, 2019

- Rates Assumed:

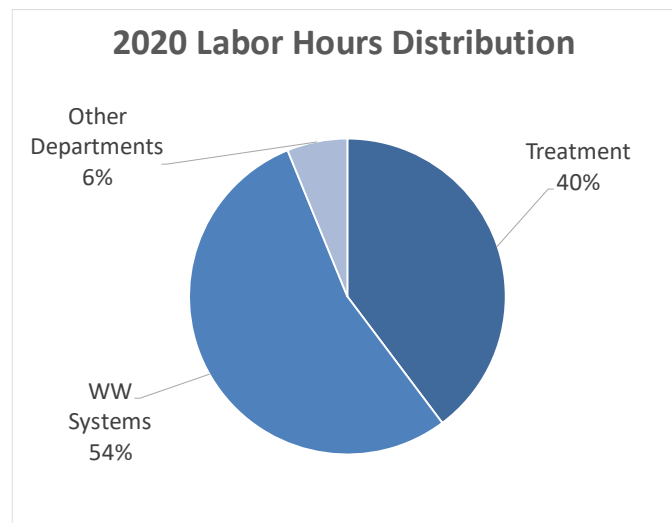
Effective Date:	Base/Per HCF
Mar 2013	\$43/\$5.25
Mar 2014	\$46/\$5.41
Mar 2015	\$48/\$5.57
Mar 2016	\$49.50/\$5.68

2020 Operating Expense Highlights

Salaries/Wages – Labor hours budgeted increased 8.6% (620 hours). This combined with the average wage rates increase of 2.9% resulted in an 11.7% (\$22,189) increase in Salaries/Wages.

Employee Benefits – The benefit rate (including FICA) decreased from 50.51% in 2019 to 48.39% in 2020 due to lower overall employee benefit costs. Overall, Employee Benefits expense increased 6.8% (\$6,009).

Biosolids Disposal – The budget for Biosolids Disposal increased \$830 (4.0%). The budget assumes a steady wet ton amount but a \$2.84 (4.2%) price increase to the per ton price as allowed in the vendor contract.



Chemicals – The budget increased by \$985 (or 9.5%) primarily due to a 20% increase in budgeted usage for Sodium Bicarbonate.

Contracted Services – The budget increased 4.6% (\$12,680) due to higher treatment costs expected to be charged by South Portland and an increase in lab analysis needed.

Heat/Fuel Oil – The budget increased 23.2% (\$3,430) due to a rise in price per gallon of propane along with an increase in heating levels at Cape's pump stations in order to assist with ventilation requirements at those stations.

Purchased Power – The Purchased Power budget increased 8.7% (\$6,336) driven mainly by wastewater pump stations. Annual usage for small and medium accounts increased 18,000 kWh and 13,000 kWh, respectively. Usage estimates are based on a 2-year average. A 3% assumption is also included for potential CMP rate changes.

Support Services – These costs are related to general work done that cannot be directly charged to a fund as noted above (such as customer service, billing or information technology) or work done on behalf of several municipalities at the same time (engineering or laboratory services) that is allocated based on the value to each fund. Overall, Support Services increased \$28,245 or 6.65%.

The allocation from Administration increased \$12,328 (6.6%) because of the two new authorized head count in Information Services and Employee Services. The costs associated with Wastewater increased \$14,484 (11.1%) due to redistribution in labor towards the smaller Wastewater funds to mirror actual hours.

Debt Service/Lease Expense – This is the annual principal and interest payments on bonds issued to finance capital projects. This cost increased \$54,839 (22.8%) from the prior year budget to \$295,350

with the issuance of debt relating to new capital projects and the recognition of a new GASB Lease Standard No. 87 for \$4,795. Lease costs were previously in operating expense.

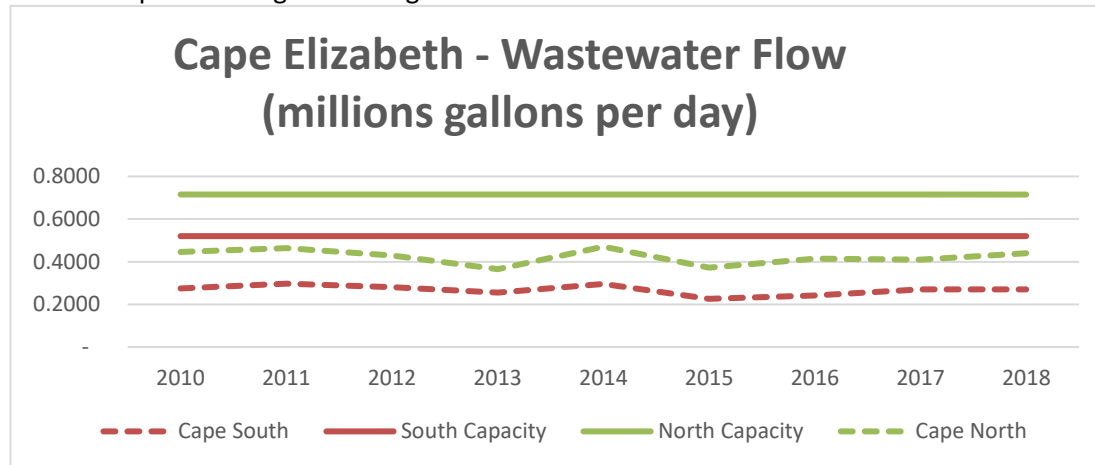
Renewal & Replacement – These are dollars put aside to fund capital projects and the replacement of equipment that has served its useful life. A contribution of \$149,611 will be made in 2020.

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Assessment Income	\$1,539,840	\$786,456	\$1,572,912	\$1,705,380	\$132,468	8.4%
Interest Income	19,685	16,399	14,143	20,884	6,741	47.7%
<u>FEMA Reimbursement</u>	<u>-2,569</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>n/a</u>
Total Revenue	1,556,956	802,855	1,587,055	1,726,264	139,209	8.8%
Salaries & Wages	179,892	97,878	189,339	211,528	22,189	11.7%
Employee Benefits	87,865	45,778	88,358	94,367	6,009	6.8%
Biosolids Disposal	16,185	6,635	20,500	21,330	830	4.0%
Chemicals	15,427	8,028	10,420	11,405	985	9.5%
Contracted Services	265,158	111,556	273,835	286,515	12,680	4.6%
Deferred Cost W/O	27,252	0	0	0	0	n/a
Heat/Fuel Oil	17,662	10,170	14,776	18,206	3,430	23.2%
Insurance	4,371	2,210	4,317	4,677	360	8.3%
Materials & Supplies	41,848	13,647	40,510	39,960	-550	-1.4%
Other Expense	3,949	3,455	4,150	1,900	-2,250	-54.2%
Purchased Power	91,525	48,061	72,969	79,305	6,336	8.7%
Tele/Other Utilities	24,285	11,564	15,778	24,988	9,210	58.4%
Transportation	30,297	13,507	38,476	34,025	-4,451	-11.6%
SS - Administration	178,915	85,394	185,908	198,236	12,328	6.6%
SS - Engineering Services	44,725	25,105	77,290	77,127	-163	-0.2%
SS - Environmental Services	25,088	14,628	28,215	29,765	1,550	5.5%
SS - Wastewater Services	125,112	63,317	130,654	145,138	14,484	11.1%
<u>SS - Water Services</u>	<u>1,996</u>	<u>1,085</u>	<u>2,785</u>	<u>2,831</u>	<u>46</u>	<u>1.7%</u>
Operating Expense	1,181,552	562,018	1,198,280	1,281,303	83,023	6.9%
Debt Service & Lease Expense	227,181	111,671	240,511	295,350	54,839	22.8%
Renewal & Replacement - Direct	100,000	62,500	125,000	120,700	-4,300	-3.4%
<u>Renewal & Replace - Indirect</u>	<u>23,508</u>	<u>12,237</u>	<u>23,264</u>	<u>28,911</u>	<u>5,647</u>	<u>24.3%</u>
Total Expense	1,532,241	748,426	1,587,055	1,726,264	139,209	8.8%
Current Year Surplus (Deficit)	24,715	54,429	0	0		
Transfer to R&R	-30,551	0	0	0		
OPEB Surplus Allocated	5,836	0	0	0		
<u>Prior Year Surplus</u>	<u>398,772</u>	<u>398,772</u>	<u>410,962</u>	<u>439,022</u>		
Accumulated Surplus	398,772	453,201	410,962	439,022		

Operation Summary

Wastewater Treatment: The Cape Elizabeth Wastewater System is comprised of two general areas, North and South. Flow generated in the Northern area is delivered to South Portland for treatment while flow generated in South Cape is treated at the Cape Elizabeth WWTF. The Cape Elizabeth treatment facility is designed to treat 520,000 gallons per day with a peak capacity of 2.75 mgd during wet weather. PWD owns 715,400 gallons per day of capacity at South Portland's WWTF. The Cape Elizabeth plant is currently operated in a way that provides some nitrogen removal.

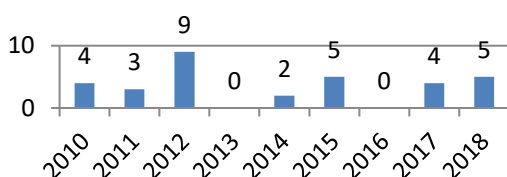
In 2017, the flow in the Northern area averaged 0.410 mgd and the South Cape flow to the treatment plant averaged 0.27 mgd.



Effluent Permit Requirements:

Parameter	Discussion
Biological Oxygen Demand (BOD)	Measure of organic material and the strength of pollution. The treatment plant removed 93% of the BOD; well above the required 85% removal.
Total Suspended Solids (TSS)	Measure of suspended material in the incoming wastewater; also the strength of pollution. The treatment plant removed 94% of the TSS, well above the required 85% removal.
Total Residual Chlorine	Used for disinfecting the treated effluent, chlorine must be removed before the effluent is discharged. The permit limit was met at all times. The planned UV disinfection upgrade will eliminate the use of disinfection system chemicals. (Note: the new UV system will eliminate the need to use chlorine for disinfection).
Fecal Coliform Bacteria	Following disinfection, the fecal coliform level is monitored to confirm the treatment plant effluent was properly disinfected.

Permit Violations



The Discharge Permit was renewed in late 2016. There were five (5) effluent permit violations in 2018. These violations were associated with the performance of the disinfection system. It is anticipated that the new UV disinfection system will resolve this in future years.

Operation Summary (continued)

Wastewater Conveyance – interceptors and pumping stations: The Draft Ottawa Road CSO Long Term Control Plan was submitted to Maine Department of Environmental Protection in December 2011 and was approved in September 2013. The 5-year plan began in 2014. The plan's projects are expected to lower the frequency and volume of overflow during extreme wet weather events by addressing private sources of infiltration and inflow in the collection systems of Cape Elizabeth and South Portland. Both the Town of Cape Elizabeth and the City of South Portland have completed an inventory of private sources of inflow & infiltration. Cape Elizabeth has installed additional storm drainage and redirected private sources of I/I to the storm sewer system. This effort has addressed 35 of 37 known sources of private I/I in 2018. South Portland has completed a project on Drew Rd. to remove 10 private sources of I/I. The project also lined the collection system pipe in the area to reduce infiltration. This project was completed in 2018.

The PWD has purchased a new standby generator to improve the reliability of the pump station. The flow meter at the pump station will be replaced in 2019. PWD is assessing alternatives to maximize flow from the pump station while reviewing flow data to quantify the flow reductions realized through the work completed by Cape Elizabeth and South Portland.

PWD staff continues to respond and maintain service during various storm events and power failures, while we work to install emergency generators through our Capital Improvement process. This will assist in managing elevated flows during wet weather and often associated power losses. Additional work performed by the Systems group is shown in the table below:

Parameter	2019 Actual to September	2020 Projected
Preventive Work Orders	457	450
Corrective Work Orders	33	40
Wet wells cleaned	35	45
Debris removed (ton)	49.7	40
Dry Weather Overflows	2	0

2019 Other Highlights

- Asset Management Software continues to drive the preventive maintenance program; generating both monthly and annual preventive maintenance tasks for all pump stations, continuing our emphasis on the pump station preventive maintenance program. The new position of Maintenance Manager/Planner will help to optimize efforts. The replacement of the current asset management computer system will further enable improvements in our effectiveness.
- Staff from the East End WWTF handle weekend sampling during the chlorination/disinfection season. This required sampling is expected to be eliminated by the installation of the UV disinfection system since chlorine chemicals will no longer be added, neutralized or monitored.

2020 Work Plan

- Flow monitoring will continue to assess the flow reductions that have been realized due to the Ottawa Rd. drainage area I/I flow reduction efforts by Cape Elizabeth and South Portland.
- Design of the Family Field (Little John) Pump Station is underway. This station serves the entire Northern Cape Elizabeth Area.
- The new UV disinfection system is under construction and will be operational by May 2020. The UV system will be a welcomed replacement of the current chemical based disinfection system.
- Design of the Maiden Cove Pump Station and force main replacement will begin in 2019 with Construction in 2020. The site is very limited and construction will be challenging.
- A process evaluation of the treatment plant will be completed. This assessment will review the current aeration system and equipment. With the attention to nitrogen reduction (both from a water quality and process performance standpoint), the original aeration equipment will be assessed and updates and improvements will likely be identified.
- The first phase of an HVAC system review and upgrade will be completed in 2020.

Capital Summary

A five-year capital plan is updated each year. The projects are prioritized based on operational needs and financing availability. The table below indicates the projects scheduled for the next fiscal year and the funding source of those projects. Detailed descriptions of the projects can be found in the Capital Finance and Capital Expenditures sections.

Expenditures by CIP Year:

	<u>Prior CIP</u>	<u>2020 CIP</u>	<u>CIP Total</u>
Projects:			
WW Collection & Pumping			
Maiden Cove PS Upgrades - 3002	\$ 15,000	\$ 430,000	\$ 445,000
Pump Station R&R - 3130		\$ 25,000	\$ 25,000
WW Treatment			
Treatment Plant HVAC - 2571	\$ 375,000		\$ 375,000
Treatment Plant UV Disinfection - 2701	\$ 1,025,000		\$ 1,025,000
Treatment Process Evaluation - 3000		\$ 50,000	\$ 50,000
Treatment Plant R&R - 3129		\$ 25,000	\$ 25,000
Total by CIP Year	<u>\$ 1,415,000</u>	<u>\$ 530,000</u>	<u>\$ 1,945,000</u>

Source of Funds:

	<u>R&R Fund</u>	<u>Prior Bond</u>	<u>Future Bond</u>	<u>Funding Total</u>	<u>Bond Issue Year</u>
Beginning Balance	\$ 261,088				
2020 Contribution	\$ 120,700				
Total R&R Balance Available	<u>\$ 381,788</u>				
Projects:					
WW Collection & Pumping					
Maiden Cove PS Upgrades - 3002			\$ 445,000	\$ 445,000	2021
Pump Station R&R - 3130	\$ 25,000			\$ 25,000	
WW Treatment					
Treatment Plant HVAC - 2571			\$ 375,000	\$ 375,000	2020
Treatment Plant UV Disinfection - 2701		\$ 875,000	\$ 150,000	\$ 1,025,000	2019/2020
Treatment Process Evaluation - 3000	\$ 50,000			\$ 50,000	
Treatment Plant R&R - 3129	\$ 25,000			\$ 25,000	
Total	<u>\$ 100,000</u>	<u>\$ 875,000</u>	<u>\$ 970,000</u>	<u>\$ 1,945,000</u>	
Ending Balance	<u>\$ 281,788</u>				

Projections for Rate-Making Purposes

Multi-year projections are made for each of the wastewater funds' assessment. The projections provide guidance to the wastewater municipalities to assist them in determining their wastewater sewer rates. A summary of the projection is provided on next page.

Summary

Major Assumptions:

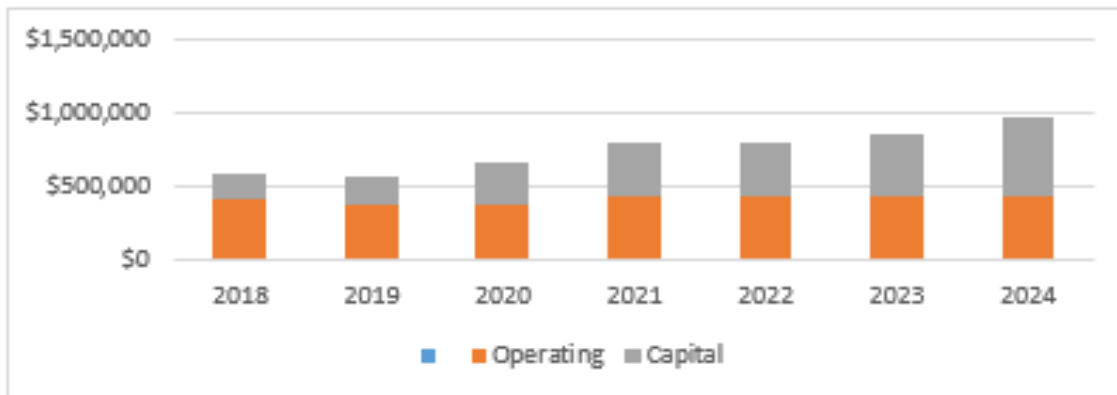
The assumptions incorporated in the projections are as follows:

- Salary increases of 3.0% each year. Additional 1.25 headcount in 2021.
- Benefit increases of 5% each year.
- Biosolids contract expires in 2021; assumed 1.8% increase in unit prices. Contract renewal in 2022 may result in a significant increase but it is unknown so not forecasted.
- Other expenses increase between 2.3% and 3.5% each year.
- New debt service and renewal/replacement fund expenditures consistent with the 2020 5-year capital plan. New debt assumed a 20-year life at 3% interest.

Summary of Projection Impact:

Assessment is projected to increase to \$2,093,000 in 2024, a 23% increase over 2020 Budget, with the most significant cost change related to debt service issued to finance capital projects. Operating Reserve balance and Capital R&R balance are below the target balances.

Reserve Fund Balances



Percent of Budget Dedicated to Debt Service – Target: Not to Exceed 35%

2018	2019	2020	2021	2022	2023	2024
15%	15%	17%	21%	23%	22%	22%

Debt Service Ratio – Target: Greater or Equal to 125%

2018	2019	2020	2021	2022	2023	2024
165%	149%	152%	141%	136%	139%	139%

Projections for Rate-Making Purposes (continued)

Operating Fund:

	<u>2020 Budget</u>	<u>2021 Forecast</u>	<u>2022 Forecast</u>	<u>2023 Forecast</u>	<u>2024 Forecast</u>
Revenues:					
Assessment Income	1,705,380	1,854,425	1,973,768	2,022,348	2,092,893
Interest Income	20,884	15,663	15,663	15,663	15,663
Other Income	0	0	0	0	0
Total Revenues	1,726,264	1,870,088	1,989,431	2,038,011	2,108,556
Operating Expenses:					
Salaries & Wages	211,528	217,874	224,410	231,142	238,076
Employee Benefits	94,367	99,085	104,039	109,241	114,703
Biosolids Disposal	21,330	21,714	22,105	22,503	22,908
Chemicals	11,405	11,747	12,099	12,462	12,836
Contracted Services	286,515	293,105	299,846	306,742	313,797
Heat/Fuel Oil	18,206	18,843	19,503	20,186	20,893
Insurance	4,677	4,785	4,895	5,008	5,123
Materials & Supplies	39,960	40,879	41,819	42,781	43,765
Other Expense	1,900	1,944	1,989	2,035	2,082
Purchased Power	79,305	79,305	79,305	80,812	82,347
Tele/Other Utilities	24,988	25,563	26,151	26,752	27,367
Transportation	34,025	34,808	35,609	36,428	37,266
SS - Administration	198,236	210,424	217,421	224,650	232,120
SS - Engineering Services	77,127	83,660	86,412	89,255	92,191
SS - Environmental Services	29,765	30,755	31,778	32,835	33,927
SS - Wastewater Services	145,138	149,964	154,950	160,102	165,425
SS - Water Services	2,831	3,825	3,952	4,083	4,219
	1,281,303	1,328,280	1,366,283	1,407,017	1,449,045
Debt Service	290,555	383,544	454,884	452,730	471,247
Renewal & Replacement - Direc	120,700	135,000	145,000	155,000	165,000
Renewal & Replace - Indirect	33,706	23,264	23,264	23,264	23,264
Capital Finance Expense	444,961	541,808	623,148	630,994	659,511
Total Operating Expenses	1,726,264	1,870,088	1,989,431	2,038,011	2,108,556
Current Year Surplus(Deficit)	0	0	0	0	0
Prior Year Surplus	439,022	439,022	439,022	439,022	439,022
Accumulated Surplus	439,022	439,022	439,022	439,022	439,022
Target Balance(25% of budget)	431,566	467,522	497,358	509,503	527,139
Above/(Below)	7,456	-28,500	-58,336	-70,481	-88,117

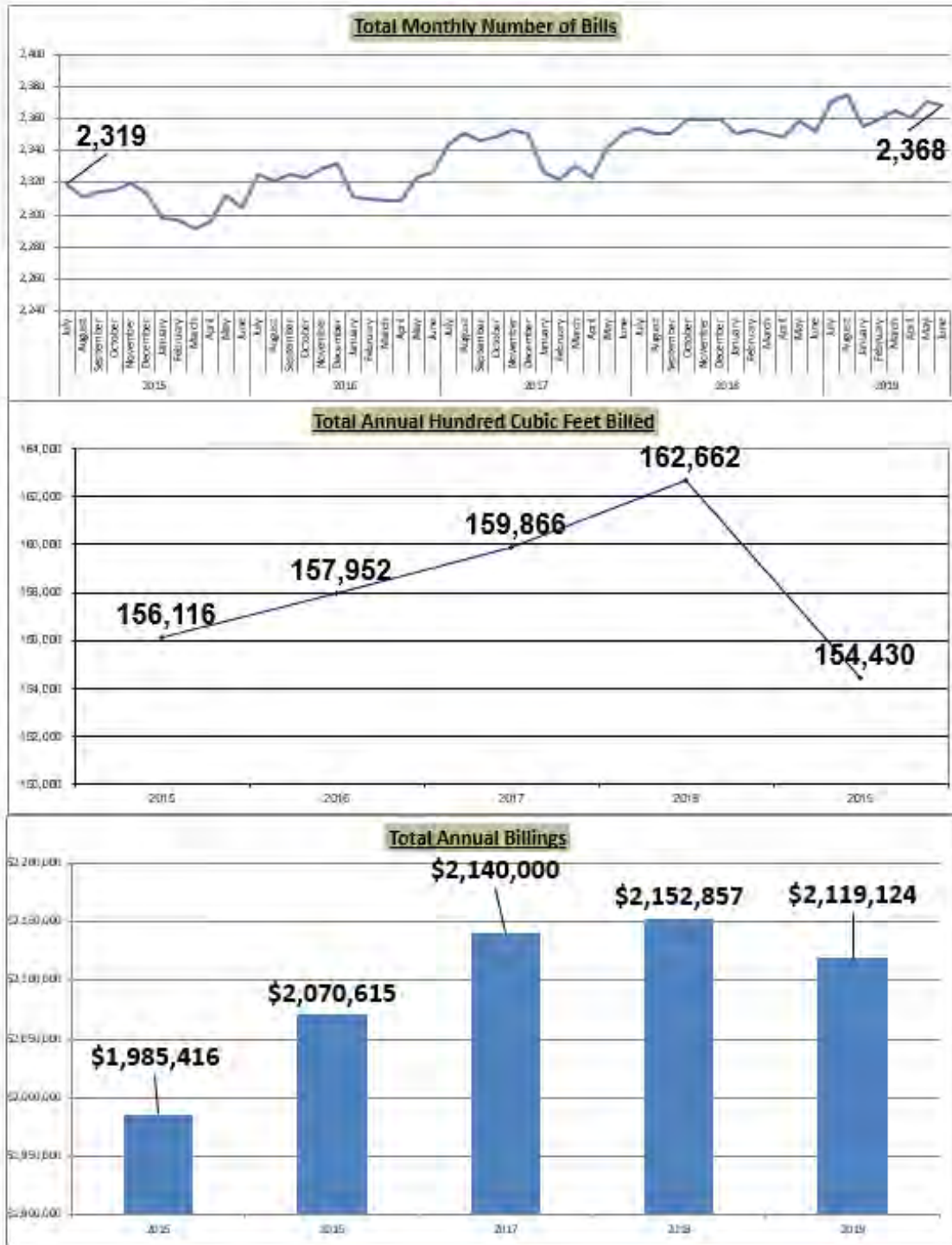
Capital Expenditures: (See details in the Capital Expenditure section) Target Balance: \$815,000

	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Column1	Budget	Forecast	Forecast	Forecast	Forecast
R&R Balance BOY	\$ 261,088	\$ 281,788	\$ 366,788	\$ 361,788	\$ 416,788
Contribution	\$ 120,700	\$ 135,000	\$ 145,000	\$ 155,000	\$ 165,000
Withdrawals	\$ (100,000)	\$ (50,000)	\$ (150,000)	\$ (100,000)	\$ (50,000)
R&R Balance EOY	\$ 281,788	\$ 366,788	\$ 361,788	\$ 416,788	\$ 531,788

Sewer Billing Statistics

The District provides sewer billing services for the municipality by contract. Sewer is billed based on water consumption and is included on Portland Water District's water bill. The municipality determines the sewer rate. Dollars collected are forwarded to the municipality weekly.

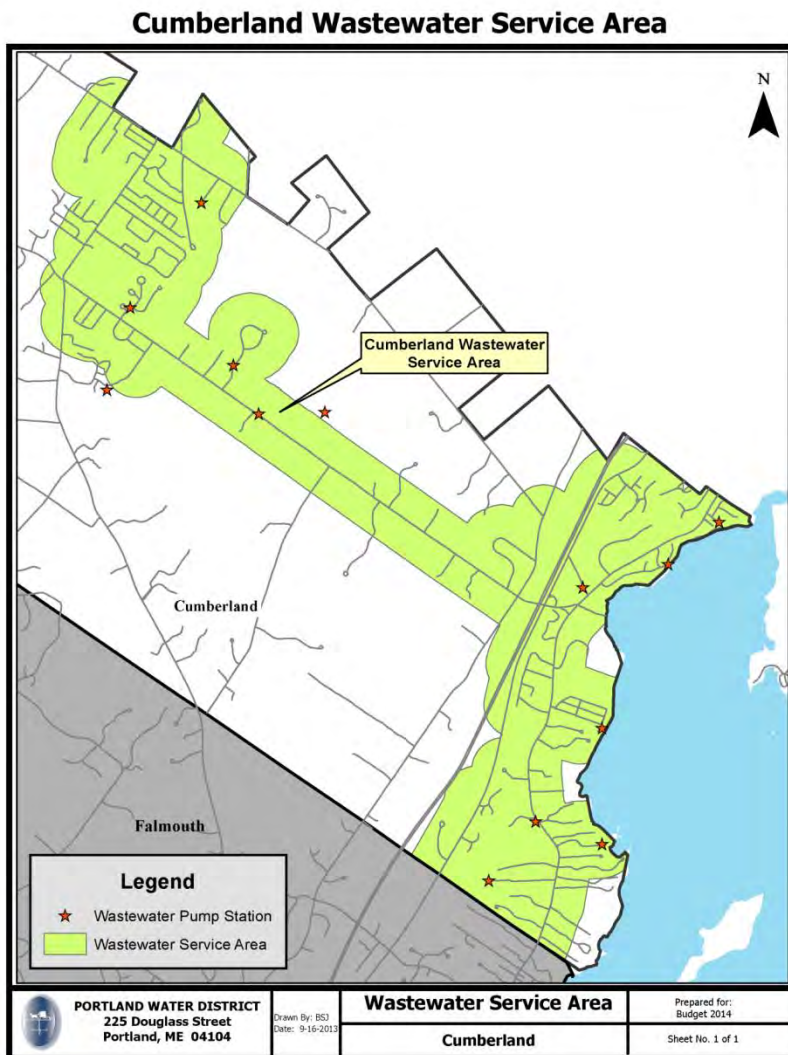
By Municipal Fiscal Year: Jul 1 to Jun 30



Fund: Wastewater - Cumberland

Background

The Portland Water District's charter authorizes the District to provide wastewater treatment and collection system and interceptors service to the town. By contract with the town, the District additionally operates and maintains the collectors in the sewer collection system. The District contracts with the Town of Falmouth to provide treatment services. Additionally, by contract, the District provides utility billing services.



Summary of Services Provided:

Treatment

0.235 million
gallons/day

Collection System:

13 Pump Stations with
29.2 miles of pipe

Utility Billing Services:

Annual Billings of
\$1,045,364 on 1,185
Customers (avg.
\$73.51/month)

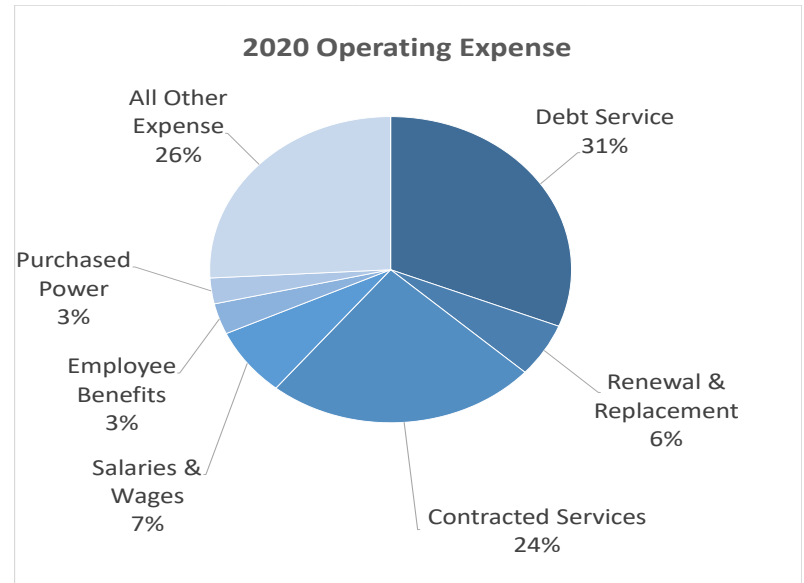
Fund: Wastewater - Cumberland

2020 Financial Summary

The proposed assessment of \$965,292 is an increase of \$59,928 or 6.6%.

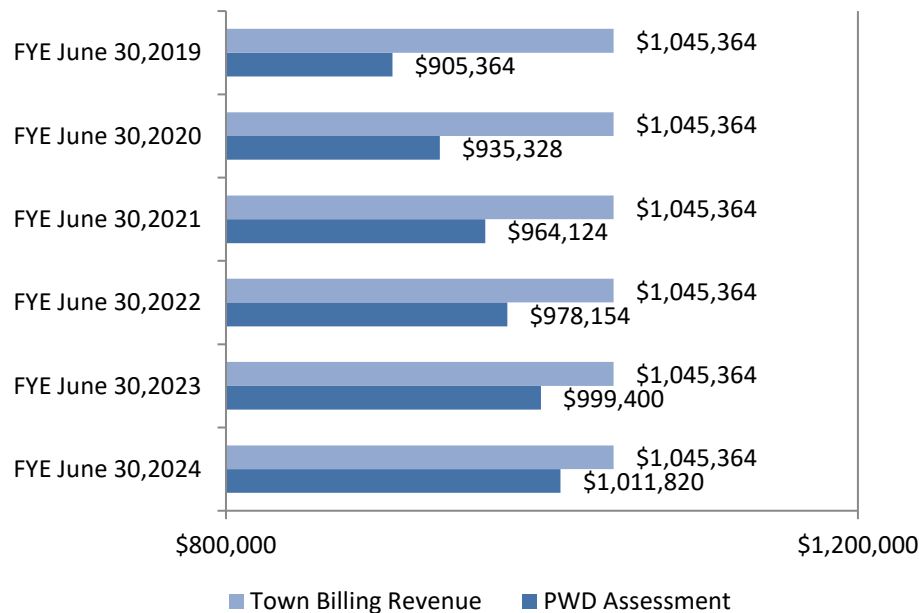
The proposed 2020 Operating Expense and Capital budgets are \$978,595 and \$152,650, respectively. The Operating Expense budget increased \$63,251 or 6.9% due to an increase in Salaries & Wages (\$14,176), Contracted Services related to repairing manholes (\$10,000) and Renewal/Replacement-Contracted (\$15,000).

The SCADA Radio Modem Replacement Project scheduled for 2019 was postponed to 2020. The project includes 14 Cumberland pump stations and is the primary focus for Cumberland's 2020 Capital plan.



Assessment Compared to Ratepayers' Billing

The municipality's fiscal year end is June 30, while the District's is December 31. The chart below compares the cash as collected by the District for sewer billings on their behalf and the District's assessment for services rendered. The municipality may incur additional sewer-related costs. The municipality determines if there are adjustments to sewer billing rates.



Revenue Assumptions:

- Consumption is the 12 months ending June 30, 2019

Rates Assumed:

Effective Date: Base/Per HCF

Jul 2013	\$34.25/\$4.96
Sep 2013	\$34.25/\$5.29
Sep 2015	\$35.58/\$5.29
Sep 2016	\$36.92/\$5.29
Sep 2018	\$36.92/\$5.52

2020 Operating Expense Highlights

Salaries/Wages – This expense is budgeted to increase 25% or \$14,176 to \$70,672. The labor hours for this fund increased 23.2% (489 hours) mostly in the Wastewater Systems area amounting to \$13,106 of the increase. This is based on projected personnel efforts needs in this fund.

Employee Benefits – The benefit rate (including FICA) decreased from 50.51% in 2019 to 48.39% in 2020. However, the additional time spent in Cumberland caused Employee Benefits expense to increase by 20.1% (\$5,334).

Contracted Services – This category includes payments to the Town of Falmouth for wastewater treatment and pumping services. Overall Contracted Services increased 5.1% (\$11,512) to a total of \$237,197. The portion of that amount applicable to the treatment services from the Town of Falmouth is \$192,645. Wastewater Systems added \$10,000 to the budget for manhole repairs in the coming year.

Purchased Power – Overall the budget increased \$4,420 (19.9%) driven mainly by wastewater pump stations. Annual usage increased 16,000 kWh and is based on a 2 to 3 year average. A 3% assumption is also included for potential CMP rate changes.

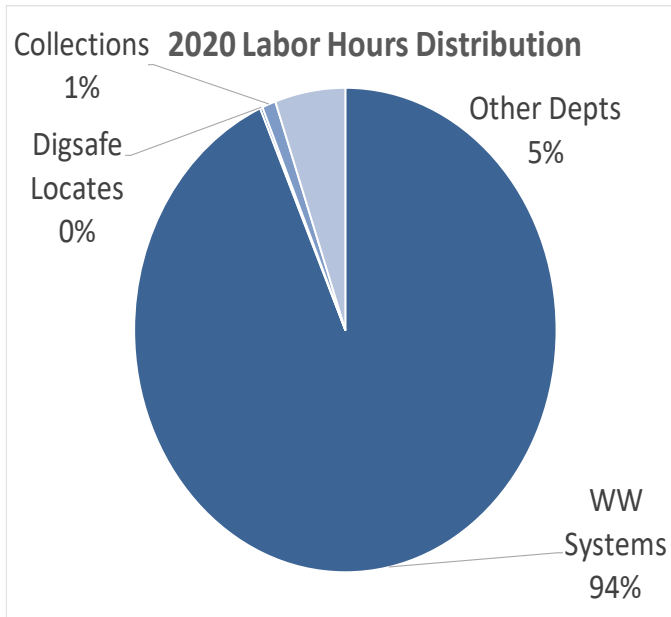
Transportation – Transportation costs increased by 12% (\$2,427). The increase is related to the corresponding rise in labor hours.

Support Services – These costs are related to general work done that cannot be directly charged to a fund as noted above (such as customer service, billing or computer support) or work done on behalf of several municipalities at the same time (engineering or laboratory services) that is allocated based on the value to each fund. Overall, Support Services increased \$15,196 or 8.8%.

The allocation from Administration increased \$9,323 (8.8%) because of the two new authorized head count in Information Services and Employee Services.

Debt Service – Debt service expense decreased 3.3% (\$10,495) due to the delay in issuing the ABC bond and decline in interest expense as debt is paid down.

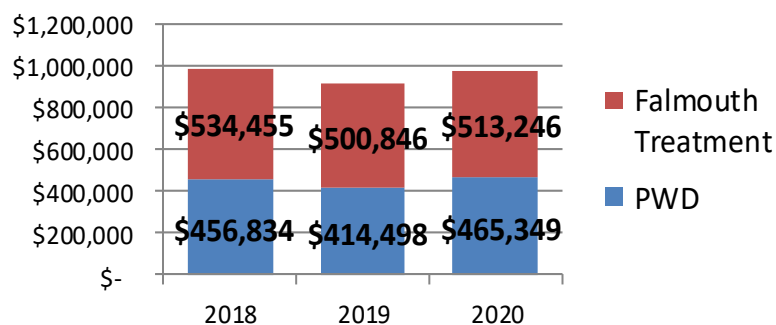
Renewal and Replacement – This is the annual contribution to a fund to finance smaller capital projects. A contribution of \$70,000 (\$40,000 for Cumberland only and \$30,000 for Falmouth assets utilized) will be made in 2020. The Falmouth portion increased by \$15,000 budgeted in 2019 due to projected capital projects at the treatment plant.



	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Assessment Income	\$905,364	\$452,682	\$905,364	965,292	\$59,928	6.6%
Interest Income	12,665	12,060	9,980	13,303	3,323	33.3%
<u>FEMA Reimbursement</u>	<u>-1,377</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>n/a</u>
Total Revenue	916,652	464,742	915,344	978,595	63,251	6.9%
Salaries & Wages	73,120	32,962	56,496	70,672	14,176	25.1%
Employee Benefits	37,056	14,446	26,592	31,926	5,334	20.1%
Contracted Services	225,343	123,061	225,685	237,197	11,512	5.1%
Deferred Cost W/O	8,088	0	0	0	0	n/a
Heat/Fuel Oil	120	0	332	332	0	0.0%
Insurance	2,955	2,589	842	3,232	2,390	283.8%
Materials & Supplies	18,990	2,894	7,850	7,750	-100	-1.3%
Other Expense	50	0	0	0	0	n/a
Purchased Power	29,747	14,925	22,248	26,668	4,420	19.9%
Tele/Other Utilities	2,219	887	2,104	2,160	56	2.7%
Transportation	26,424	16,813	20,220	22,647	2,427	12.0%
SS - Administration	99,189	48,346	104,934	114,257	9,323	8.9%
SS - Engineering Services	20,600	11,292	34,063	34,079	16	0.0%
SS - Wastewater Services	38,536	14,963	31,261	37,100	5,839	18.7%
<u>SS - Water Services</u>	<u>1,100</u>	<u>597</u>	<u>1,535</u>	<u>1,553</u>	<u>18</u>	<u>1.2%</u>
Operating Expense	583,537	283,775	534,162	589,573	55,411	10.4%
Debt Service & Lease Expense	322,737	154,299	314,073	303,578	-10,495	-3.3%
Renewal & Replacement - Direct	19,628	19,850	39,700	40,000	300	0.8%
Renewal & Replace - Indirect	12,477	6,558	12,409	15,444	3,035	24.5%
<u>Renewal & Replace - Contracted</u>	<u>52,910</u>	<u>7,500</u>	<u>15,000</u>	<u>30,000</u>	<u>15,000</u>	<u>100.0%</u>
Total Expense	991,289	471,982	915,344	978,595	63,251	6.9%
Current Year Surplus (Deficit)	-74,637	-7,240	0	0		
Transfer to R&R	0	0	0	0		
OPEB Surplus Allocated	2,094	0	0	0		
<u>Prior Year Surplus</u>	<u>328,678</u>	<u>256,135</u>	<u>279,915</u>	<u>256,136</u>		
Accumulated Surplus	256,135	248,895	279,915	256,136		

Contracted Services – Treatment Services from Town of Falmouth

A significant portion of Cumberland's total expense involves the treatment services provided by the Town of Falmouth:



Operation Summary

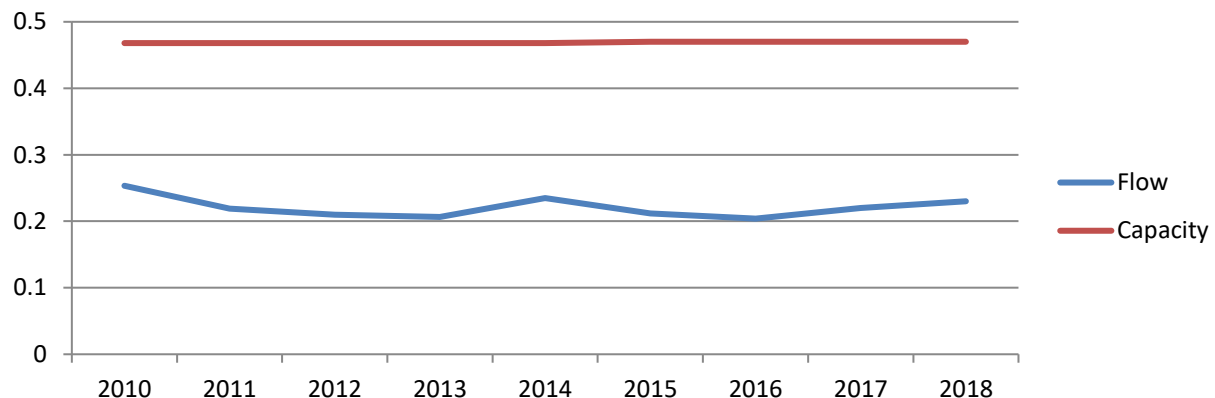
Wastewater Treatment: The wastewater generated in the Town of Cumberland is collected and pumped to the Falmouth Wastewater Treatment Facility (FWWTF). PWD, on behalf of Cumberland, owns 30% of the Falmouth Plant's design capacity, or 468,000 gallons per day. The town is billed for operating costs based on the ratio of Cumberland flow to the total flow processed at the Falmouth facility. The table below illustrates Cumberland's flow contribution to the Falmouth plant.

Year	Cumberland Flow	Falmouth WWTF Flow	% Cumberland Flow
2018	0.23 mgd	0.97 mgd	24%

FWWTF Capacity	Cumberland Cap (30%)	% Capacity Used	Capacity Remaining
1.56 mgd	0.468 mgd	49%	0.24 mgd

The flows from the Cumberland system in 2018 were essentially constant from 2017, with Cumberland again using less than half of the allotted capacity in the Falmouth Plant.

**Cumberland - Wastewater Flow
(millions gallons day)**



Wastewater Conveyance – collectors, interceptors and pumping stations

Parameter	2019 Actual to Sept	2020 Projected
Preventive Work Orders	284	200
Corrective Work Orders	15	15
Wet wells cleaned	34	40
Debris removed (tons)	37	40
Dry Weather Overflows	2	0

Operation Summary (continued)

2019 Other Highlights

- All pump stations are monitored 24/7 with our SCADA system and dispatch service. Operations staff will continue to visit each station on a weekly basis.
- The Asset Management Program continues to drive the preventive maintenance program, generating both monthly and annual preventive maintenance work orders for each of the pump stations.
- Wet wells will continue to be scheduled for cleaning on a quarterly basis unless experience dictates otherwise.
- A flow meter was installed on Route 1. Along with the Route 88 meter, this meters measures all flows to the Falmouth system. These flow monitors have increased the accuracy of flows sent to Falmouth and have aided in the sizing of pump stations, such as the Mill Creek Pump Station.

2020 Work Plan

- The Asset Management Program will continue to drive the preventive maintenance program, generating both monthly and annual preventive maintenance work orders for each of the pump stations.
- Wet wells will continue to be scheduled for cleaning on a quarterly basis unless experience dictates otherwise.
- The Cumberland radio network enabling SCADA communication (control system) will be upgraded to replace the legacy system.

Capital Summary

A five-year capital plan is updated each year. The projects are prioritized based on operational needs and financing availability. The table below indicates the projects scheduled for the next fiscal year and the funding source of those projects. Detailed descriptions of the projects can be found in the Capital Finance and Capital Expenditures sections.

Expenditures by CIP Year:

	<u>2020 CIP</u>	<u>CIP Total</u>
Projects:		
SCADA & Technology		
SCADA Radio Modem Replacement - 3126 (prorated)	\$ 132,650	\$ 132,650
WW Collection & Pumping		
Pump Station R&R - 3136	\$ 20,000	\$ 20,000
Total by CIP Year	<u>\$ 152,650</u>	<u>\$ 152,650</u>

Source of Funds:

	<u>Regular</u>	<u>Contracted</u>	<u>Future Bond</u>	<u>Funding</u>
	<u>R&R Fund</u>	<u>R&R Fund</u>		<u>Total</u>
Beginning Balance	\$ 382,423	\$ 2,426		
2020 Contribution	\$ 40,000	\$ 30,000		
Total R&R Balance Available	<u>\$ 422,423</u>	<u>\$ 32,426</u>		
Projects:				
SCADA & Technology				
SCADA Radio Modem Replacement - 3126	\$ 132,650	\$ -		\$ 132,650
WW Collection & Pumping				
Pump Station R&R - 3136	\$ 20,000	\$ -		
WW Treatment				
Town of Falmouth - estimated expenses	\$ -	\$ 30,000		\$ 30,000
Total	<u>\$ 152,650</u>	<u>\$ 30,000</u>		<u>\$ 162,650</u>
Ending Balance	<u>\$ 269,773</u>	<u>\$ 2,426</u>		

Prorated Projects: Costs of projects done on infrastructure used by multiple communities are ‘prorated’ between the municipalities based on relative design capacity. In the case of the SCADA radio modem replacement project, the proration is based on there being 14 Cumberland pump stations out of the 37 total pump stations that are planned to have work done in 2020. This project was postponed from 2019.

Projections for Rate-Making Purposes

Multi-year projections are made for each of the wastewater funds' assessment. The projections provide guidance to the wastewater municipalities to assist them in determining their wastewater sewer rates. A summary of the projection is provided on the next page.

Major Assumptions:

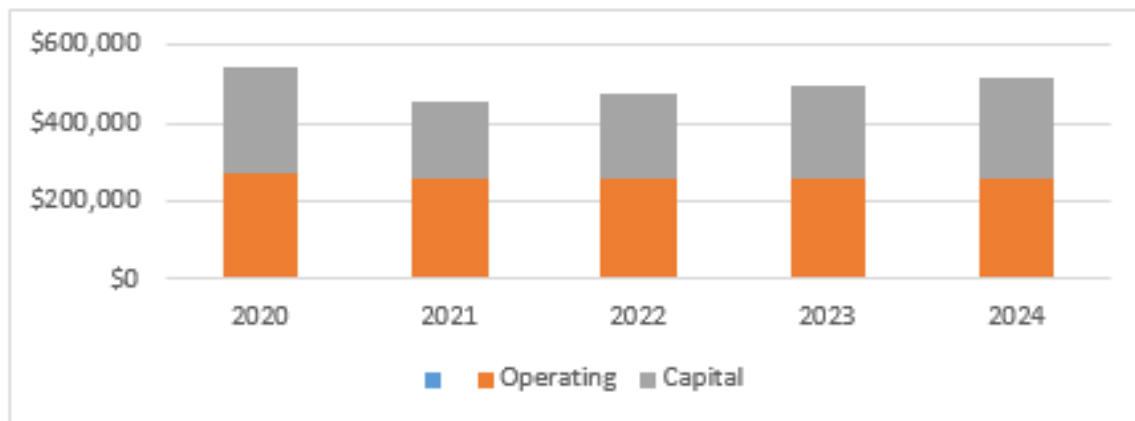
The assumptions incorporated in the projections are as follows:

- Salary increases of 3.0% each year. Additional 1.25 headcount in 2021.
- Benefit increases of 5% each year.
- Biosolids contract expires in 2021; assumed 1.8% increase in unit prices. Contract renewal in 2022 may result in a significant increase but it is unknown so not forecasted.
- Other expenses increase between 2.3% and 3.5% each year.
- New debt service and renewal/replacement fund expenditures consistent with the 2020 5-year capital plan. New debt assumed a 20-year life at 3% interest.

Summary of Projection Impact:

Assessment is projected to increase to \$1,018,193 in 2024, a 6% increase over 2020 Budget, with the most significant cost change related to debt service issued to finance capital projects. Operating Reserve balance and Capital R&R balance are below the target balances.

Reserve Fund Balances



Percent of Budget Dedicated to Debt Service – Target: Not to Exceed 35%

2018	2019	2020	2021	2022	2023	2024
33%	34%	31%	32%	32%	31%	30%

Debt Service Ratio – Target: Greater or Equal to 125%

2018	2019	2020	2021	2022	2023	2024
103%	119%	128%	117%	116%	117%	117%

Projections for Rate-Making Purposes (continued)

Operating Fund:

	<u>2020 Budget</u>	<u>2021 Forecast</u>	<u>2022 Forecast</u>	<u>2023 Forecast</u>	<u>2024 Forecast</u>
Revenues:					
Assessment Income	965,292	962,955	993,352	1,005,447	1,018,193
Interest Income	13,303	9,977	9,977	9,977	9,977
Total Revenues	978,595	972,932	1,003,329	1,015,424	1,028,170
Operating Expenses:					
Salaries & Wages	70,672	72,792	74,976	77,225	79,542
Employee Benefits	31,926	33,522	35,198	36,958	38,806
Contracted Services	237,197	242,653	248,234	253,943	259,784
Deferred Cost W/O	0	0	0	0	0
Heat/Fuel Oil	332	344	356	368	381
Insurance	3,232	3,306	3,382	3,460	3,540
Materials & Supplies	7,750	7,928	8,110	8,297	8,488
Other Expense	0	0	0	0	0
Purchased Power	26,668	26,668	26,668	27,175	27,691
Tele/Other Utilities	2,160	2,210	2,261	2,313	2,366
Transportation	22,647	23,168	23,701	24,246	24,804
SS - Administration	114,257	121,044	125,069	129,228	133,525
SS - Engineering Services	34,079	37,108	38,329	39,590	40,893
SS - Wastewater Services	37,100	38,334	39,609	40,926	42,287
SS - Water Services	1,553	2,105	2,175	2,247	2,322
	589,573	611,182	628,068	645,976	664,429
Debt Service	303,578	309,331	322,842	317,029	311,322
Renewal & Replacement - Direct	40,000	40,000	40,000	40,000	40,000
Renewal & Replace - Indirect	45,444	12,419	12,419	12,419	12,419
Capital Finance Expense	389,022	361,750	375,261	369,448	363,741
Total Operating Expenses	978,595	972,932	1,003,329	1,015,424	1,028,170
Current Year Surplus(Deficit)	0	0	0	0	0
Prior Year Surplus	256,136	256,136	256,136	256,136	256,136
Accumulated Surplus	256,136	256,136	256,136	256,136	256,136
Target Balance(25% of budget)	244,649	243,233	250,832	253,856	257,043
Above/(Below)	11,487	12,903	5,304	2,280	-907

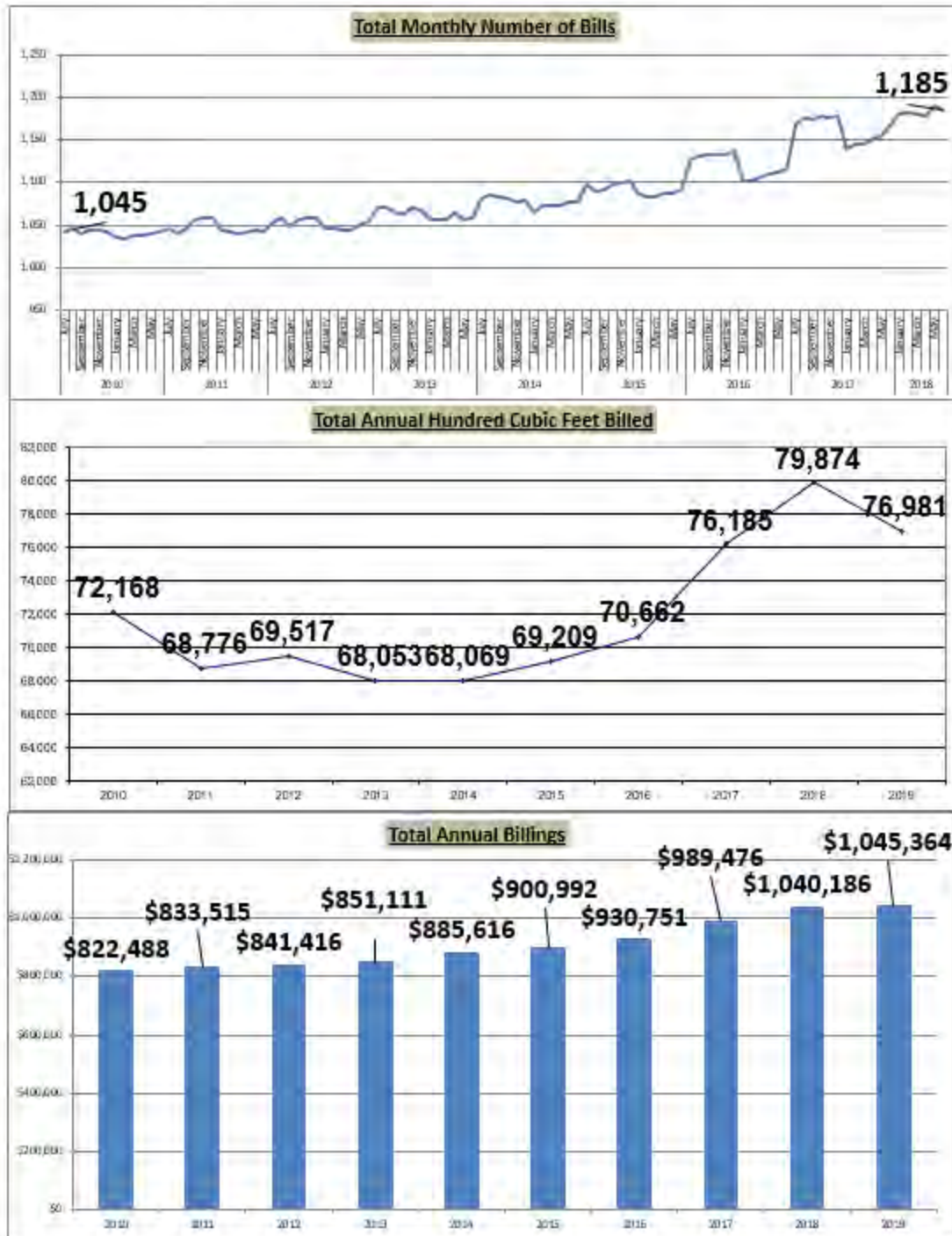
Capital Expenditures: (See details in the Capital Expenditure section) Target Balance: \$389,000

	<u>2020 Budget</u>	<u>2021 Forecast</u>	<u>2022 Forecast</u>	<u>2023 Forecast</u>	<u>2024 Forecast</u>
R&R Balance BOY	\$ 382,423	\$ 269,773	\$ 194,773	\$ 214,773	\$ 234,773
Contribution	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000
Withdrawals	\$ (152,650)	\$ (115,000)	\$ (20,000)	\$ (20,000)	\$ (20,000)
R&R Balance EOY	\$ 269,773	\$ 194,773	\$ 214,773	\$ 234,773	\$ 254,773

Sewer Billing Statistics

The District provides sewer billing services for the municipality by contract. Sewer is billed based on water consumption and is included on Portland Water District's water bill. The municipality determines the sewer rate. Dollars collected are forwarded to the municipality weekly.

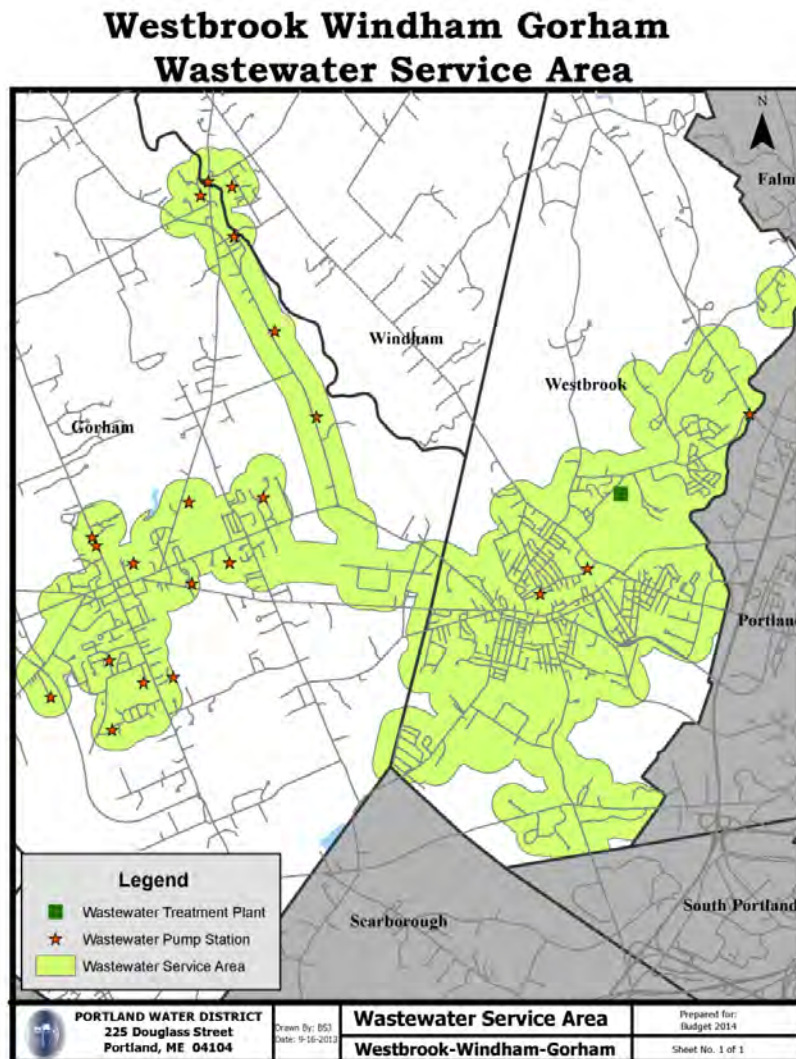
By Municipal Fiscal Year: Jul 1 to Jun 30, 2019



Fund: Wastewater - Gorham

Background

The Portland Water District's charter authorizes the District to provide wastewater treatment and collection system-interceptors service to the town. By contract with the town, the District additionally operates and maintains the collectors in the sewer collection system. Gorham's wastewater is treated at the treatment facility located in Westbrook and jointly used by the Town of Windham and City of Westbrook. Additionally, by contract, the District provides utility billing services.



Summary of Services Provided:

Treatment

*0.471 million
gallons/day*

Collection System

*14 Gorham only & 3
Joint use Pump
Stations with 33.7
miles of pipe*

Utility Billing

*Annual Billings of
\$1,147,560 for 1,879
Customers (avg.
\$50.89/month)*

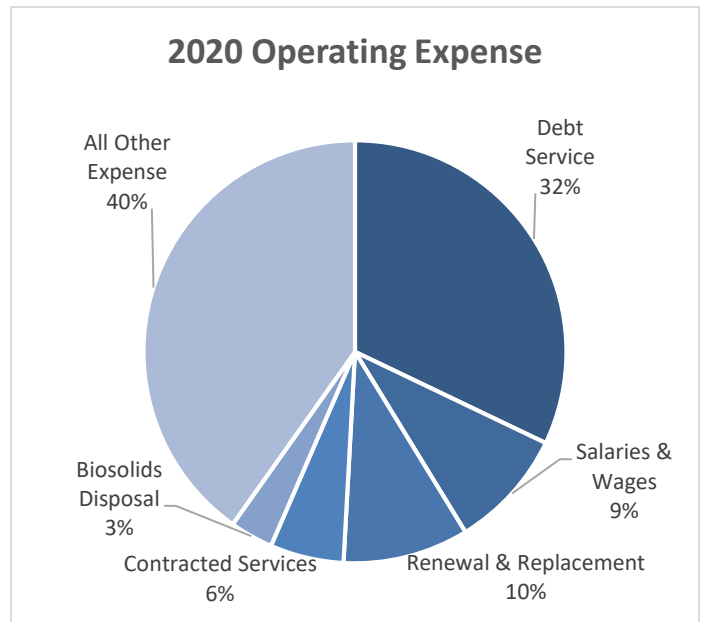
Fund: Wastewater - Gorham

2020 Financial Summary

The proposed assessment is \$1,160,676; this is a 2.4% increase over the prior year and was on par with the forecasted assessment provided to the town last year.

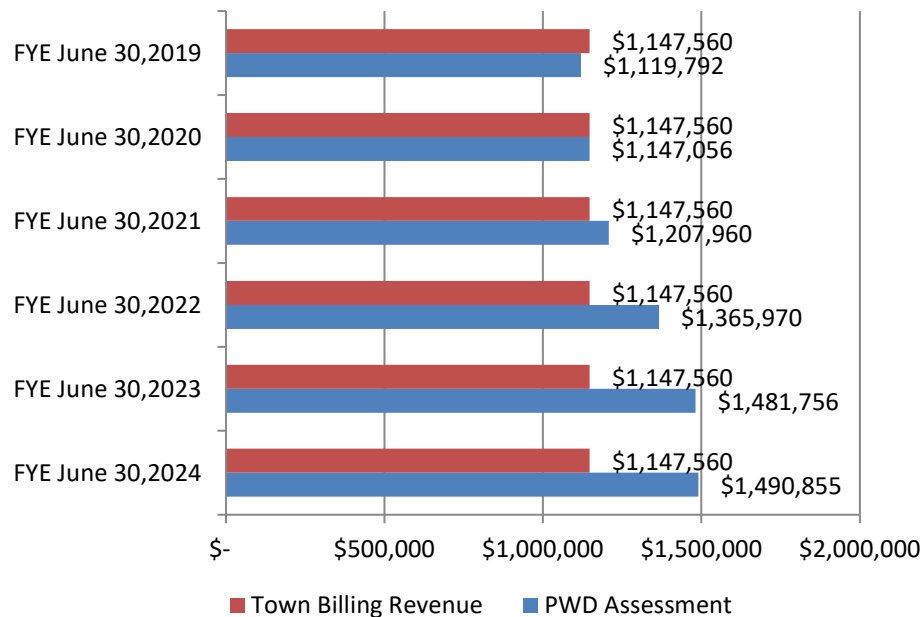
The proposed 2020 Operating Expense and Capital budgets are \$1,179,131 and \$3,849,150, respectively.

The Operating Expense budget increase is \$26,177 or 2.3%. Much of the Fund's expense comes from joint use facilities with Westbrook and Windham. Gorham's percentage of the wastewater flows were the same as 2019 for Westbrook but down 3.5% within the Little Falls area. The primary Capital project is upgrading the joint Westbrook Treatment Plant's Aeration & Clarifier processes. \$3.46M is Gorham's portion of the construction cost.



Assessment Compared to Ratepayers' Billing

The municipality's fiscal year end is June 30, while the District's is December 31. The chart below compares the cash as collected by the District for sewer billings on their behalf and the District's assessment for services rendered. The municipality may incur additional sewer-related costs. The municipality determines whether to increase the sewer billing rates.



Revenue Assumptions:

- Consumption is the 12 months ending June 30, 2018

Rates Assumed:

Effective Date: Base/Per HCF

Nov 2006 \$13.74/6.29

No change in rates since 11/1/2006.

2020 Operating Expense Highlights

Salaries/Wages – The budget for salaries and wages is related to the labor required to deliver wastewater services. Treatment plant costs are allocated based on flows. The budget increased \$12,083 (12.6%) to \$107,877. The average wage rate increased 3.0% and labor hours increased at the wastewater pump stations located in Gorham.

Employee Benefits – The benefit rate (including FICA) decreased from 50.51% in 2019 to 48.39% in 2020 due to lower employee benefit expenses. Overall, employee benefits expense increased 6.9% (\$3,143).

Biosolids Disposal – Biosolids expense at the Westbrook Regional WWTF is projected to increase 7.8% due to a 3.5% increase in wet tons disposed and an expected 4.2% increase in the disposal price per wet ton. The result was a \$2,833 increase in expense.

Contracted Services – The primary reason for the increase was Wastewater System's increase in manhole repairs. Overall, the expense was up \$11,505 (20.9%)

Purchased Power – The budget for power is expected to increase by 14.8% or \$5,870. Gorham saw increases in all areas: joint Little Falls and joint Westbrook pump stations' usage estimates are 58,000 kWh higher than last year's budget. The Westbrook WWTF usage estimate was 177,000 kWh higher. Demand also increased 942 KW and 300 KW, respectively. Gorham only pump stations also increased by 8,000 kWh. Estimates are based off a 1 to 2 year average rather than a 3-year average.

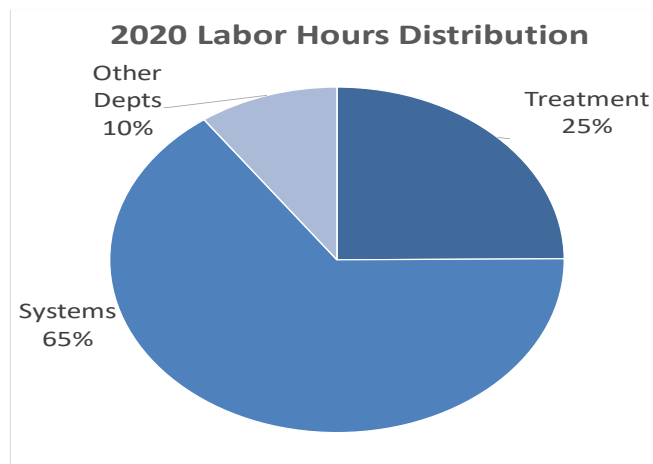
Transportation – Transportation expenses decreased \$312 (1.4%) due to a decrease in rates by 2%.

Support Services – These costs are related to general work done that cannot be directly charged to a fund as noted above (such as customer billing or information technology) or work done on behalf of several municipalities at the same time (engineering or laboratory services) that is allocated based on the value to each fund. Overall, Support Services increased \$11,480 or 3.8%.

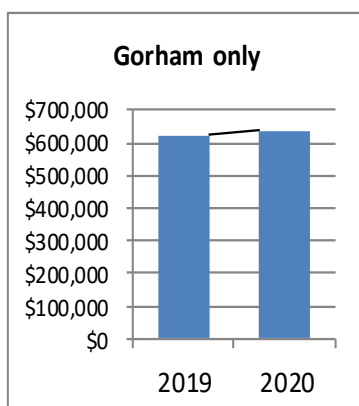
The allocation from Administration increased \$7,810 (5.66%) as two full time positions were added Admin's head count. The costs associated with Wastewater increased \$4,205 (7%) due to redistribution in labor towards the smaller Wastewater funds to mirror actual hours.

Debt Service - The annual principal and interest payments on bonds issued to finance capital projects. This item decreased 5.0% (\$19,829). This is directly related to not issuing the ABC bond this year.

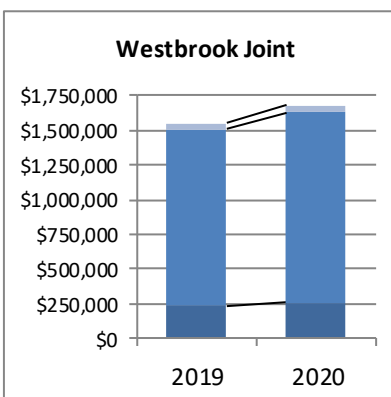
Renewal & Replacement - Dollars put aside to fund smaller capital projects. A contribution of \$113,382 will be made in 2020.



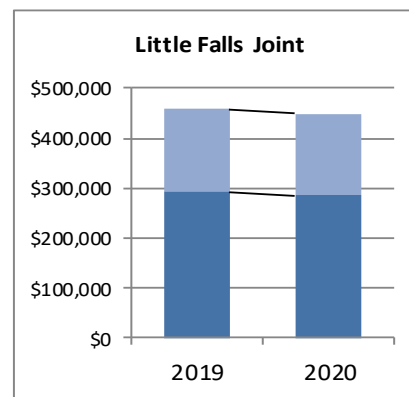
	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Assessment Income	\$1,106,148	\$566,718	\$1,133,436	\$1,160,676	\$27,240	2.4%
Interest Income	26,287	24,528	19,518	18,455	-1,063	-5.4%
Other Income	882	0	0	0	0	n/a
FEMA Reimbursement	-410	0	0	0	0	n/a
Total Revenue	1,132,907	591,246	1,152,954	1,179,131	26,177	2.3%
Salaries & Wages	99,590	41,189	95,794	107,877	12,083	12.6%
Employee Benefits	58,045	21,908	36,229	39,062	2,833	7.8%
Biosolids Disposal	49,421	19,790	45,569	48,712	3,143	6.9%
Chemicals	17,686	10,101	9,169	16,098	6,929	75.6%
Contracted Services	82,311	20,008	54,977	66,482	11,505	20.9%
Deferred Cost W/O	18,363	0	0	0	0	n/a
Heat/Fuel Oil	4,705	6,509	5,327	5,559	232	4.4%
Insurance	1,386	650	1,271	1,369	98	7.7%
Materials & Supplies	38,328	11,525	26,937	23,708	-3,229	-12.0%
Other Expense	981	951	789	854	65	8.2%
Purchased Power	54,294	25,958	39,657	45,527	5,870	14.8%
Tele/Other Utilities	3,750	1,408	2,959	3,042	83	2.8%
Transportation	19,908	12,081	21,954	21,642	-312	-1.4%
SS - Administration	135,215	63,341	138,078	145,888	7,810	5.7%
SS - Engineering Services	43,420	22,931	71,809	69,881	-1,928	-2.7%
SS - Environmental Services	21,014	11,104	23,553	24,891	1,338	5.7%
SS - Wastewater Services	64,594	28,930	59,888	64,093	4,205	7.0%
SS - Water Services	1,769	959	2,468	2,523	55	2.2%
Operating Expense	714,780	299,343	636,428	687,208	50,780	8.0%
Debt Service & Lease Expense	373,303	188,129	398,370	378,541	-19,829	-5.0%
Renewal & Replacement - Direct	86,690	50,000	100,000	90,800	-9,200	-9.2%
Renewal & Replace - Indirect	18,392	9,524	18,156	22,582	4,426	24.4%
Total Expense	1,193,165	546,996	1,152,954	1,179,131	26,177	2.3%
Current Year Surplus (Deficit)	-60,258	44,250	0	0		
OPEB Surplus Allocated	3,361	0	0	0		
Prior Year Surplus	310,000	253,103	310,054	294,783		
Accumulated Surplus	253,103	297,353	310,054	294,783		



Gorham Only – Expense up 2.7% or \$16.7k.



Westbrook JT – Expense up 8.4%; Gorham's share of expense unchanged (13.0%), net expense up \$17.4k (7.3%).



Little Falls JT – Expense down \$9.0k, Gorham's share of expense was down (28.0% to 24.5%), net expense down \$7.9k (2.7%).

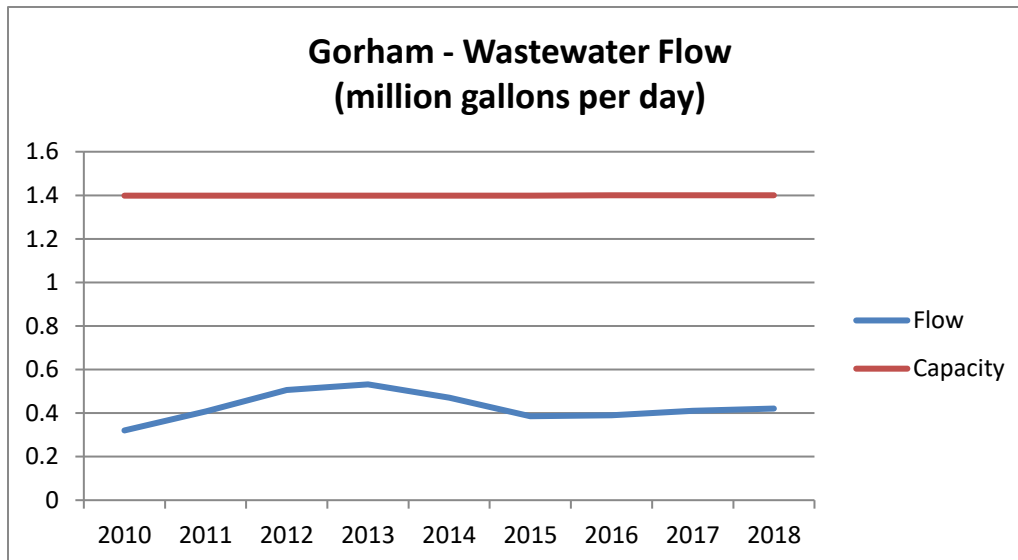
Operation Summary

Wastewater Treatment: All wastewater generated in Gorham is being treated at the Westbrook/ Gorham/Windham Regional WWTF. The table below shows flow from the Gorham and Little Falls section of Gorham to the regional facility. The Town of Gorham shares operational costs at the treatment facility in Westbrook based on the amount of flow the town contributes to the total flow through the treatment facility. Gorham has 30.8% of the treatment facility capacity, or 1,398,320 gallons per day.

Area	2017 Gorham Flow	Westbrook WWTF Flow	% Gorham Flow
Total Gorham Flow	0.41 mgd	3.04 mgd	13%

WGWWTF Capacity	Gorham Capacity (30.8%)	2017 - % Capacity Used	Capacity Remaining
4.54 mgd	1.398 mgd	29%	0.99 mgd

Flow from Gorham remained steady. The Town of Gorham utilized only 29% of the allotted capacity at the treatment plant and has just under 1 million gallons per day of capacity remaining at the treatment plant.



Wastewater Conveyance – interceptors and pumping stations

Parameter	2019 Actual to Sept	2020 Projected
Preventive Work Orders	307	275
Corrective Work Orders	13	20
Wet wells cleaned	29	30
Debris removed (tons)	45.5	35
Dry Weather Overflows	1	0

Operation Summary (continued)

2019 Other Highlights

- The Asset Management Program will continue to drive the preventive maintenance program, generating both monthly and annual preventive maintenance work orders for each of the pump stations.
- The aeration system at the Westbrook/Gorham/Windham Regional WWTF was evaluated in 2015. Several possible approaches to design of the new system were identified and are dependent on future phosphorus permit limits. The loadings to the treatment facility have increased and are creating some operational challenges. Design of the new system is anticipated in 2019 with construction of the upgraded system currently contemplated for 2021.
- Recognizing the increased loading at the treatment plant and in anticipation of the aeration system upgrade in 2020, acceptance of septage at the plant has ceased until after the completion of the aeration upgrade. Septage is being accepted at the East End WWTF in Portland.
- Wet wells will continue to be scheduled for cleaning on a quarterly basis.
- Emergency generators installed at existing pump stations, and the installation of generators as part of new installations have reduced the need to respond to these critical stations during system power failures, improving the level of service to customers.
- The odor control system at the Mallison Falls Pump Station has worked well since it was installed in the summer of 2012. We have received no odor complaints since its installation. We continue to maintain the system and replace the odor removing media on an annual basis.
- The new dewatering system (screw press) at the treatment facility was installed in 2018. Following an extended start-up, the Operations Team has been able to optimize the equipment and performance of the system has increased dramatically. Through September, the %TS had increased from only 15.6 % the year before to 20.1% TS in 2019. This results in the removal of roughly 1,466,000 lbs. of water from the biosolids managed by the facility. This has resulted in a savings in excess of \$50,000 over past years.

2020 Work Plan

- The Asset Management Program will continue to drive the preventive maintenance program, generating both monthly and annual preventive maintenance work orders for each of the pump stations.
- Wet wells will continue to be scheduled for cleaning on a quarterly basis.
- The Gorham radio network enabling SCADA communication (control system) will be upgraded to replace the legacy system.
- The Westbrook/Gorham/Windham Regional WWTF will have major work on a number of process areas, including the dewatering conveyance system, odor control for the sludge storage tank and polymer system additions.
- Design of the aeration system upgrade began in 2019.

Capital Summary

A five-year capital plan is updated each year. The projects are prioritized based on operational needs and financing availability. The table below indicates the projects scheduled for the next fiscal year and the funding source of those projects. Detailed descriptions of the projects can be found in the Capital Finance and Capital Expenditures sections.

Expenditures by CIP Year:

	<u>Prior CIP</u>	<u>2020 CIP</u>	<u>Total</u>
Projects:			
SCADA & Technology			
SCADA Radio Modem Replacement - 3126 (prorated)		\$ 141,750	\$ 141,750
WW Collection & Pumping			\$ -
Gorham Only Pump Station R&R - 3137	\$ 20,000	\$ 20,000	\$ 20,000
Little River Bridge Forcemain Replacement (prorated)	\$ 207,000	\$ 207,000	\$ 207,000
WW Treatment			\$ -
<u>Westbrook Treatment Plant</u>			\$ -
Treatment Plant R&R - 3132 (prorated)		\$ 15,400	\$ 15,400
Sludge Storage Odor Control - 3025 (prorated)	\$ 231,000		\$ 231,000
Aeration & Clarifier Design - 3022 (prorated)	\$ 231,000		\$ 231,000
Aeration & Clarifier Construction - 3023 (prorated)		\$ 3,465,000	\$ 3,465,000
Total by CIP Year	\$ 462,000	\$ 3,849,150	\$ 4,311,150

Source of Funds:

	<u>R&R Fund</u>	<u>Bond Issue 2020</u>	<u>Bond Issue 2021</u>	<u>Funding Total</u>
Beginning Balance	\$ 925,773			
2020 Contribution	\$ 90,800			
Total R&R Balance Available	\$ 1,016,573			
Projects:				
SCADA & Technology	\$ 141,750			\$ 141,750
WW Collection & Pumping	\$ 227,000			\$ 227,000
WW Treatment	\$ 15,400	\$ 462,000	\$ 3,465,000	\$ 3,942,400
Total	\$ 384,150	\$ 462,000	\$ 3,465,000	\$ 4,311,150
Ending Balance	\$ 632,423			

Prorated Projects: Costs of projects done on infrastructure used by multiple communities are ‘prorated’ between the municipalities based on relative design capacity. In the case of the SCADA radio modem replacement project, the proration is based on there being 15 Gorham pump stations out of the 37 total pump stations that are planned to have work done in 2020. This project was postponed from 2019.

Projections for Rate-Making Purposes

Multi-year projections are made for each of the wastewater funds' assessment. The projections provide guidance to the wastewater municipalities to assist them in determining their wastewater sewer rates. A summary of the projection is provided on next page.

Major Assumptions:

The assumptions incorporated in the projections are as follows:

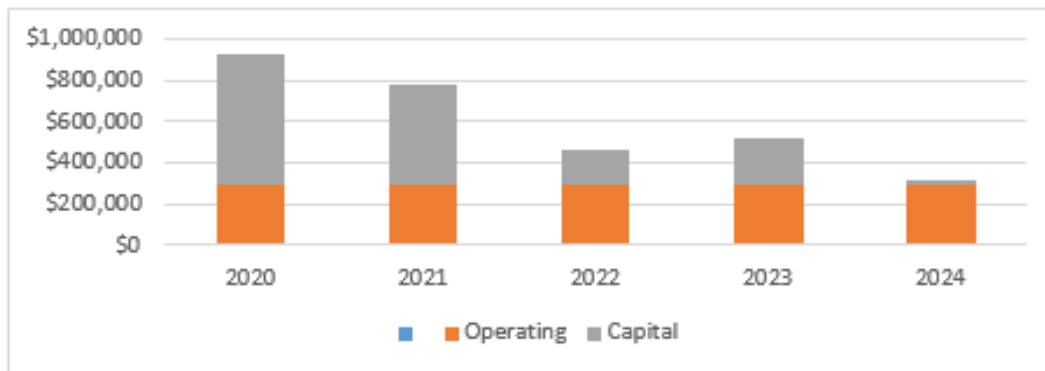
- Salary increases of 3.0% each year. Additional 1.25 headcount in 2021.
- Benefit increases of 5% each year.
- Biosolids contract expires in 2021; assumed 1.8% increase in unit prices. Contract renewal in 2022 may result in a significant increase but it is unknown so not forecasted.
- Other expenses increase between 2.3% and 3.5% each year.
- New debt service and renewal/replacement fund expenditures consistent with the 2020 5-year capital plan. New debt assumed a 20-year life at 3% interest.

Summary of Projection Impact:

Assessment is projected to increase to \$1,494,896 in 2024, a 29% increase over 2020 Budget, with the most significant cost change related to debt service issued to finance capital projects. Operating Reserve balance is slightly below target balance by 2024 and Capital R&R balance are below the target balances for all years.

Debt Service as a percent of budget is high due to Gorham's request to connect the Little Falls area to the Westbrook Regional Treatment Plant and significant upcoming upgrades at the treatment plant.

Reserve Fund Balances



Percent of Budget Dedicated to Debt Service – Target: Not to Exceed 35%

2018	2019	2020	2021	2022	2023	2024
31%	34%	32%	34%	42%	41%	40%

Debt Service Ratio – Target: Greater or Equal to 125%

2018	2019	2020	2021	2022	2023	2024
112%	125%	130%	129%	120%	120%	121%

Projections for Rate-Making Purposes (continued)

Operating Fund:

	<u>2020 Budget</u>	<u>2021 Forecast</u>	<u>2022 Forecast</u>	<u>2023 Forecast</u>	<u>2024 Forecast</u>
Revenues:					
Assessment Income	1,160,676	1,255,243	1,476,697	1,486,814	1,494,896
Interest Income	18,455	13,841	13,841	13,841	13,841
Other Income	0	0	0	0	0
Total Revenues	1,179,131	1,269,084	1,490,538	1,500,655	1,508,737
Operating Expenses:					
Salaries & Wages	107,877	111,113	114,446	117,879	121,415
Employee Benefits	39,062	41,015	43,066	45,219	47,480
Biosolids Disposal	48,712	49,589	50,482	51,391	52,316
Chemicals	16,098	16,581	17,078	17,590	18,118
Contracted Services	66,482	68,011	69,575	71,175	72,812
Deferred Cost W/O	0	0	0	0	0
Heat/Fuel Oil	5,559	5,754	5,955	6,163	6,379
Insurance	1,369	1,400	1,432	1,465	1,499
Materials & Supplies	23,708	24,253	24,811	25,382	25,966
Other Expense	854	874	894	915	936
Purchased Power	45,527	45,527	45,527	46,392	47,273
Tele/Other Utilities	3,042	3,112	3,184	3,257	3,332
Transportation	21,642	22,140	22,649	23,170	23,703
SS - Administration	145,888	157,833	163,081	168,503	174,106
SS - Engineering Services	69,881	76,512	79,029	81,629	84,315
SS - Environmental Services	24,891	25,719	26,574	27,458	28,371
SS - Wastewater Services	64,093	66,224	68,426	70,701	73,052
SS - Water Services	2,523	3,407	3,520	3,637	3,758
	687,208	719,064	739,729	761,926	784,831
Debt Service	378,541	426,443	627,232	615,152	600,329
Renewal & Replacement - Direct	90,800	100,000	100,000	100,000	100,000
Renewal & Replace - Indirect	22,582	23,577	23,577	23,577	23,577
Capital Finance Expense	491,923	550,020	750,809	738,729	723,906
Total Operating Expenses	1,179,131	1,269,084	1,490,538	1,500,655	1,508,737
Current Year Surplus(Deficit)	0	0	0	0	0
Prior Year Surplus	294,783	294,783	294,783	294,783	294,783
Accumulated Surplus	294,783	294,783	294,783	294,783	294,783
Target Balance(25% of budget)	294,783	317,271	372,635	375,164	377,184
Above/(Below)	0	-22,488	-77,852	-80,381	-82,401

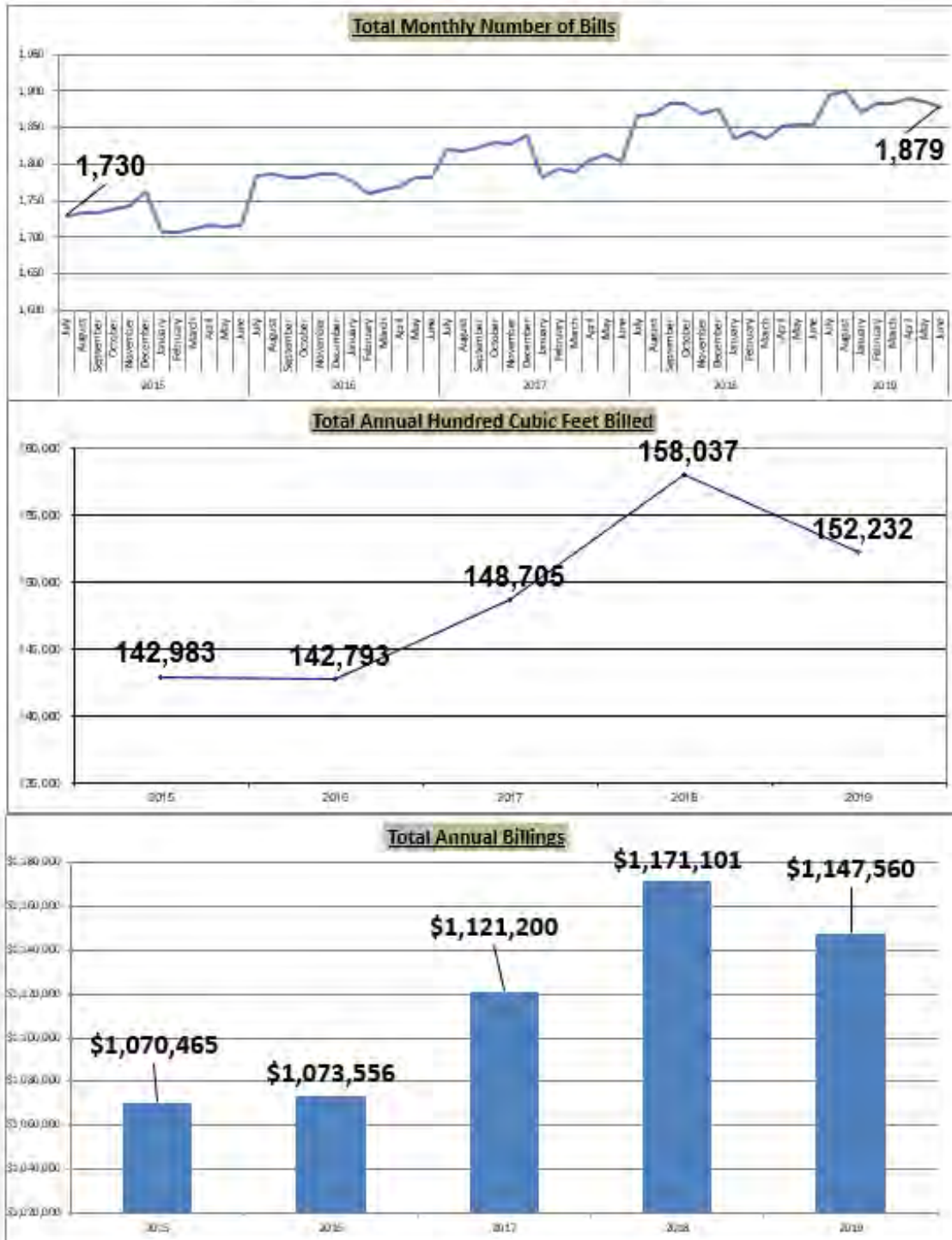
Capital Expenditures: (See details in the Capital Expenditure section) Target Balance: \$882,000

	<u>2020 Budget</u>	<u>2021 Forecast</u>	<u>2022 Forecast</u>	<u>2023 Forecast</u>	<u>2024 Forecast</u>
R&R Balance BOY	\$ 925,773	\$ 632,423	\$ 481,423	\$ 162,123	\$ 226,723
Contribution	\$ 90,800	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Withdrawals	\$ (384,150)	\$ (251,000)	\$ (419,300)	\$ (35,400)	\$ (312,600)
R&R Balance EOY	\$ 632,423	\$ 481,423	\$ 162,123	\$ 226,723	\$ 14,123

Sewer Billing Statistics

The District provides sewer billing services for the municipality by contract. Sewer is billed based on water consumption and is included on Portland Water District's water bill. The municipality determines the sewer rate. Dollars collected are forwarded to the municipality weekly.

By Municipal Fiscal Year: Jul 1 to Jun 30

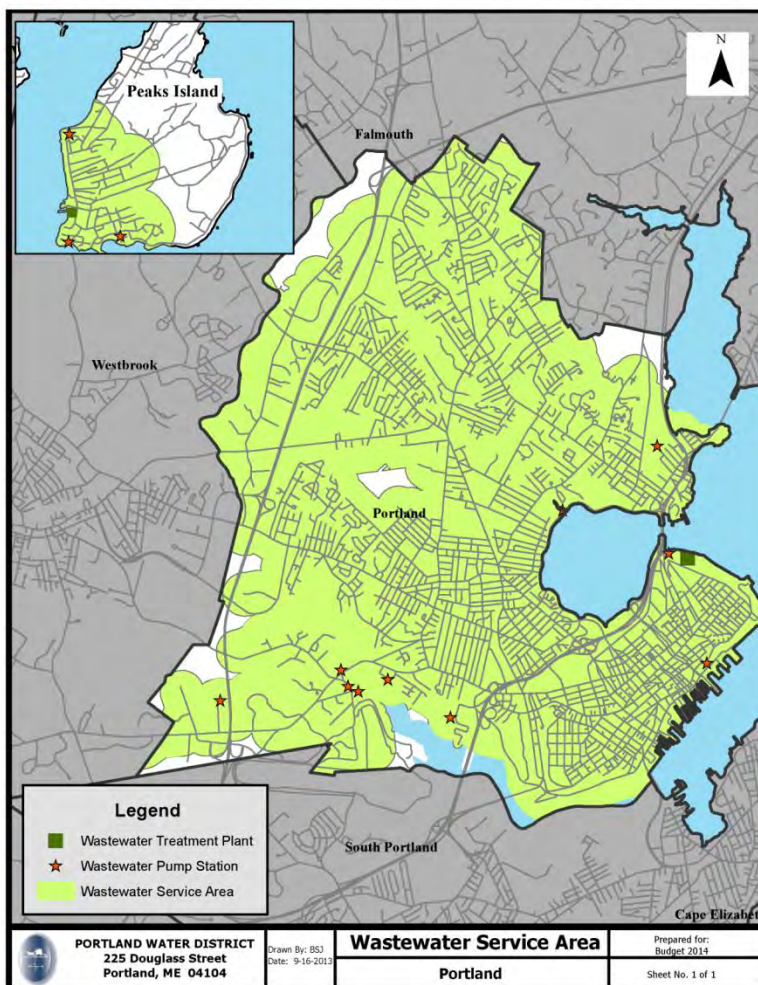


Fund: Wastewater - Portland

Background

The Portland Water District's charter authorizes the District to provide wastewater treatment, collection system and interception services to the city. By contract with the city, the District additionally provides Peaks Island's collection system-collector and storm water system services. The city maintains the mainland's collection system- collectors that transport wastewater from user's property to the District's interceptors. Additionally, by contract, the District provides utility billing services.

Portland Wastewater Service Area



Summary of Services

Provided:

Treatment

Mainland: 18.07 million gallons/day

Peaks Island: 0.104 million gallons/day

Collection System

14 Pump Stations with
23.5 miles of pipe

Storm Water system

Peaks Island with 1.9 miles of pipe

Utility Billing

Annual Billings of
\$24,790,430 on 17,136
Customers (avg.
\$120.56/month)

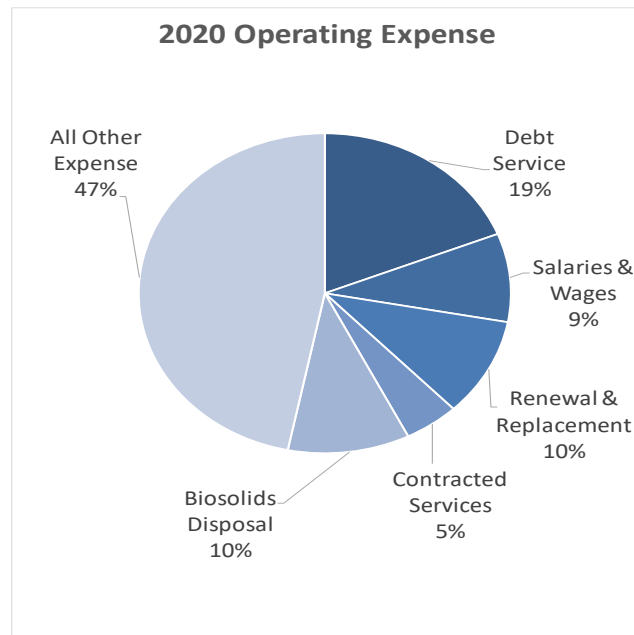
Fund: Wastewater - Portland

2020 Financial Summary

The city's assessment will increase 2.0% or \$247,260 to \$12,863,340.

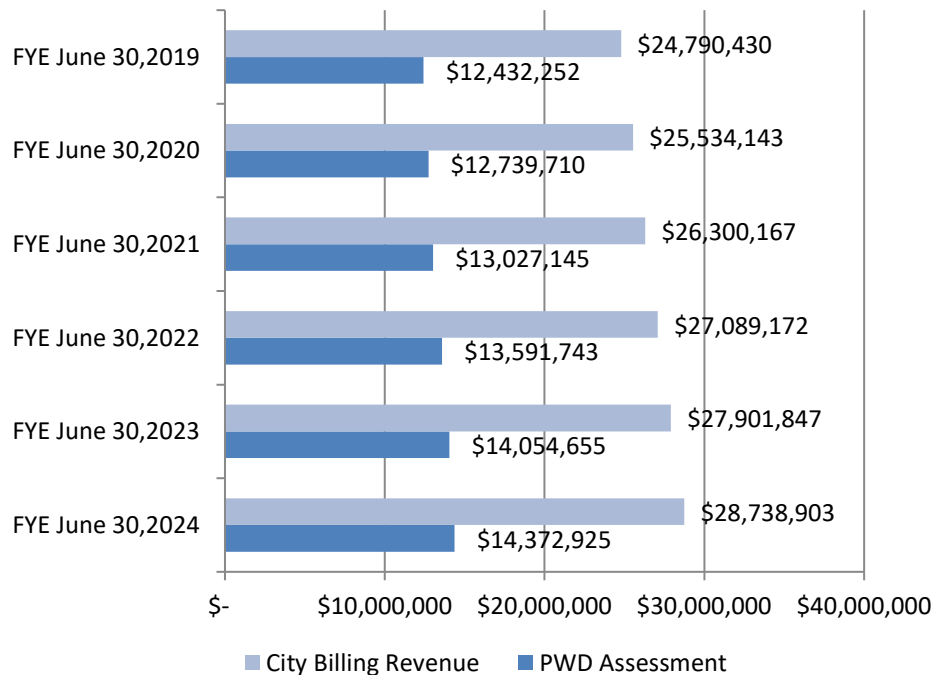
The proposed 2020 Operating Expense and Capital budgets are \$13,227,844 and \$4,545,000, respectively.

The Operating Expense budget is \$365,225 or 2.8%, lower than the previous year. Departmental expense increased by 3% or \$277,320. Debt service decreased \$141,941 (5.4%) and renewal & replacement (direct and indirect) will increase \$1,317,013 to \$229,846.



Assessment Compared to Ratepayers' Billing

The municipality's fiscal year end is June 30, while the District's is December 31. The chart below compares the sewer billing cash as collected by the District on their behalf and the District's assessment for services rendered. The municipality may incur additional sewer-related costs. The municipality determines whether to increase the sewer billing rates.



Revenue Assumptions:

- Consumption is the 12 months ending June 30, 2017

- Rates Assumed:

Effective Date:	Base/Per HCF
Jul 1 2013	\$8.35
Jul 1 2014	\$8.81
Jul 1 2015	\$9.70
Jan 1 2016	\$8.20
Jan 1 2017	\$9.35
Jul 1 2017	\$9.65
Jul 1 2018	\$9.95
Jul 1 2019	\$10.40

Assumed 3% increase in July 2020 to 2024.

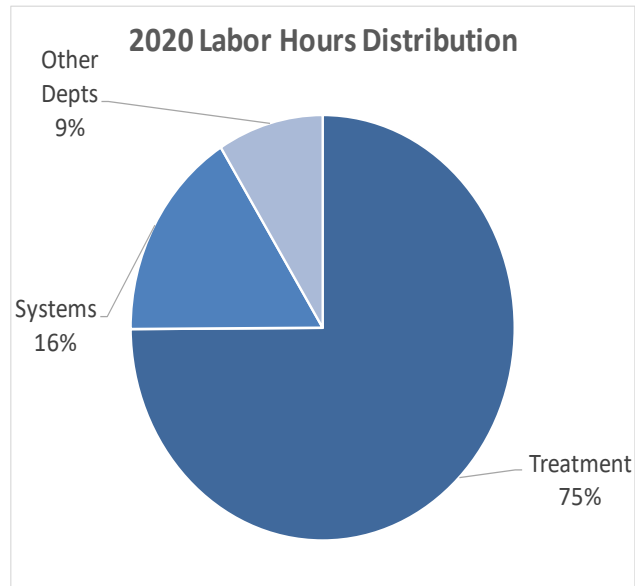
2020 Operating Expense Highlights

Salaries/Wages – Budgeted expenses decreased 1.8% or \$21,853 to \$1,182,968. The decrease was primarily due to a decrease in hours (5.6%) from the Treatment Department, Systems, and Engineering.

Employee Benefits – The benefit rate (including FICA) decreased from 50.51% in 2019 to 48.39% in 2020 due to lower overall employee expenses. Overall, Employee Benefits expense decreased 6.6% (\$36,432) due to less labor time allocated to Portland.

Biosolids Disposal – The budget for this item was increased 1.8% (\$24,581). The budget assumes a decrease in volume (wet tons) of 2.2% due to a downward trend in volume (dry tons) processed at the treatment plant.

The assumption for “percent total solids” (%TS) of 21% is unchanged from 2019 Budget. The disposal rate (per wet ton) is expected to increase 4.2% over the prior budget.



Chemicals – Overall, this category is up \$55,121 or 9.4%. The majority of this increase is related to the 24% increase in per unit costs of Sodium Bisulfite, the chemical used to dechlorinate water in the treatment process. The budget for that chemical is increasing \$42,896 or 26.9%. Polymer is also increased by 25% or \$41,300 because of a rise in both the projected usage (14%) and per unit price (9%).

Heat/Fuel Oil – The majority of this category is pipeline delivered natural gas but the increase involves container delivered propane at the East End WWTF. The container delivered budget has increased \$31,100 or (255%) which is 92% of the total fuel budget increase to reflect better usage estimate.

Purchased Power – Power is expected to increase 6.2% (\$61,622). Energy contracts reduced the energy rate for East End WWTF & India St. pump station in 2020. Usage for these two sites is estimated to increase 114,000 kWh and 153,000 kWh, respectively and net a demand increase of 900 KW. Medium and small accounts combined is estimated to net a reduction in usage of 22,500 kWh and a higher demand of 286 KW.

Transportation – The budget increased \$9,021 (11.9%). This is primarily due to a projected use of higher costing vehicles this year based on past utilization.

Support Services – These costs are related to general work done that cannot be directly charged to a fund as noted above (such as customer billing or information technology) or work done on behalf of several municipalities at the same time (engineering or laboratory services) that is allocated based on the value to each fund. The combined Support Services costs increased 0.49% (\$15,784).

The allocation from Administration increased \$55,052 (3.8%) because of the two new authorized head count in Information Services and Employee Services. The costs associated with Engineering and

Environmental Services decreased \$20,106 (4.0%) and \$22,462 (7.7%) because the direct labor allocation rate decreased 32%.

Debt Service – This is the annual principal and interest payments on bonds issued to finance capital projects. The expense will decrease \$141,941 (5.4%) in 2020 because the \$1.5M bond issue for the ABC project was postponed and will not have a debt service impact until 2021.

Renewal and Replacement – This is the fund's annual contribution to a fund to finance smaller capital projects. A contribution of \$1,317,013 will be made in 2020.

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Assessment Income	\$12,248,424	\$6,308,040	\$12,616,080	\$12,863,340	\$247,260	2.0%
Interest Income	136,641	140,432	104,939	164,504	59,565	56.8%
Other Income	210,246	196,375	141,600	200,000	58,400	41.2%
FEMA Reimbursement	<u>-1,483</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>n/a</u>
Total Revenue	12,593,828	6,644,847	12,862,619	13,227,844	365,225	2.8%
Salaries & Wages	1,071,708	567,321	1,204,821	1,182,968	-21,853	-1.8%
Employee Benefits	498,480	253,374	553,740	517,308	-36,432	-6.6%
Biosolids Disposal	1,406,196	748,694	1,375,775	1,400,356	24,581	1.8%
Chemicals	475,751	323,698	588,295	643,416	55,121	9.4%
Contracted Services	635,994	227,334	559,781	629,309	69,528	12.4%
Deferred Cost W/O	143,541	0	0	0	0	n/a
Heat/Fuel Oil	122,710	71,552	121,995	155,721	33,726	27.6%
Insurance	27,373	13,695	26,752	29,305	2,553	9.5%
Materials & Supplies	230,114	96,664	288,938	315,500	26,562	9.2%
Other Expense	52,408	8,630	16,680	37,155	20,475	122.8%
Purchased Power	1,063,430	544,542	1,000,142	1,061,804	61,662	6.2%
Tele/Other Utilities	118,458	68,410	97,843	114,435	16,592	17.0%
Transportation	64,821	26,574	75,996	85,017	9,021	11.9%
SS - Administration	1,357,102	665,989	1,445,232	1,500,284	55,052	3.8%
SS - Engineering Services	289,616	165,548	507,845	487,739	-20,106	-4.0%
SS - Environmental Services	239,391	143,597	290,672	268,210	-22,462	-7.7%
SS - Wastewater Services	973,128	461,107	944,506	947,233	2,727	0.3%
SS - Water Services	19,536	10,582	27,263	27,836	573	2.1%
Operating Expense	8,789,757	4,397,311	9,126,276	9,403,596	277,320	3.0%
Debt Service & Lease Expense	2,533,331	1,236,808	2,649,176	2,507,235	-141,941	-5.4%
Renewal & Replacement - Direct	720,000	450,000	900,000	1,090,000	190,000	21.1%
Renewal & Replace - Indirect	<u>186,167</u>	<u>98,469</u>	<u>187,167</u>	<u>227,013</u>	<u>39,846</u>	<u>21.3%</u>
Total Expense	12,229,255	6,182,588	12,862,619	13,227,844	365,225	2.8%
Current Year Surplus (Deficit)	364,573	462,259	0	0		
Transfer to R&R	-337,748	-125,000	0	0		
OPEB Surplus Allocated	39,174	0	0	0		
Prior Year Surplus	<u>3,150,009</u>	<u>3,216,008</u>	<u>3,106,012</u>	<u>3,498,825</u>		
Accumulated Surplus	3,216,008	3,553,267	3,106,012	3,498,825		

Operation Summary

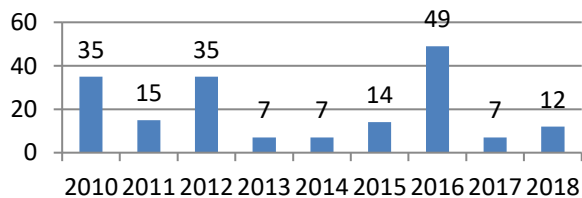
Wastewater Treatment: The Portland Water District owns, operates and maintains the interceptor and treatment facilities in the City of Portland. The largest facility, the East End WWTF is located off the Eastern Promenade while the Peaks Island facility is located by the ferry dock on the island.

EEWTF Parameter	Capacity	2018 Facility Avg	2018 - % Capacity Used
Flow (million gallons per day)	19.8 mgd	17.72 mgd	89 %
Biosolids Removed (wet tons/month)	N/A	1,914 wt/month	

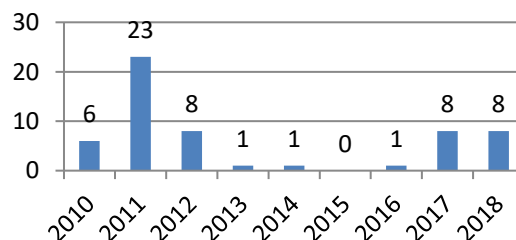
Effluent Permit Requirements:

Parameter	Discussion
Biological Oxygen Demand (BOD)	Measure of organic material and the strength of pollution. The treatment plant removed 97% of the BOD; well above the required 85% removal. This is an increase in pollution removal efficiency and is related to the new diffused aeration system that was constructed over the past several years.
Total Suspended Solids (TSS)	Measure of suspended material in the incoming wastewater; also the strength of pollution. The treatment plant removed 97% of the TSS, well above the required 85% removal. This is an increase in pollution removal efficiency and is related to the new diffused aeration system that was constructed over the past several years.
Total Residual Chlorine	Used for disinfecting the treated effluent, chlorine must be removed before the effluent is discharged. The permit limit was met at all times.
Fecal Coliform Bacteria	Following disinfection with chlorine, the fecal coliform level is monitored to confirm the treatment plant effluent was properly disinfected.
Effluent Nitrogen	Nitrogen is considered a pollutant that can contribute to water quality issues. The new permit requires monitoring of nitrogen during the warmer months and the development of a “nitrogen optimization” approach where PWD will be asked to operate the plant to reduce the effluent nitrogen loading using existing facilities. To date in 2019, the plant has demonstrated nearly 70% reduction in effluent nitrogen loading from historic levels from May to September.

EEWWTF License Exceedences



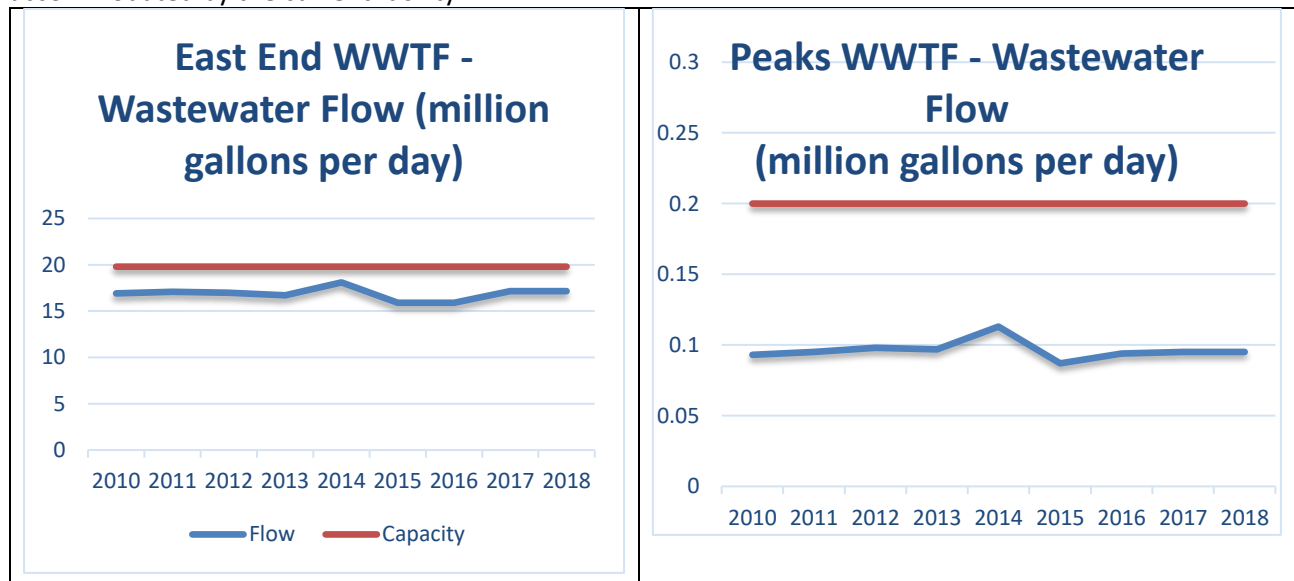
Peaks Island WWTF License Exceedences



Operation Summary (continued)

The 5-year permit issued in 2017 asked PWD to submit an annual “nutrient optimization” report that includes effluent nitrogen results and our efforts to manage nitrogen. The new aeration system is anticipated to be able achieve a 20 – 40% reduction in effluent nitrogen levels. In 2019, the plant has demonstrated a 67% reduction in effluent nitrogen loading from historic levels from May to September. In 2018, the plant demonstrated a 72% reduction.

The treatment facility on Peaks Island provides wastewater treatment to the residents and businesses on Peaks Island. The Peaks Island WWTF permit requires monitoring of effluent nitrogen from the treatment plant. Waste solids generated on the island are hauled to the mainland and processed at the Portland’s East End Wastewater Treatment Facility. With the completion of the Island Avenue sewer extension project and eventual connection of those customers adjacent to the new sewer, the capacity in the treatment plant has essentially been reached. In 2018, an analysis of the current capacity, along with suggested upgrades or opportunities for capacity improvements, was completed. Treatment plants have both a hydraulic (flow) and loading (amount of pollution that can be treated) capacity. As show below, while specific high volume storm events are problematic, the plant flow is within the design capacity of the plants. However, the Peaks Island Plant pollutant loading during the peak season is regularly at the capacity of the treatment plant. This has been well managed, but additional sewer connections beyond the current amount and those connected as part of the sewer extension, cannot be readily accommodated by the current facility.



Wastewater Conveyance – interceptors and pumping stations

Parameter	2019 Actual to Sept	2020 Projected
Preventive Work Orders	201	200
Corrective Work Orders	29	45
Wet wells cleaned	12	15
Debris removed (tons)	10.38	15
Dry Weather Overflows	1	0

Operation Summary (continued)

2019 Other Highlights

- Odor complaints related to the East End treatment plant have decreased due to the new aeration system, a new odor control unit at the Northeast Pump Station, and ongoing operational and maintenance efforts on existing plant odor control systems.
- Monthly CSO activities continue to be monitored and reported by PWD for regular distribution to stakeholders. Sites are continuously monitored by web-based software. In 2016, many of these decade-old units had reached the end of their service life and were replaced with newer models. This should ensure that the monitors continue to provide monitoring and alarming of CSO sites for the next 10 years.
- The diffused aeration system construction was completed in the summer of 2017. This system has had several operational benefits, including: improved sludge settleability, reduced odors from the aeration system, and the ability to attempt nutrient optimization in the warmer months. Treatment efficiency has improved as well, with an average of 96% of pollution removed by the facility.
- The aeration system has allowed the East End facility to manage nitrogen in the warmer months. To date in 2019, the seasonal loading has been reduced by nearly 70% from historical levels.
- Efforts to manage the Peaks Island facility during the busy summer season were successful in avoiding operational issues that had occurred in 2018. There have been no violations of the effluent permit to date in 2019 (there were 8 violations in 2018).
- The Fore River Pump Station Upgrade began in 2015 and design of the final phase was completed in 2018. Construction is underway.
- Design of an upgrade to the Baxter Blvd. pump station is underway.
- PWD has participated as a member of the City of Portland's Integrated Planning Team. This effort will review permitting and compliance obligations associated with the City's collection system, the City's stormwater system, and the Portland Water District's facilities.

2020 Work Plan

- The Asset Management Program will continue to drive the preventive maintenance program, generating both monthly and annual preventive maintenance work orders.
- The electrical master plan and HVAC evaluations were completed in 2017. These assessments resulted in a long-range plan for the replacement and refurbishment of these critical support systems. The first projects are under design and construction will begin in 2020. The first of the planned projects was deferred following an agreement with Central Maine Power to locate a major high-voltage substation at the East End facility.
- A "nutrient optimization" report that describes the efforts and challenges of the plant's efforts to attempt to manage the effluent nitrogen loading will be completed in 2019. This is a requirement of the 2017 permit. While there have been some disinfection system struggles due to the impact of ammonia removal, the plant has achieved an average of 70% reduction in historical nitrogen loading from May to September in the past 2 years..
- The City of Portland has embarked on a two-year Integrated Planning effort to prioritize water quality commitments. This effort will assess combined sewer, stormwater, and wastewater treatment obligations and prioritize the use of resources to address the various efforts with a goal of improving receiving water quality.

Capital Summary

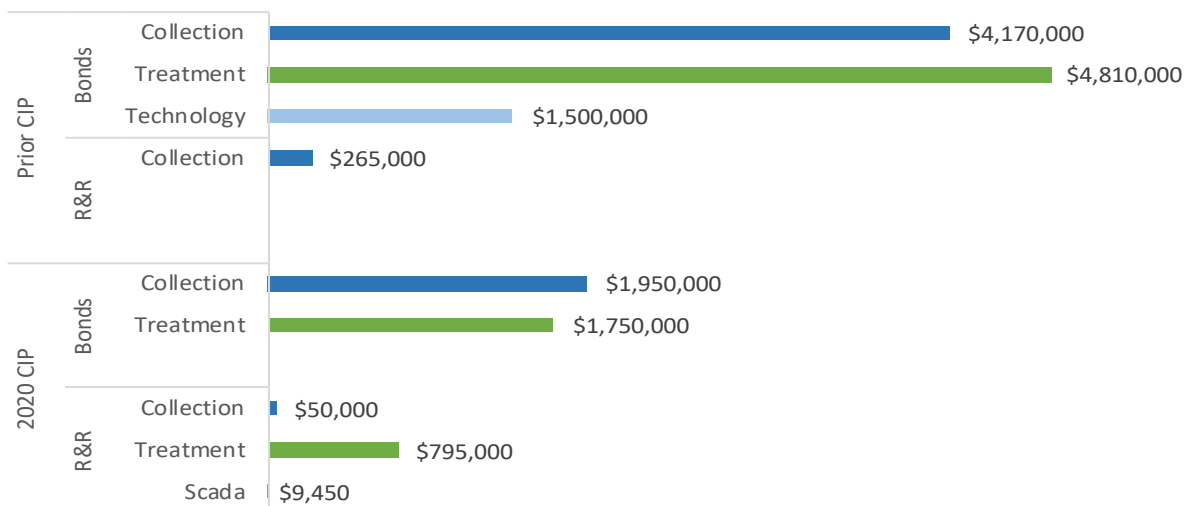
A five-year capital plan is updated each year. The projects are prioritized based on operational needs and financing availability. The table below indicates the projects scheduled for the next fiscal year and the funding source of those projects. Detailed descriptions of the projects can be found in the Capital Finance and Capital Expenditures sections.

Expenditures by CIP Year:

Projects:	<u>Prior CIP</u>	<u>2020 CIP</u>	<u>Total</u>
SCADA & Technology	\$ 1,500,000	\$ 9,450	\$ 1,509,450
WW Collection & Pumping	\$ 4,435,000	\$ 2,000,000	\$ 6,435,000
WW Treatment	\$ 4,810,000	\$ 2,545,000	\$ 7,355,000
Total by CIP Year	\$ 10,745,000	\$ 4,554,450	\$ 15,299,450

Source of Funds:

	<u>R&R Fund</u>	<u>Bond Issue 2020</u>	<u>Bond Issue 2021</u>	<u>Total Funding</u>
Beginning Balance	\$ 4,347,209			
2020 Contribution	\$ 1,090,000			
Total R&R Balance Available	\$ 5,437,209			
Projects:				
SCADA & Technology	\$ 9,450	\$ 1,500,000		\$ 1,509,450
WW Collection & Pumping	\$ 315,000	\$ 3,920,000	\$ 2,200,000	\$ 6,435,000
WW Treatment	\$ 795,000	\$ 5,985,000	\$ 575,000	\$ 7,355,000
Total	\$ 1,119,450	\$ 11,405,000	\$ 2,775,000	\$ 15,299,450
Ending Balance	\$ 4,317,759			



Capital Summary (continued)**Projects:**

	<u>R&R Fund</u>	<u>Future Bond</u>	<u>Funding Total</u>	<u>Bond Issue Year</u>
SCADA & Technology				
Asset, Billing, Customer Relations System - 2542		\$ 1,500,000	\$ 1,500,000	2020
SCADA Radio Modem Replacement - 3126*	\$ 9,450		\$ 9,450	
WW Collection & Pumping				
CSO Program - 131 (India St. Tide Gate) - 2577		\$ 420,000	\$ 420,000	2020
Stroudwater PS Upgrades Phase 2 - 3006	\$ 265,000		\$ 265,000	
Portland Pump Station R&R - 3135	\$ 50,000		\$ 50,000	
Baxter Blvd PS Upgrades Design - 3144		\$ 250,000	\$ 250,000	2021
Baxter Blvd PS Construction - 3143		\$ 1,950,000	\$ 1,950,000	2021
Fore River PS Upgrades - 2424		\$ 3,500,000	\$ 3,500,000	2020
WW Treatment				
<u>East End Treatment Facility</u>				
2018 Security Improvements - 2564	\$ 25,000		\$ 25,000	
Influent Screen, Effluent Meter, Piping - 2046		\$ 960,000	\$ 960,000	2020
HVAC Upgrades Dewatering Area - 2705		\$ 525,000	\$ 525,000	2020
Backup Power Upgrade - 3010		\$ 2,000,000	\$ 2,000,000	2020
Primary Clarifier Rehabilitation - 3013		\$ 750,000	\$ 750,000	2020
Main 12.4 kV Power Distribution Upgrades		\$ 1,750,000	\$ 1,750,000	2020
HVAC Upgrades 3rd Floor - 3017		\$ 575,000	\$ 575,000	2021
Process Gate Automation - 3020	\$ 50,000		\$ 50,000	
Power Panel Upgrades - 3021	\$ 75,000		\$ 75,000	
Portable Wastewater Pump - 3024	\$ 250,000		\$ 250,000	
East End WWTF R&R - 3133	\$ 75,000		\$ 75,000	
Odor Control System Tower #2 Rehab - 3203	\$ 250,000		\$ 250,000	
Pri. Gallery Electrical Upgrade Design - 3208	\$ 50,000		\$ 50,000	
Peaks Island Treatment Facility R&R - 3131	\$ 20,000		\$ 20,000	
Total	\$ 1,119,450	\$ 14,180,000	\$ 15,299,450	

*This cost is for one pump station. This project was postponed from 2019.

Projections for Rate-Making Purposes

Multi-year projections are made for each of the wastewater funds' assessment. The projections provide guidance to the wastewater municipalities to assist them in determining their wastewater sewer rates. A summary of the projection is provided on next page.

Major Assumptions:

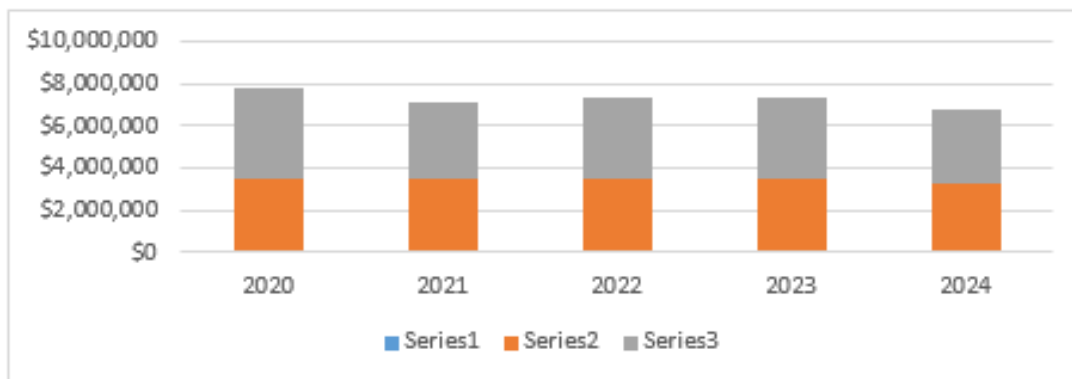
The assumptions incorporated in the projections are as follows:

- Salary increases of 3.0% each year. Additional 1.25 headcount in 2021.
- Benefit increases of 5% each year.
- Biosolids contract expires in 2021; assumed 1.8% increase in unit prices. Contract renewal in 2022 may result in a significant increase but it is unknown so not forecasted.
- Other expenses increase between 2.3% and 3.5% each year.
- New debt service and renewal/replacement fund expenditures consistent with the 2020 5-year capital plan. New debt assumed a 20-year life at 3% interest.

Summary of Projection Impact:

Assessment is projected to increase to \$14,629,076 in 2024, a 12% increase over 2020 Budget, with the most significant cost change related to debt service issued to finance capital projects. Operating Reserve balance and Capital R&R balance are below the target balances.

Reserve Fund Balances



Percent of Budget Dedicated to Debt Service – Target: Not to Exceed 35%

2018	2019	2020	2021	2022	2023	2024
21%	20%	19%	18%	21%	20%	21%

Debt Service Ratio – Target: Greater or Equal to 125%

2018	2019	2020	2021	2022	2023	2024
150%	136%	153%	152%	142%	145%	142%

Projections for Rate-Making Purposes (continued)**Operating Fund:**

	<u>2020 Budget</u>	<u>2021 Forecast</u>	<u>2022 Forecast</u>	<u>2023 Forecast</u>	<u>2024 Forecast</u>
Revenues:					
Assessment Income	12,863,340	13,190,949	13,992,536	14,116,774	14,629,076
Interest Income	164,504	123,378	123,378	123,378	123,378
Other Income	200,000	200,000	200,000	200,000	200,000
Total Revenues	13,227,844	13,514,327	14,315,914	14,440,152	14,952,454
Operating Expenses:					
Salaries & Wages	1,182,968	1,218,457	1,255,011	1,292,661	1,331,441
Employee Benefits	517,308	543,173	570,332	598,849	628,791
Biosolids Disposal	1,400,356	1,425,562	1,451,222	1,477,344	1,503,936
Chemicals	643,416	662,718	682,600	703,078	724,170
Contracted Services	629,309	643,783	658,590	673,738	689,234
Heat/Fuel Oil	155,721	161,171	166,812	172,650	178,693
Insurance	29,305	29,979	30,669	31,374	32,096
Materials & Supplies	315,500	322,757	330,180	337,774	345,543
Other Expense	37,155	38,010	38,884	39,778	40,693
Purchased Power	1,061,804	1,061,804	1,061,804	1,081,978	1,102,536
Tele/Other Utilities	114,435	117,067	119,760	122,514	125,332
Transportation	85,017	86,972	88,972	91,018	93,111
SS - Administration	1,500,284	1,597,027	1,650,128	1,704,995	1,761,686
SS - Engineering Services	487,739	531,110	548,584	566,632	585,274
SS - Environmental Services	268,210	277,128	286,343	295,864	305,701
SS - Wastewater Services	947,233	978,728	1,011,271	1,044,896	1,079,639
SS - Water Services	27,836	37,762	39,018	40,315	41,655
	9,403,596	9,733,208	9,990,180	10,275,458	10,569,531
Debt Service	2,507,235	2,494,169	3,038,784	2,877,744	3,095,973
Renewal & Replacement - Direct	1,090,000	1,100,000	1,100,000	1,100,000	1,100,000
Renewal & Replace - Indirect	227,013	186,950	186,950	186,950	186,950
Capital Finance Expense	3,824,248	3,781,119	4,325,734	4,164,694	4,382,923
Total Operating Expenses	13,227,844	13,514,327	14,315,914	14,440,152	14,952,454
Current Year Surplus(Deficit)	0	0	0	0	0
Prior Year Surplus	3,498,825	3,498,825	3,498,825	3,498,825	3,498,825
Accumulated Surplus	3,498,825	3,498,825	3,498,825	3,498,825	3,498,825
Target Balance(25% of budget)	3,306,961	3,378,582	3,578,979	3,610,038	3,738,114
Above/(Below)	191,864	120,243	-80,154	-111,213	-239,289

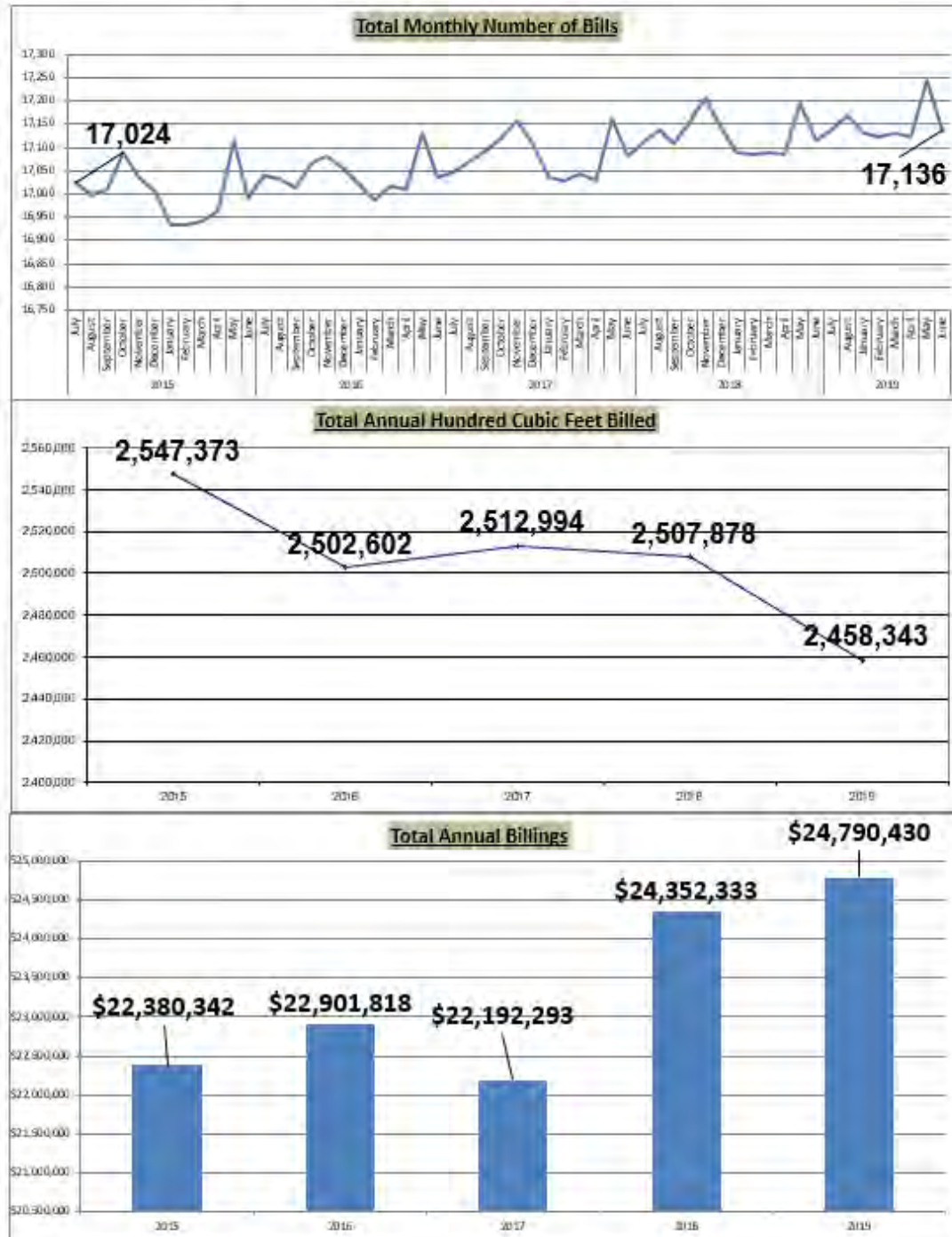
Capital Expenditures: (See details in the Capital Expenditure section) Target Balance: \$5,601,000

	<u>2020 Budget</u>	<u>2021 Forecast</u>	<u>2022 Forecast</u>	<u>2023 Forecast</u>	<u>2024 Forecast</u>
R&R Balance BOY	\$ 4,347,209	\$ 4,317,759	\$ 3,662,759	\$ 3,792,759	\$ 3,797,759
Contribution	\$ 1,090,000	\$ 900,000	\$ 900,000	\$ 900,000	\$ 900,000
Withdrawals	\$ (1,119,450)	\$ (1,555,000)	\$ (770,000)	\$ (895,000)	\$ (1,095,000)
R&R Balance EOY	\$ 4,317,759	\$ 3,662,759	\$ 3,792,759	\$ 3,797,759	\$ 3,602,759

Sewer Billing Statistics

The District provides sewer billing services for the municipality by contract. Sewer is billed based on water consumption and is included on Portland Water District's water bill. The municipality determines the sewer rate. Dollars collected are forwarded to the municipality weekly. The total billing decline between 2016 and 2017 is the result of the City's implementation of a storm water fee to cover costs previously collected as part of sewer billings.

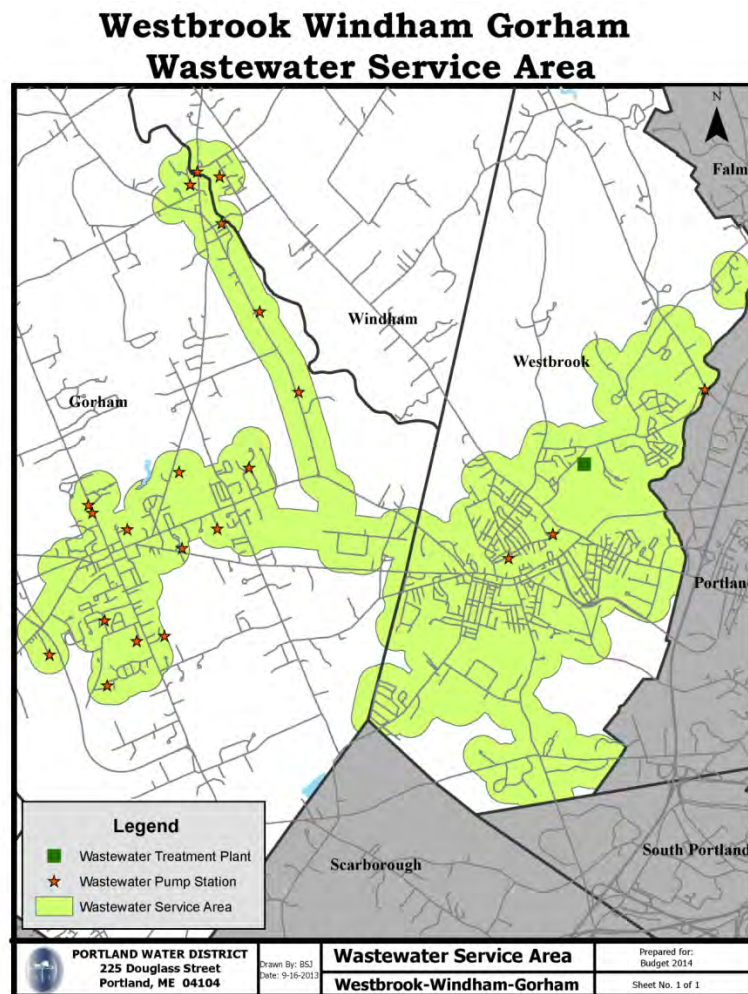
By Municipal Fiscal Year: Jul 1 to Jun 30



Fund: Wastewater - Westbrook

Background

The Portland Water District's charter authorizes the District to provide wastewater treatment collection system, and interceptor service to the city. Westbrook's wastewater is treated at the treatment facility located in Westbrook and jointly used by the towns of Windham and Gorham. The city maintains the collection system-collectors that transport wastewater from user's property to the District's interceptor system. Additionally, by contract, the District provides utility billing services.



Summary of Services Provided:

Treatment
*2.397 million
gallons/day*

Collection System
*2 Westbrook only & 1
Joint use Pump Stations
with 9.2 miles of pipe*

Utility Billing
*Annual Billings of
\$4,366,353 on 4,697
Customers (avg.
\$77.47/month)*

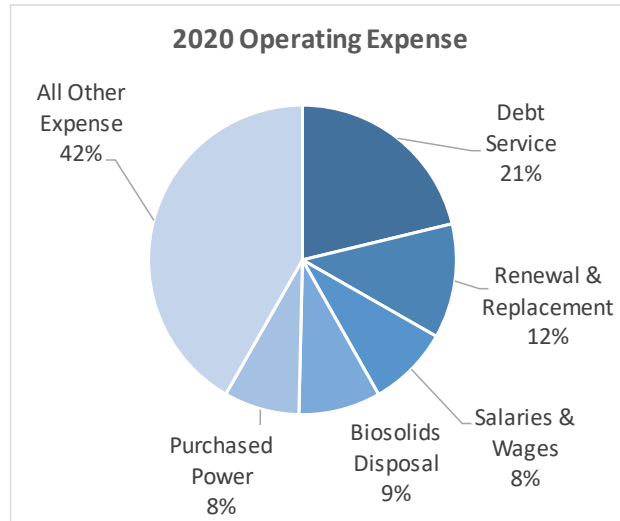
Fund: Wastewater - Westbrook

2020 Financial Summary

The proposed assessment of \$2,820,768 is an 11.1% increase over the previous year. Much of this is related to the debt service associated with capital projects at the treatment plant and Dana Court pump station.

The proposed 2020 Operating Expense and Capital budgets are \$2,931,963 and \$7,608,600 respectively.

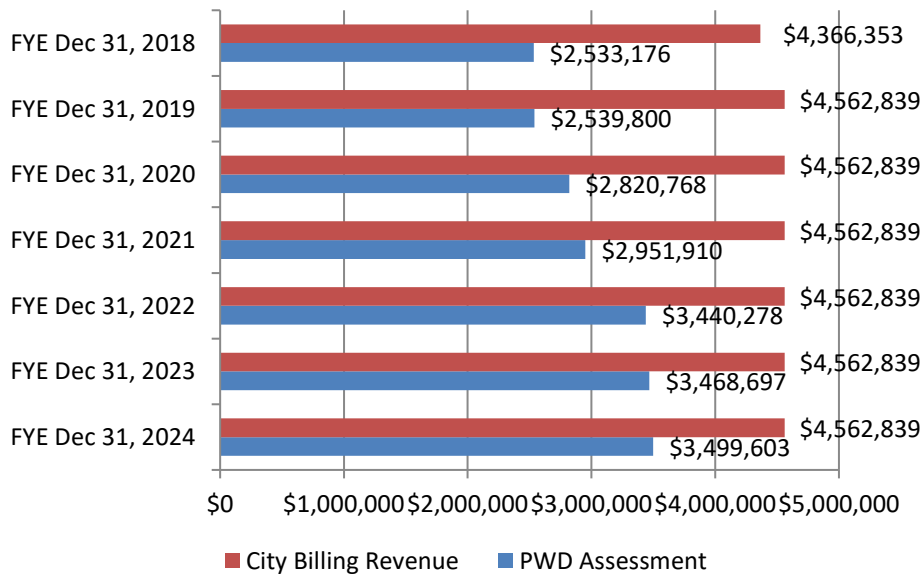
The Operating Expense budget is \$292,005 higher (11.1%) than the previous year. Departmental Expense decreased by \$169,160 or 9.5%, Debt Service increased 22% to \$622,953 as well as Renewal & Replacement (direct and indirect) funding increased \$10,304 to \$351,067. An investment of



\$7.49M is Westbrook's portion of the construction cost for Aeration & Clarifier upgrades.

Assessment Compared to Ratepayers' Billing

The municipality's and District's fiscal year end is Dec 31. The chart below compares the cash as collected by the District for sewer billings on their behalf and the District's assessment for services rendered. The municipality may incur additional sewer-related costs. The municipality determines whether to increase the sewer billing rates.



Revenue Assumptions:

- Consumption assumed is based on consumption through December 31, 2018

- Rates Assumed:
Effective Date: Base/Per HCF

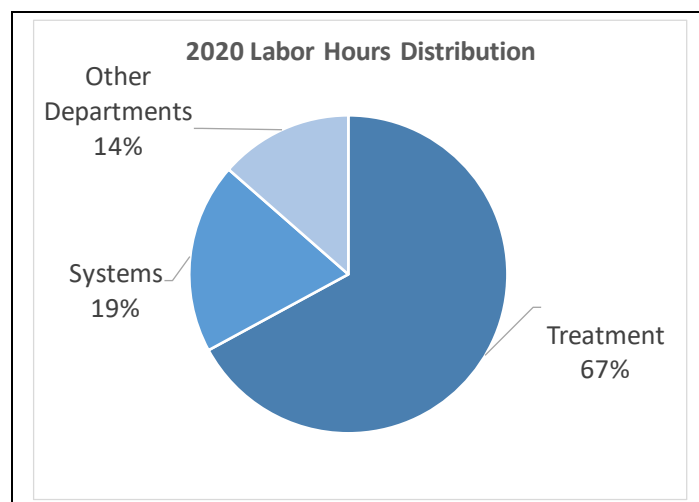
Jan 2013	\$11.13/\$6.13
Jan 2019	\$11.53/\$6.53

2020 Operating Expense Highlights

Salaries/Wages – The expense increase of 9.4% (\$21,486) has resulted in a budget amount of \$250,547. District labor rates increased an average of 3.0% while hours for this fund rose 6.2% or 530. This reflects trends in the area's labor utilization.

Employee Benefits – The benefit rate (including FICA) decreased from 50.51% in 2019 to 48.39% in 2020. Overall, employee benefits expense increased 4.3% (\$4,686).

Biosolids Disposal – Biosolids expense at the Westbrook Regional WWTF is projected to increase 7.8% (\$18,306) due to a 3.5% increase in projected wet tons disposed and an expected 4.2% increase in the price per wet ton. Westbrook's share of allocated treatment costs remained at 84%.



Chemicals – Wastewater Treatment has increased their projected chemical needs this year by \$25,555 or 43.1%. The increase of chemicals is related to Sodium Hypochlorite used to disinfect and Polymer used to dewater the waste. Polymer's price rose 9.7% as well as a 55.6% increase in the amount projected and Sodium Hypochlorite projected an 8.0% increase in quantity with an 18.8% increase in the unit price. The increase in polymer use is related to the enhanced performance of the new dewatering equipment, which requires more polymer than the previous system.

Contracted Services – Contracted Services has increased \$21,876 or 16.2% with the majority of the increase attributed to a new initiative in right-of-way cleaning.

Heat/Fuel Oil – The increase, of \$2,014 or 10.2%, was due to an increase in the contracted cost per gallon of container delivered propane in addition to increased heating needs for the treatment plant's chemical storage area.

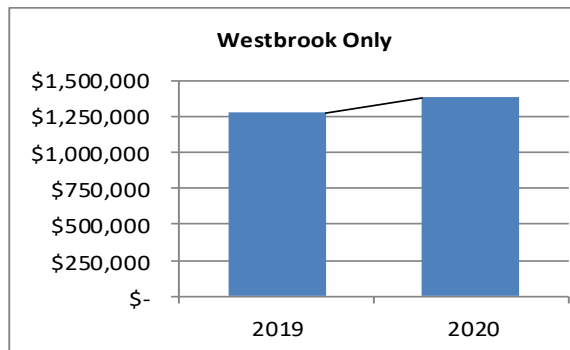
Purchased Power – The budget for power is expected to increase by 24.8% or \$46,272. Westbrook saw increases in all areas: joint Westbrook pump stations' usage estimates are 50,000 kWh higher than last year's budget. The Westbrook WWTF usage estimate is 177,000 kWh higher. Westbrook only pump stations also increased by 74,000 kWh. Demand increased 942 KW, 300 KW and 383 KW, respectively. Estimates are based off a 1 to 2 year average.

Support Services – These costs are related to general work done that cannot be directly charged to a fund as noted above (such as customer service or information technology) or work done on behalf of several municipalities at the same time (engineering or laboratory services) that is allocated based on the value to each fund. Overall, Support Services increased \$39,257 or 5.5%. The allocation from Administration increased \$19,513 (6.1%) because of the two new authorized head count in Information Services and Employee Services. The costs associated with Wastewater increased \$13,943 (8.1%) due to redistribution in labor towards the smaller Wastewater funds to mirror actual hours.

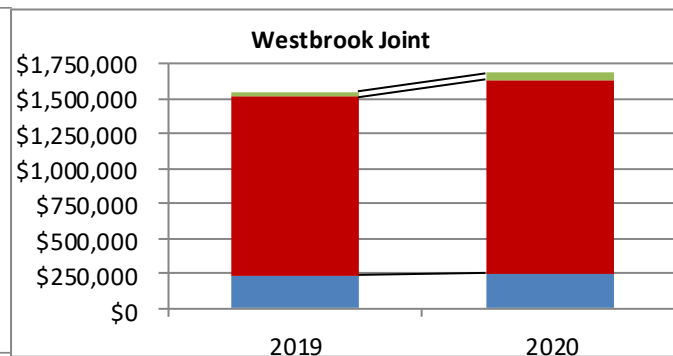
Debt Service – The annual principal and interest payments on bonds issued to finance capital projects, this item increased 22% (\$112,541).

Renewal & Replacement – Dollars put aside to fund capital projects; the 2020 contribution is \$351,067.

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Assessment Income	\$2,533,176	\$1,269,900	\$2,539,800	\$2,820,768	\$280,968	11.1%
Interest Income	80,339	79,776	62,258	72,695	10,437	16.8%
Other Income	49,585	1,500	37,900	38,500	600	1.6%
FEMA Reimbursement	-70	0	0	0	0	n/a
Total Revenue	2,663,030	1,351,176	2,639,958	2,931,963	292,005	11.1%
Salaries & Wages	228,231	113,141	229,061	250,547	21,486	9.4%
Employee Benefits	112,033	54,023	108,723	113,409	4,686	4.3%
Biosolids Disposal	298,519	141,559	234,097	252,403	18,306	7.8%
Chemicals	91,394	56,265	59,245	84,800	25,555	43.1%
Contracted Services	99,497	33,894	135,245	157,121	21,876	16.2%
Deferred Cost W/O	36,985	5,050	10,100	0	-10,100	-100.0%
Heat/Fuel Oil	18,419	18,718	19,716	21,730	2,014	10.2%
Insurance	4,937	2,549	4,980	5,455	475	9.5%
Materials & Supplies	44,944	21,110	50,278	51,667	1,389	2.8%
Other Expense	4,658	5,767	4,772	5,202	430	9.0%
Purchased Power	231,793	128,139	186,224	232,496	46,272	24.8%
Tele/Other Utilities	21,135	13,699	24,271	24,819	548	2.3%
Transportation	7,174	4,239	12,365	9,331	-3,034	-24.5%
SS - Administration	310,280	145,821	318,336	337,849	19,513	6.1%
SS - Engineering Services	59,123	31,852	97,564	98,347	783	0.8%
SS - Environmental Services	91,937	57,664	115,064	119,933	4,869	4.2%
SS - Wastewater Services	171,534	83,907	172,049	185,992	13,943	8.1%
SS - Water Services	4,796	2,598	6,693	6,842	149	2.2%
Operating Expense	1,837,389	919,995	1,788,783	1,957,943	169,160	9.5%
Debt Service & Lease Expense	455,918	240,164	510,412	622,953	112,541	22.0%
Renewal & Replacement - Direct	370,574	150,000	300,000	300,000	0	0.0%
Renewal & Replace - Indirect	41,883	21,405	40,763	51,067	10,304	25.3%
Total Expense	2,705,764	1,331,564	2,639,958	2,931,963	292,005	11.1%
Current Year Surplus (Deficit)	-42,734	19,612	0	0		
Transfer to R&R	0	0	0	0		
OPEB Surplus Allocated	9,213	0	0	0		
Prior Year Surplus	844,744	811,223	752,234	786,814		
Accumulated Surplus	811,223	830,835	752,234	786,814		



Westbrook Only – Westbrook Only expenses were up \$187k (11.1%) due to debt service.

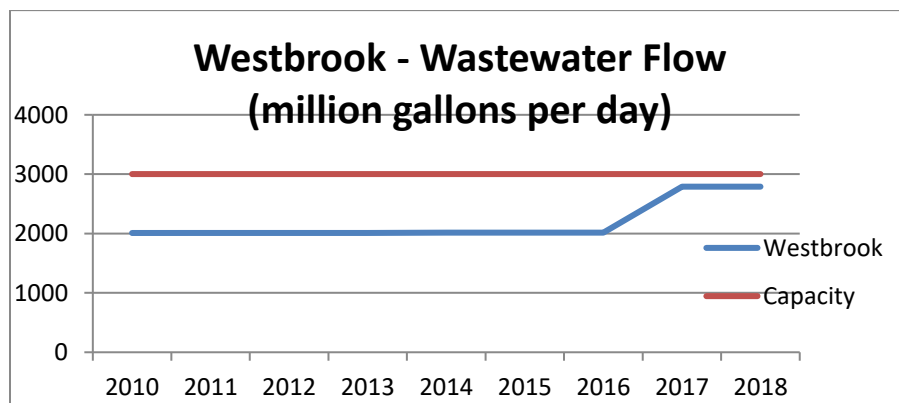


Westbrook JT – Expense up 8.4%; Westbrook's share of expense 84.0%, net expense up \$105k (8.2%).

Operation Summary

Wastewater Treatment: The wastewater generated in the City of Westbrook is pumped to the Westbrook/Gorham/Windham Regional WWTF on Park Road. Flows from the Little Falls section of Gorham and the Town of Windham, including the Maine Correctional Center, are conveyed to this facility. The table below depicts flows from each contributing community. The chart illustrates capacity used for each community and total plant capacity being used based on the treatment plant capacity of 4.54 MGD.

Municipality (Design Flow)	2018 Flow (mgd)	% of 2018 WWTF Flow	Reserved Capacity (mgd)	% of Capacity Used
Westbrook (66.6%)	2.79	84 %	3.023	93%
Gorham (30.8%)	0.42	13 %	1.398	30%
Windham (2.6%)	0.10	3 %	0.118	85 %
Total Plant Flow	3.31		4.54	73 %



The following tables depict some of the key parameters that are monitored at the facility.

WGWWTF Parameter	DEP Limit	2018 Facility Average
Biosolids Removed (wet tons/month)	N/A	459 wet ton/month

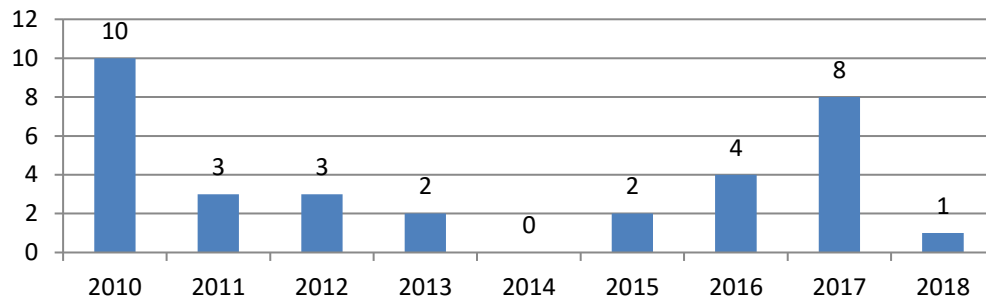
Parameter	Discussion
Biological Oxygen Demand (BOD)	Measure of organic material and the strength of pollution. The treatment plant removed 94% of the BOD, well above the required 85% removal.
Total Suspended Solids (TSS)	Measure of suspended material in the incoming wastewater. The treatment plant removed 94% of the TSS, well above the required 85% removal.
Total Residual Chlorine	Used for disinfecting the treated effluent, chlorine must be removed before the effluent is discharged. The permit limit was met at all times.
Fecal Coliform Bacteria	Following disinfection with chlorine, the fecal coliform level is monitored to confirm the treatment plant effluent was properly disinfected.
Phosphorus	The renewed 5-year permit includes a requirement to monitor phosphorus in the plant's effluent discharge. Phosphorus can contribute to water quality concerns that might include algae and low dissolved oxygen. The monitoring will likely create a baseline for consideration if effluent permit limitations are established in the future.

Operation Summary (continued)

Effluent Permit Requirements:

The effluent permit was renewed in 2017. The permit included reductions in effluent monitoring requirements due to the plant's past performance and the inclusion of a requirement to monitor effluent phosphorus. The City of Westbrook is a joint permittee for their obligations under the CSO Long Term Control Plan.

Westbrook/Gorham Regional WWTF - Permit Exceedences



Wastewater Conveyance – interceptors and pumping stations

Parameter	2019 Actual to Sept	2020 Projected
Preventive Work Orders	90	80
Corrective Work Orders	22	15
Wet wells cleaned	1	3
Debris removed (tons)	3.61	6
Dry Weather Overflows	0	0

2019 Other Highlights

- The Asset Management Program will continue to drive the preventive maintenance program, generating both monthly and annual preventive maintenance work orders for each of the pump stations. The computerized maintenance management system will be replaced in 2020. Work on this is underway. The Maintenance Manager/Planner Scheduler position, which was created in 2018, will help to implement this new system and to integrate our current departmental efforts into this new management system.
- The aeration system at the Westbrook/Gorham/Windham Regional WWTF was evaluated in 2015. Several possible approaches to design of the new system were identified and are dependent on future phosphorus permit limits. The loadings to the treatment facility have increased and are creating some operational challenges. Design of the new system is anticipated in 2019 with construction of the upgraded system currently contemplated for 2021.

2019 Other Highlights (continued)

- Recognizing the increased loading at the treatment plant and in anticipation of the aeration system upgrade in 2020, acceptance of septage at the plant has ceased until after the completion of the aeration upgrade. Septage is being accepted at the East End WWTF in Portland.
- Wet wells will continue to be scheduled for cleaning on a quarterly basis at the three pump stations in Westbrook.
- Construction of the recent upgrade of the Dana Court Pump Station took place in 2018-2019. This is the final of the three large stations in Westbrook to have an upgrade completed (Cottage Place and East Bridge St. upgrades were completed in the past). The upgrade included the installation of a new screening system that was similar to the system previously installed at the other pump stations in Westbrook.
- The new dewatering system (screw press) at the treatment facility was installed in 2018. Following an extended start-up, the Operations Team has been able to optimize the equipment and performance of the system has increased dramatically. Through September, the % total solids had increased from only 15.6 % the year before to 20.1% total solids in 2019. This results in the removal of roughly 1,466,000 lbs. of water from the biosolids managed by the facility. This has resulted in a savings in excess of \$50,000 over past years.

2020 Work Plan

- The Asset Management Program will continue to drive the preventive maintenance program, generating both monthly and annual preventive maintenance work orders for each of the pump stations.
- Wet wells will continue to be scheduled for cleaning on a quarterly basis.
- The Westbrook/Gorham/Windham Regional WWTF will have major work on a number of process areas, including the dewatering conveyance system, odor control for the sludge storage tank and polymer system additions.
- The construction of the upgraded diffused aeration system will begin in 2020. Design of the system is currently underway.

Capital Summary

A five-year capital plan is updated each year. The projects are prioritized based on operational needs and financing availability. The table below indicates the projects scheduled for the next fiscal year and the funding source of those projects. Detailed descriptions of the projects can be found in the Capital Finance and Capital Expenditures sections.

Expenditures by CIP Year:

	<u>Prior CIP</u>	<u>2020 CIP</u>	<u>Total</u>
Projects:			
SCADA & Technology			
SCADA Radio Modem Replacement - 3126 (prorated)		\$ 37,800	\$ 37,800
WW Collection & Pumping			\$ -
Westbrook Pump Station R&R - 3134		\$ 20,000	\$ 20,000
Modeling Update - 3164		\$ 25,000	\$ 25,000
WW Treatment			\$ -
Aeration & Clarifier Design - 3022 (prorated)	\$ 499,500		\$ 499,500
Aeration & Clarifier Construction - 3023 (prorated)		\$ 7,492,500	\$ 7,492,500
Sludge Storage Odor Control - 3025 (prorated)	\$ 499,500		\$ 499,500
Treatment Plant R&R - 3132 (prorated)		\$ 33,300	\$ 33,300
Total by CIP Year	\$ 999,000	\$ 7,608,600	\$ 8,607,600

Source of Funds:

	<u>R&R Fund</u>	<u>Bond Issue 2020</u>	<u>Bond Issue 2021</u>	<u>Total Funding</u>
Beginning Balance	\$ 3,314,543			
2020 Contribution	\$ 300,000			
Total R&R Balance Available	\$ 3,614,543			
Projects:				
SCADA & Technology	\$ 37,800			\$ 37,800
WW Collection & Pumping	\$ 45,000			\$ 45,000
WW Treatment	\$ 33,300	\$ 999,000	\$ 7,492,500	\$ 8,524,800
Total	\$ 116,100	\$ 999,000	\$ 7,492,500	\$ 8,607,600
Ending Balance	\$ 3,498,443			

Prorated Projects: Costs of projects done on infrastructure used by multiple communities are ‘prorated’ between the municipalities based on relative design capacity. In the case of the SCADA radio modem replacement project, the proration is based on there being 4 Westbrook only pump stations out of the 37 total pump stations that are planned to have work done in 2020. This project was postponed from 2019.

Projections for Rate-Making Purposes

Multi-year projections are made for each of the wastewater funds' assessment. The projections provide guidance to the wastewater municipalities to assist them in determining their wastewater sewer rates. A summary of the projection is provided on next page.

Major Assumptions:

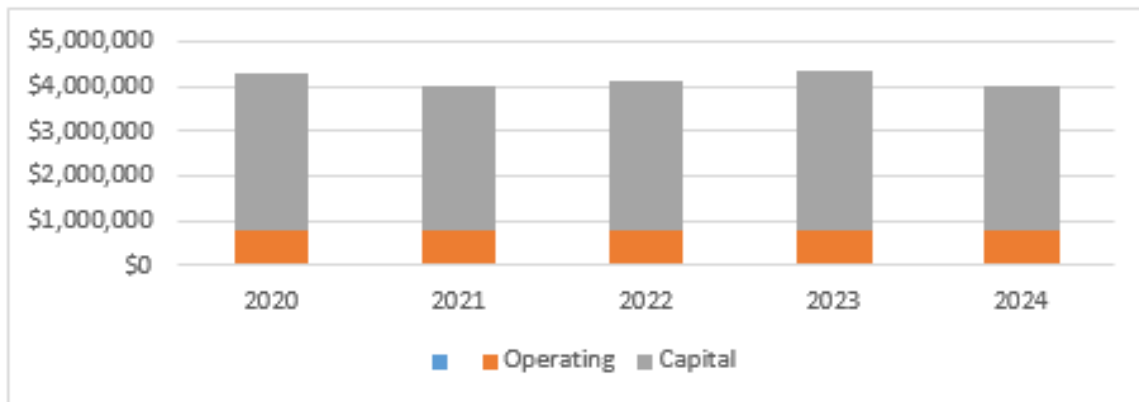
The assumptions incorporated in the projections are as follows:

- Salary increases of 3.0% each year. Additional 1.25 headcount in 2021.
- Benefit increases of 5% each year.
- Biosolids contract expires in 2021; assumed 1.8% increase in unit prices. Contract renewal in 2022 may result in a significant increase but it is unknown so not forecasted.
- Other expenses increase between 2.3% and 3.5% each year.
- New debt service and renewal/replacement fund expenditures consistent with the 2020 5-year capital plan. New debt assumed a 20-year life at 3% interest.

Summary of Projection Impact:

Assessment is projected to increase to \$3,499,603 in 2024, a 24% increase over 2020 Budget, with the most significant cost change related to debt service issued to finance capital projects. Operating Reserve balance and Capital R&R balances are near or above the target balances.

Reserve Fund Balances



Percent of Budget Dedicated to Debt Service – Target: Not to Exceed 35%

2018	2019	2020	2021	2022	2023	2024
17%	19%	21%	23%	32%	31%	30%

Debt Service Ratio – Target: Greater or Equal to 125%

2018	2019	2020	2021	2022	2023	2024
181%	167%	156%	147%	129%	130%	130%

Projections for Rate-Making Purposes (continued)

Operating Fund:

	<u>2020 Budget</u>	<u>2021 Forecast</u>	<u>2022 Forecast</u>	<u>2023 Forecast</u>	<u>2024 Forecast</u>
Revenues:					
Assessment Income	2,820,768	2,951,910	3,440,278	3,468,697	3,499,603
Interest Income	72,695	54,521	54,521	54,521	54,521
Other Income	38,500	38,500	38,500	38,500	38,500
Total Revenues	2,931,963	3,044,931	3,533,299	3,561,718	3,592,624
Operating Expenses:					
Salaries & Wages	250,547	258,063	265,805	273,779	281,992
Employee Benefits	113,409	119,079	125,033	131,285	137,849
Biosolids Disposal	252,403	256,946	261,571	266,279	271,072
Chemicals	84,800	87,344	89,964	92,663	95,443
Contracted Services	157,121	160,735	164,432	168,214	172,083
Heat/Fuel Oil	21,730	22,491	23,278	24,093	24,936
Insurance	5,455	5,580	5,708	5,839	5,973
Materials & Supplies	51,667	52,855	54,071	55,315	56,587
Other Expense	5,202	5,322	5,444	5,569	5,697
Purchased Power	232,496	232,496	232,496	236,913	241,414
Tele/Other Utilities	24,819	25,390	25,974	26,571	27,182
Transportation	9,331	9,546	9,766	9,991	10,221
SS - Administration	337,849	358,513	370,434	382,751	395,477
SS - Engineering Services	98,347	106,911	110,428	114,061	117,814
SS - Environmental Services	119,933	123,921	128,041	132,298	136,697
SS - Wastewater Services	185,992	192,176	198,566	205,168	211,990
SS - Water Services	6,842	10,069	10,404	10,750	11,107
	1,957,943	2,027,437	2,081,415	2,141,539	2,203,534
Debt Service	622,953	693,917	1,128,307	1,096,602	1,065,513
Renewal & Replacement - Direct	300,000	300,000	300,000	300,000	300,000
Renewal & Replace - Indirect	51,067	23,577	23,577	23,577	23,577
Capital Finance Expense	974,020	1,017,494	1,451,884	1,420,179	1,389,090
Total Operating Expenses	2,931,963	3,044,931	3,533,299	3,561,718	3,592,624
Current Year Surplus(Deficit)	0	0	0	0	0
Prior Year Surplus	786,814	786,814	786,814	786,814	786,814
Accumulated Surplus	786,814	786,814	786,814	786,814	786,814
Target Balance(25% of budget)	732,991	761,233	883,325	890,430	898,156
Above/(Below)	53,823	25,581	-96,511	-103,616	-111,342

Capital Expenditures: (See details in the Capital Expenditure section) Target Balance: \$640,203

	<u>2020 Budget</u>	<u>2021 Forecast</u>	<u>2022 Forecast</u>	<u>2023 Forecast</u>	<u>2024 Forecast</u>
R&R Balance BOY	\$ 3,314,543	\$ 3,498,443	\$ 3,203,943	\$ 3,334,093	\$ 3,580,793
Contribution	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000
Withdrawals	\$ (116,100)	\$ (594,500)	\$ (169,850)	\$ (53,300)	\$ (652,700)
R&R Balance EOY	\$ 3,498,443	\$ 3,203,943	\$ 3,334,093	\$ 3,580,793	\$ 3,228,093

Sewer Billing Statistics

The District provides sewer billing services for the municipality by contract. Sewer is billed based on water consumption and is included on Portland Water District's water bill. The municipality determines the sewer rate. Dollars collected are forwarded to the municipality weekly.

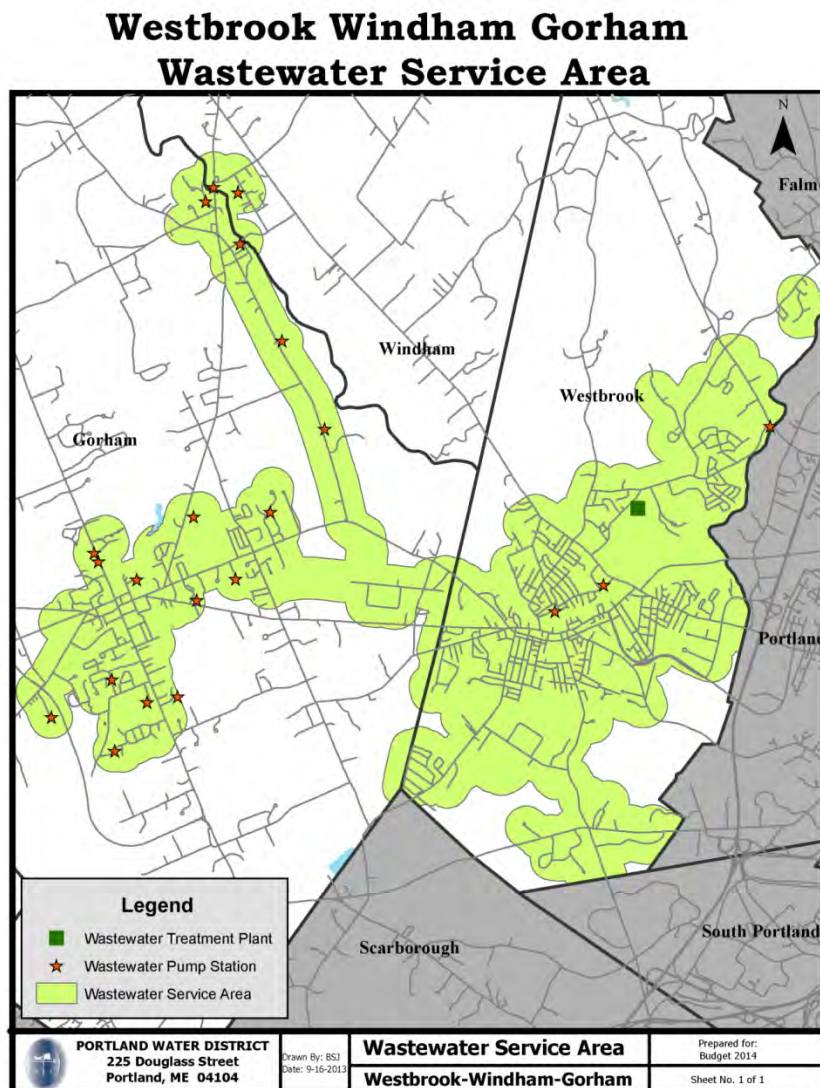
By Municipal Fiscal Year: Jul 1 to Jun 30



Fund: Wastewater – Windham

Background

The Portland Water District's charter authorizes the District to provide wastewater treatment and collection system-interceptors service to the town. By contract with the town, the District additionally operates and maintains the collectors in the sewer collection system. Windham's wastewater is treated at the treatment facility located in Westbrook and jointly used by Windham, the Town of Gorham and City of Westbrook. Additionally, by contract, the District provides utility billing services.



Summary of Services Provided:

Treatment

*0.086 Million
gallons/day*

Collection System

*2 Windham only & 3
Joint use Pump Stations
with 5.8 miles of pipe*

Utility Billing

*Annual Billings of
\$355,759 with 55
Customers*

Fund: Wastewater - Windham

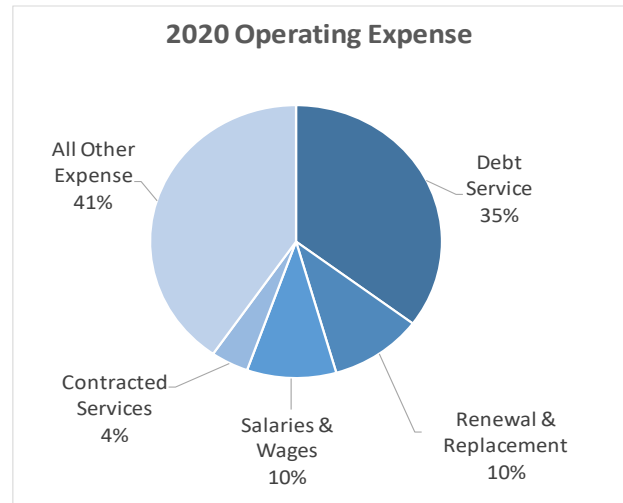
2020 Financial Summary

The town's proposed assessment of \$389,004 is 6.1% increase (\$22,236).

The proposed 2020 Operating Expense and Capital budgets are \$397,107 and \$435,150, respectively.

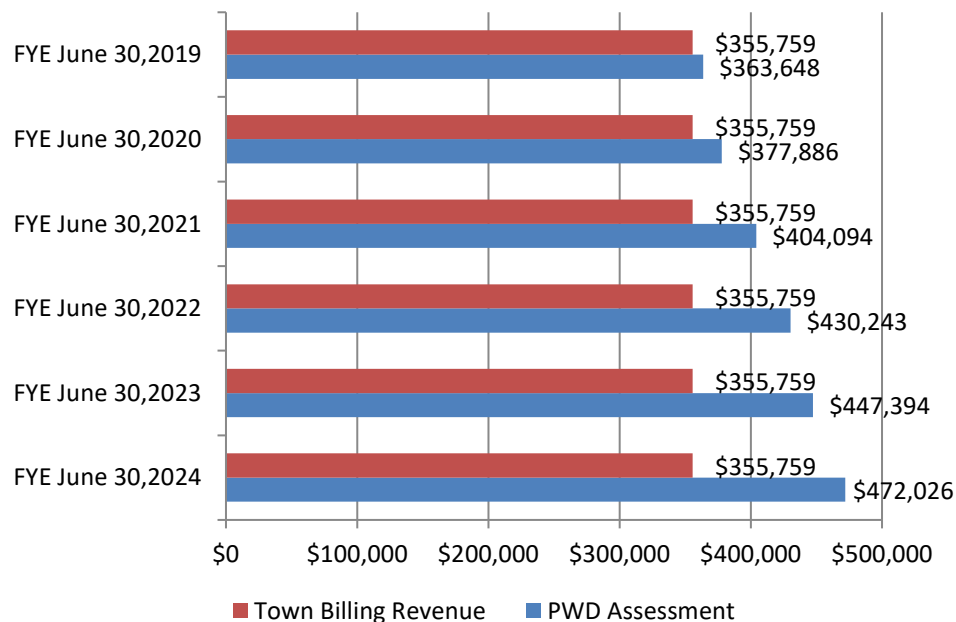
Operating Expense was up 6.3%. Windham flows increased in the Little Falls System (72% to 75.5%) and the Westbrook Regional WWTF remained at 3%.

The primary Capital project is upgrading the joint Westbrook Treatment Plant's Aeration & Clarifier processes. \$292,500 is Windham's portion of the construction cost.



Assessment Compared to Ratepayers' Billing

The municipality's fiscal year end is June 30, while the District's is December 31. The chart below compares the cash as collected by the District for sewer billings on their behalf and the District's assessment for services rendered. The municipality may incur additional sewer-related costs. The municipality determines whether to increase the sewer billing rates. Any shortfall of billing revenue is made up from the Town's general funds.



Revenue Assumptions:

- Consumption is the 12 months ending June 30, 2019

- Rates Assumed:

Effective Base/Per HCF
Date:

April 2009 \$48.84/\$3.24

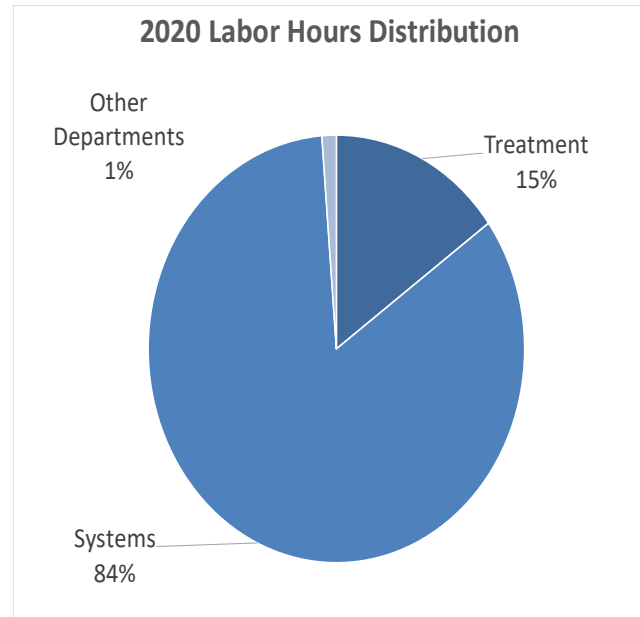
No change since 4/1/2009

2020 Operating Expense Highlights

Salaries/Wages – Wages were budgeted to increase 18.0% (\$5,993). The increase was due to a rise of 14% in the hours WW Systems plans to spend in the area to deal with pump station maintenance and repairs. This reflects the labor utilization trend over the past few years.

Employee Benefits – Overall, employee benefits expense increased \$1,999 (12.6%) but the benefit rate (including FICA) decreased from 50.51% in 2019 to 48.39% in 2020 due to lower overall benefit expenses.

Biosolids Disposal – Biosolids expense at the Westbrook Regional WWTF is projected to increase 7.8% due to a 3.5% increase in wet tons disposed and an expected 4.2% increase in the disposal price per wet ton. The impact is a \$653 (or 7.8%) increase in expense with the Windham flow allocation from the treatment plant remaining at 3% this year.



Chemicals – The 2020 budget for Chemicals has increased by \$1,338 or 12.3%. This is mainly due to polymer's increase in pounds to be used in 2020 by 52.5% at the Westbrook Regional WWTF. Also, the contract price has increased by 9.6% per pound, which is allocated to Windham by the Joint Allocation of 3%. The increase in polymer use is due to the demands of the newly installed dewatering equipment at the treatment plant, which uses more polymer during the dewatering process to achieve improved performance over the prior system.

Contracted Services – The budget for this item decreased \$3,320 (16.7%) primarily due to an elimination of CCTV work this year based on need.

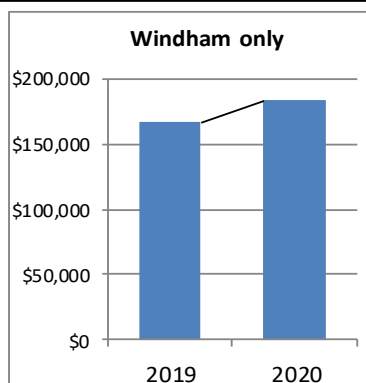
Purchased Power – The budget for power is expected to increase by 17% or \$2,668 to \$18,326. Windham saw increases in all areas: joint Little Falls and joint Westbrook pump stations' usage estimates are 58,000 kWh higher than last year's budget. The Westbrook WWTF usage estimate was 177,000 kWh higher. Demand also increased 942 KW and 300 KW, respectively. Estimates are based off a 1 to 2 year average rather than a 3-year average.

Support Services – These costs are related to general work done that cannot be directly charged to a fund as noted above (such as customer billing or information technology) or work done on behalf of several municipalities at the same time (engineering or laboratory services) that is allocated based on the value to each fund. Overall, Support Services increased \$5,718 or 7.5%. The allocation from Administration increased \$3,579 (9.9%) because of the two new authorized head count in Information Services and Employee Services. The costs associated with Wastewater increased \$3,286 (16.2%) due to redistribution in labor towards the smaller Wastewater funds to mirror actual hours.

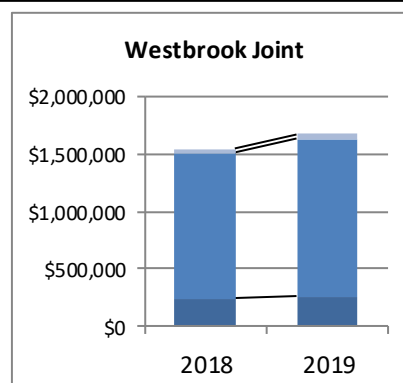
Debt Service - The annual principal and interest payments on bonds issued to finance capital projects. This item decreased 2.8% (\$4,059) due to the delay of issuing the ABC.

Renewal & Replacement - Dollars put aside to fund capital projects. A contribution of \$40,911 will be made in 2020.

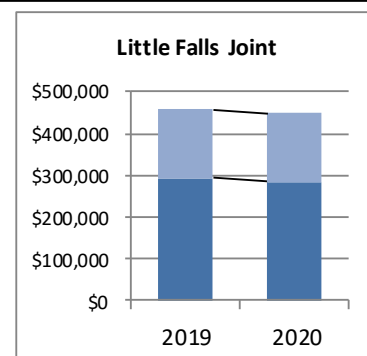
	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Assessment Income	\$360,528	\$183,384	\$366,768	\$389,004	\$22,236	6.1%
Interest Income	8,449	8,087	6,690	8,103	1,413	21.1%
Other Income	182	0	0	0	0	n/a
Total Revenue	369,159	191,471	373,458	397,107	23,649	6.3%
Salaries & Wages	40,970	19,415	33,314	39,307	5,993	18.0%
Employee Benefits	11,978	5,056	8,361	9,014	653	7.8%
Biosolids Disposal	20,814	9,004	15,879	17,878	1,999	12.6%
Chemicals	18,467	5,592	10,855	12,193	1,338	12.3%
Contracted Services	15,554	6,056	19,902	16,582	-3,320	-16.7%
Deferred Cost W/O	3,154	0	0	0	0	n/a
Heat/Fuel Oil	1,477	3,014	2,247	2,399	152	6.8%
Insurance	632	312	609	692	83	13.6%
Materials & Supplies	6,705	2,331	4,628	4,723	95	2.1%
Other Expense	177	202	159	174	15	9.4%
Purchased Power	18,286	9,380	15,658	18,326	2,668	17.0%
Tele/Other Utilities	560	291	556	571	15	2.7%
Transportation	13,982	8,324	11,568	12,861	1,293	11.2%
SS - Administration	35,627	17,018	36,185	39,764	3,579	9.9%
SS - Engineering Services	10,713	4,619	14,086	13,381	-705	-5.0%
SS - Environmental Services	3,361	2,401	5,116	4,673	-443	-8.7%
SS - Wastewater Services	26,920	9,761	20,269	23,555	3,286	16.2%
SS - Water Services	91	49	127	128	1	0.8%
Operating Expense	229,468	102,825	199,519	216,221	16,702	8.4%
Debt Service & Lease Expense	145,421	67,568	144,034	139,975	-4,059	-2.8%
Renewal & Replacement - Direct	35,849	12,924	25,849	35,849	10,000	38.7%
Renewal & Replace - Indirect	4,096	2,172	4,056	5,062	1,006	24.8%
Total Expense	414,834	185,489	373,458	397,107	23,649	6.3%
Current Year Surplus (Deficit)	-45,675	5,982	0	0		
OPEB Surplus Allocated	853	0	0	0		
Prior Year Surplus	109,099	64,277	86,395	42,317		
Accumulated Surplus	64,277	70,259	86,395	42,317		



Windham Only – Expense up \$16.1k (9.6%).



Westbrook JT – Expense up 8.4%; Windham's share of expense unchanged (3.0%), net expense up \$8.7k (21.2%).



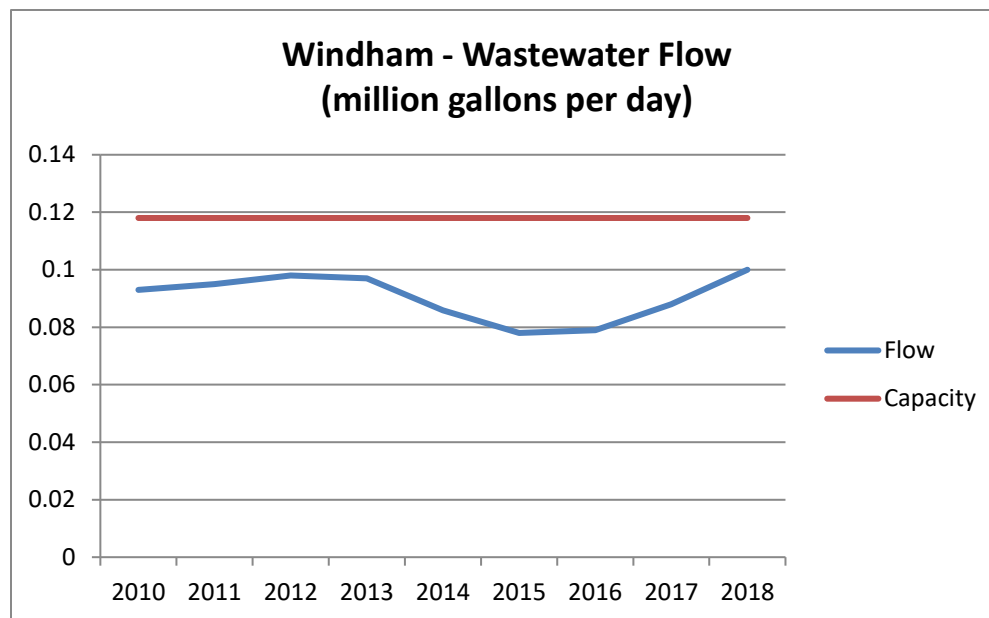
Little Falls JT – Expense down \$9.0k, Windham's share of expense up (72.0% to 75.5%), Windham's share down \$1.5k.

Operation Summary

Wastewater Treatment

Wastewater generated within the Town of Windham, including the Maine Correctional Center and the Little Falls area of Gorham, is conveyed to the Westbrook/Gorham/Windham Regional WWTF. The Town of Windham has reserved 2.6% of a design capacity of 4.54 million gallons a day, or 118,040 gallons. The table below shows the volume of flows to the Westbrook/Gorham/Windham Regional Wastewater Treatment Facility.

Area	2018 Windham Flow	Westbrook WWTF Flow	% Windham Flow
Windham	0.10 mgd	3.31 mgd	3.0%
WGWWTF Capacity	Windham Capacity (2.6%)	% Capacity Used	Capacity Remaining
4,540,000 gal/day	0.118 mgd	84.7 %	0.018 mgd



Wastewater Conveyance – collectors, interceptors and pumping stations

Parameter	2019 Actual to Sept	2020 Projected
Preventive Work Orders	30	40
Corrective Work Orders	4	5
Wet wells cleaned	14	15
Debris removed (tons)	13.8	10
Dry Weather Overflows	0	0

Operation Summary (continued)

2019 Other Highlights

- Preventive type work continues to be the main focus of system staff.
- Wet well and siphon cleaning were performed on a regular schedule using our Hansen scheduled maintenance program. This effort is in response to odor concerns in the area and the need to regularly clean the siphon to ensure the system operates properly. Staff inspects the siphon weekly.
- Design of a new pump station in the Depot St. area is underway. This pump station would eliminate the siphon and the associated work to inspect and clean the siphon inlet regularly.
- In response to odor concerns at the Mallison St. Pump Station, an odor control system was installed. There have been no complaints of odor since the system was installed in the summer of 2012.
- The Route 202 Pump Station flow meter was replaced in 2015. This meter records the flow from the Windham area.
- A passive odor control unit was installed at the Little River Pump Station (which is jointly used by Windham and Gorham). A more costly and potentially more effective unit could be installed in the future, if it becomes necessary.
- Recognizing the increased loading at the treatment plant and in anticipation of the aeration system upgrade in 2020, acceptance of septage at the plant has ceased until after the completion of the aeration upgrade. Septage is being accepted at the East End WWTF in Portland.
- The new dewatering system (screw press) at the treatment facility was installed in 2018. Following an extended start-up, the Operations Team has been able to optimize the equipment and performance of the system has increased dramatically. Through September, the % total solids had increased from only 15.6 % the year before to 20.1% total solids in 2019. This results in the removal of roughly 1,466,000 lbs. of water from the biosolids managed by the facility. This has resulted in a savings in excess of \$50,000 over past years

2020 Work Plan

- All pump stations will be continuously monitored with our SCADA system and dispatch service. Operations staff will visit each station on a weekly basis.
- Asset Management Software will drive the preventive maintenance program, generating both monthly and annual preventive maintenance work orders.
- A new pump station on Depot St. to serve the Windham Little Falls area is planned for installation in 2020.
- Wet wells are scheduled for cleaning on a quarterly basis unless experience dictates otherwise.
- The Routine Renewal and Replacement capital account will be used to address any unanticipated equipment issues.
- The Westbrook/Gorham/Windham Regional WWTF will have major work planned for the aeration system beginning in 2020.

Capital Summary

A five-year capital plan is updated each year. The projects are prioritized based on operational needs and financing availability. The table below indicates the projects scheduled for the next fiscal year and the funding source of those projects. Detailed descriptions of the projects can be found in the Capital Finance and Capital Expenditures sections.

Expenditures by CIP Year:

	<u>Prior CIP</u>	<u>2020 CIP</u>	<u>Total</u>
Projects:			
SCADA & Technology			
SCADA Radio Modem Replacement - 3126 (prorated)		\$ 28,350	\$ 28,350
WW Collection & Pumping			
Windham Only Pump Station R&R - 3138	\$ 20,000		\$ 20,000
Depot St PS Upgrades Phase 1 - 3139	\$ 600,000		\$ 600,000
WW Treatment			
<u>Westbrook Treatment Plant</u>			
Aeration & Clarifier Upgrade Design - 3022 (prorated)	\$ 19,500		\$ 19,500
Aeration & Clarifier Construction - 3023 (prorated)		\$ 292,500	
Sludge Storage Odor Control - 3025 (prorated)	\$ 19,500		\$ 19,500
Treatment Plant R&R - 3132 (prorated)		\$ 1,300	\$ 1,300
Little River Bridge Forcemain Replacement - 3212 (prorated)		\$ 93,000	\$ 93,000
Total by CIP Year	\$ 39,000	\$ 1,035,150	\$ 781,650

Source of Funds:

	<u>R&R Fund</u>	<u>Bond Issue 2020</u>	<u>Grant</u>	<u>Funding Total</u>
Beginning Balance	\$ 375,519			
2020 Contribution	\$ 35,849			
Total R&R Balance Available	\$ 411,368			
Projects:				
SCADA & Technology	\$ 28,350			\$ 28,350
WW Collection & Pumping	\$ 20,000	\$ 350,000	\$ 250,000	\$ 620,000
WW Treatment	\$ 94,300	\$ 39,000		\$ 133,300
Total	\$ 142,650	\$ 389,000	\$ 250,000	\$ 781,650
Ending Balance	\$ 268,718			

Prorated Projects: Costs of projects done on infrastructure used by multiple communities are ‘prorated’ between the municipalities based on relative design capacity. In the case of the SCADA radio modem replacement project, the proration is based on there being 3 Windham pump stations out of the 37 total pump stations that are planned to have work done in 2020. This project was postponed from 2019.

Projections for Rate-Making Purposes

Multi-year projections are made for each of the wastewater funds' assessment. The projections provide guidance to the wastewater municipalities to assist them in determining their wastewater sewer rates. A summary of the projection is provided on next page.

Major Assumptions:

The assumptions incorporated in the projections are as follows:

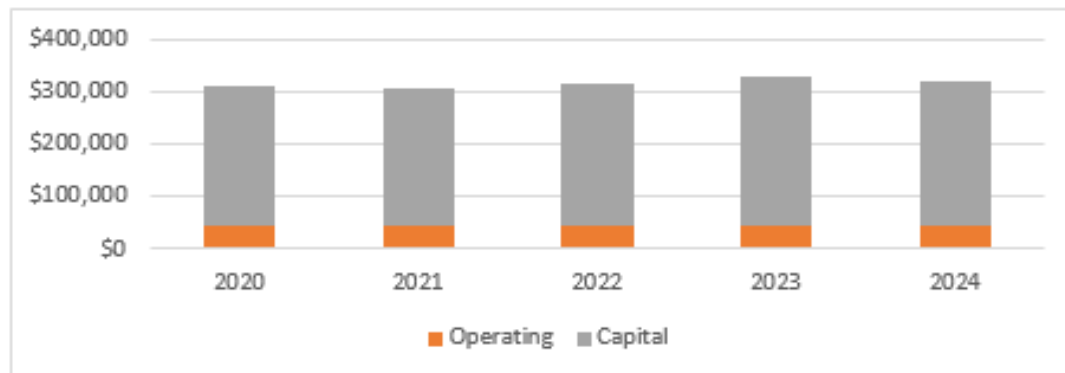
- Salary increases of 3.0% each year. Additional 1.25 headcount in 2021.
- Benefit increases of 5% each year.
- Biosolids contract expires in 2021; assumed 1.8% increase in unit prices. Contract renewal in 2022 may result in a significant increase but it is unknown so not forecasted.
- Other expenses increase between 2.3% and 3.5% each year.
- New debt service and renewal/replacement fund expenditures consistent with the 2020 5-year capital plan. New debt assumed a 20-year life at 3% interest.

Summary of Projection Impact:

Assessment is projected to increase to \$490,564 in 2024, a 26% increase over 2020 Budget, with the most significant cost change related to debt service issued to finance capital projects. Operating Reserve balance is below target balance by 2024 and Capital R&R balance are above the target balance.

Debt Service as a percent of budget is high due to Gorham's request to connect the Little Falls area to the Westbrook Regional Treatment Plant and significant upcoming upgrades at the treatment plant.

Reserve Fund Balances



Percent of Budget Dedicated to Debt Service – Target: Not to Exceed 35%

2018	2019	2020	2021	2022	2023	2024
35%	38%	35%	38%	39%	39%	43%

Debt Service Ratio – Target: Greater or Equal to 125%

2018	2019	2020	2021	2022	2023	2024
96%	119%	129%	125%	123%	122%	119%

Projections for Rate-Making Purposes (continued)

Operating Fund:

	<u>2020 Budget</u>	<u>2021 Forecast</u>	<u>2022 Forecast</u>	<u>2023 Forecast</u>	<u>2024 Forecast</u>
Revenues:					
Assessment Income	389,004	419,184	441,301	453,487	490,564
Interest Income	8,103	6,077	6,077	6,077	6,077
Total Revenues	397,107	425,261	447,378	459,564	496,641
Operating Expenses:					
Salaries & Wages	39,307	40,486	41,701	42,952	44,241
Employee Benefits	17,878	18,772	19,711	20,697	21,732
Biosolids Disposal	9,014	9,176	9,341	9,509	9,680
Chemicals	12,193	12,559	12,936	13,324	13,724
Contracted Services	16,582	16,963	17,353	17,752	18,160
Heat/Fuel Oil	2,399	2,483	2,570	2,660	2,753
Insurance	692	708	724	741	758
Materials & Supplies	4,723	4,832	4,943	5,057	5,173
Other Expense	174	178	182	186	190
Purchased Power	18,326	18,326	18,326	18,674	19,029
Tele/Other Utilities	571	584	597	611	625
Transportation	12,861	13,157	13,460	13,770	14,087
SS - Administration	39,764	42,431	43,842	45,300	46,806
SS - Engineering Services	13,381	14,565	15,044	15,539	16,050
SS - Environmental Services	4,673	4,828	4,989	5,155	5,326
SS - Wastewater Services	23,555	24,338	25,147	25,983	26,847
SS - Water Services	128	232	240	248	256
	216,221	224,618	231,106	238,158	245,437
Debt Service	139,975	160,698	176,327	181,461	211,259
Renewal & Replacement - Direct	35,849	35,849	35,849	35,849	35,849
Renewal & Replace - Indirect	5,062	4,096	4,096	4,096	4,096
Capital Finance Expense	180,886	200,643	216,272	221,406	251,204
Total Operating Expenses	397,107	425,261	447,378	459,564	496,641
Current Year Surplus(Deficit)	0	0	0	0	0
Prior Year Surplus	42,317	42,317	42,317	42,317	42,317
Accumulated Surplus	42,317	42,317	42,317	42,317	42,317
Target Balance(25% of budget)	99,277	106,315	111,845	114,891	124,160
Above/(Below)	-56,960	-63,998	-69,528	-72,574	-81,843

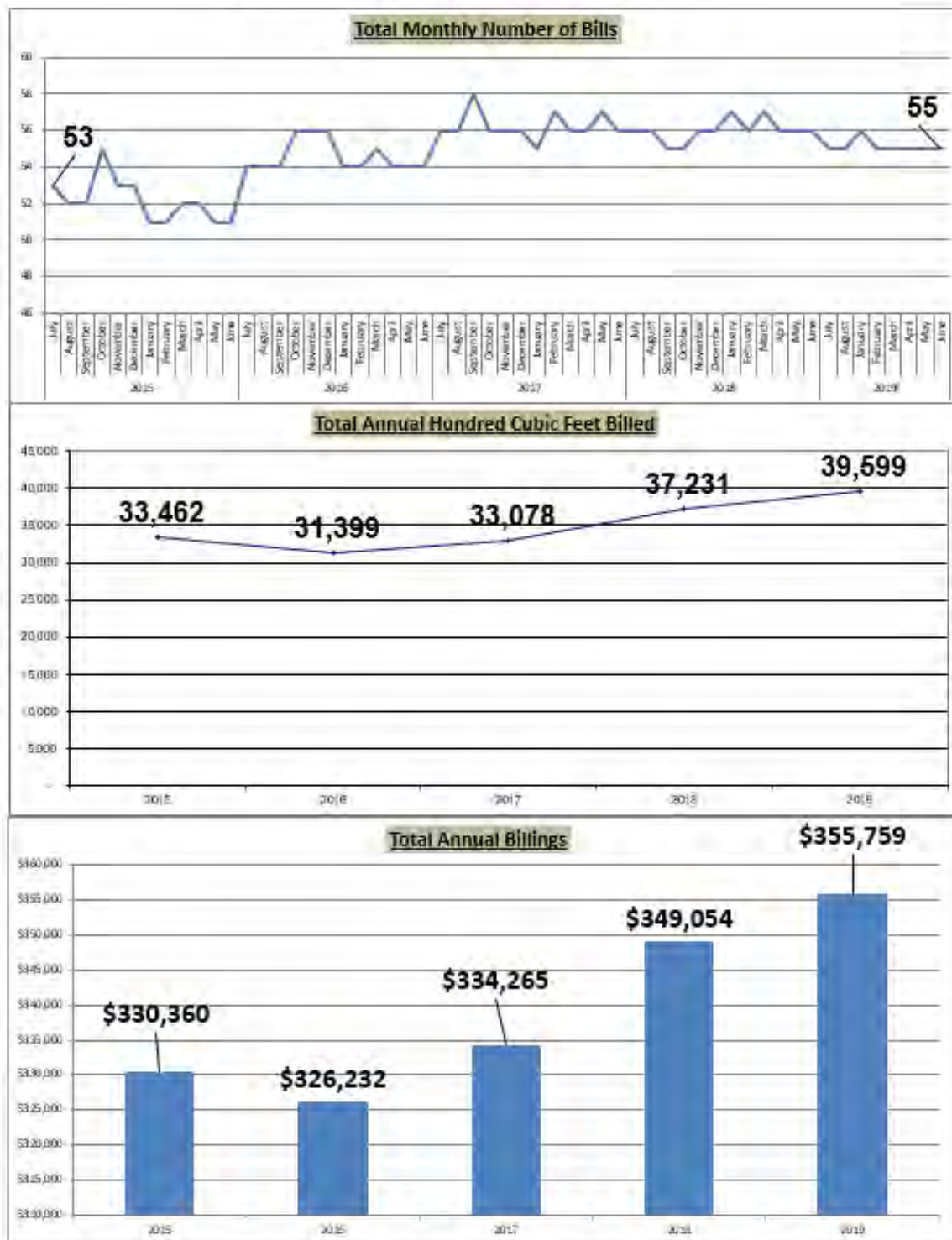
Capital Expenditures: (See details in the Capital Expenditure section) Target Balance: \$150,000

	<u>2020 Budget</u>	<u>2021 Forecast</u>	<u>2022 Forecast</u>	<u>2023 Forecast</u>	<u>2024 Forecast</u>
R&R Balance BOY	\$ 375,519	\$ 268,718	\$ 265,067	\$ 275,066	\$ 289,615
Contribution	\$ 35,849	\$ 35,849	\$ 35,849	\$ 35,849	\$ 35,849
Withdrawals	\$ (142,650)	\$ (39,500)	\$ (25,850)	\$ (21,300)	\$ (44,700)
R&R Balance EOY	\$ 268,718	\$ 265,067	\$ 275,066	\$ 289,615	\$ 280,764

Sewer Billing Statistics

The District provides sewer billing services for the municipality by contract. Sewer is billed based on water consumption and is included on Portland Water District's water bill. The municipality determines the sewer rate. Dollars collected are forwarded to the municipality weekly.

By Municipal Fiscal Year: Jul 1 to Jun 30



Falmouth Assessment and Scarborough and South Portland Contracted Services

Background

By contract, the district provides utility billing and collection services for Falmouth, Scarborough and South Portland. Wastewater services are provided in the towns of Falmouth and Scarborough by their towns' Sanitary District, both independent wastewater utilities, and in the city of South Portland by Water Resource Protection, a department of the City of South Portland.

For Scarborough and South Portland, the district estimates the cost to provide the billing and payment collection service as documented in the annual budget and bills the municipalities the estimated cost. The amount is billed to the municipality in equal monthly payments.

For Falmouth, in addition to the billing and payment collection service costs, the District will assess the town for debt service costs related to the bond that the District issued on behalf of Falmouth. The debt and the related assets will be part of the District's balance sheet but Falmouth will operate and maintain the assets.

The municipality determines the system user fees to pay the district bill and any municipal costs related to the sewer system. The district includes the sewer user fees on the monthly water utility bill sent to customers. Sewer user fees collected from users are remitted to the municipality on a weekly basis.

Sewer user fees are based on water consumption in South Portland and Scarborough, with a 1 HCF (hundred cubic feet) minimum fee plus an additional fee for each HCF used above the minimum. Falmouth user fees are based on a flat rate per month for residential homeowners and commercial customers are billed a flat rate plus a fee based on the number of fixtures and number of units at the location.

2020 Summary

The District is proposing the same assessment as last year, \$314,112 in Falmouth and similarly South Portland, remains at \$201,132. Scarborough's annual assessment has gone up 0.6% increased by \$72 to \$11,328.

Total expense for Scarborough is relatively unchanged. Falmouth is decreasing Debt Service by 2.4% or \$7,142 for a total expense decrease of \$7,221 or 2.3%. South Portland has also decreased Debt Service by \$7,387, which is offset by increases in operating expense (\$2,060) due to an increase in Collection costs and Indirect Renewal and Replacement related to Meter Servicing (\$8,331).

Falmouth Assessment and Scarborough and South Portland Contracted Services

Falmouth:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Assessment Income	\$310,056	\$157,056	\$314,112	\$314,112	\$0	0.0%
Interest Income	<u>2,334</u>	<u>1,220</u>	<u>409</u>	<u>1,100</u>	<u>691</u>	<u>168.9%</u>
Total Revenue	312,390	158,276	314,521	315,212	691	0.2%
Operating Expense	12,173	5,388	14,859	14,780	-79	-0.5%
Debt Service & Lease Expense	<u>297,184</u>	<u>142,596</u>	<u>299,662</u>	<u>292,520</u>	<u>-7,142</u>	<u>-2.4%</u>
Total Expense	309,357	147,984	314,521	307,300	-7,221	-2.3%
Current Year Surplus (Deficit)	3,033	10,292	0	7,912		
Prior Year Surplus	<u>1,298</u>	<u>4,331</u>	<u>2,652</u>	<u>14,898</u>		
Accumulated Surplus	4,331	14,623	2,652	22,810		

Scarborough:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Contracted Billing Income	\$11,256	\$5,628	\$11,256	\$11,328	\$72	0.6%
Interest Income	<u>122</u>	<u>114</u>	<u>97</u>	<u>103</u>	<u>6</u>	<u>6.2%</u>
Total Revenue	11,378	5,742	11,353	11,431	78	0.7%
Operating Expense	1,576	833	2,100	2,115	15	0.7%
Debt Service & Lease Expense	6,387	3,215	5,911	4,902	-1,009	-17.1%
Renewal & Replace - Indirect	<u>3,342</u>	<u>1,671</u>	<u>3,342</u>	<u>4,414</u>	<u>1,072</u>	<u>32.1%</u>
Total Expense	11,305	5,719	11,353	11,431	78	0.7%
Current Year Surplus (Deficit)	73	23	0	0		
Prior Year Surplus	<u>6,922</u>	<u>6,995</u>	<u>7,181</u>	<u>7,589</u>		
Accumulated Surplus	6,995	7,018	7,181	7,589		

South Portland:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Contracted Billing Income	\$197,184	\$100,566	\$201,132	\$201,132	\$0	0.0%
Interest Income	<u>1,915</u>	<u>2,612</u>	<u>1,828</u>	<u>500</u>	<u>-1,328</u>	<u>-72.6%</u>
Total Revenue	199,099	103,178	202,960	201,632	-1,328	-0.7%
Operating Expense	120,287	55,539	135,936	137,996	2,060	1.5%
Debt Service & Lease Expense	49,694	25,101	46,475	39,088	-7,387	-15.9%
Renewal & Replace - Indirect	<u>25,432</u>	<u>12,698</u>	<u>25,396</u>	<u>33,727</u>	<u>8,331</u>	<u>32.8%</u>
Total Expense	195,413	93,338	207,807	210,811	3,004	1.4%
Current Year Surplus (Deficit)	3,686	9,840	-4,847	-9,179		
Prior Year Surplus	<u>130,093</u>	<u>133,779</u>	<u>33,318</u>	<u>52,279</u>		
Accumulated Surplus	133,779	143,619	28,471	43,100		

Introduction

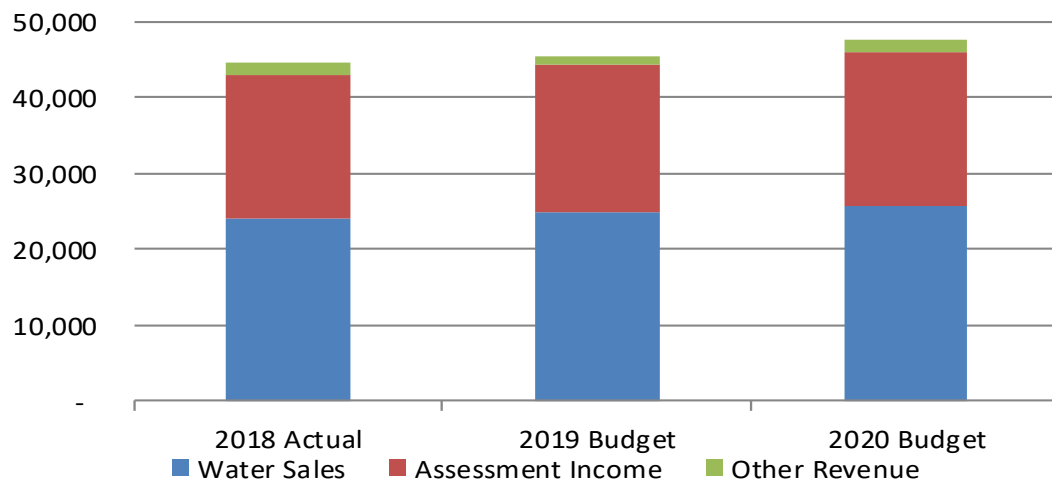
Revenue is obtained from two major sources: payments by individual customers for water services (Water Revenue, 54.1%) and payments from municipalities for wastewater services (Wastewater Assessments, 42.6%). Water revenues in 2020 are projected to increase 3.5% over last year's budget as a result of the full year impact of the 4.4% May 1, 2019 rate increase and the proposed 3.5% rate increase to take effect in May. The Wastewater Assessments for Cape Elizabeth, Cumberland, Gorham, Westbrook, Windham, and Portland increased to cover estimated 2020 costs.

Contracted Billing Income (0.45% of budgeted revenue) is revenue paid by the City of South Portland and Town of Scarborough for wastewater billing services.

Other Water and Wastewater revenue (2.89% of budgeted revenue) is derived from other activities, such as interest income, cross connection fees, customer connection and activation fees, jobbing surcharge and septage haulers fees, which are further detailed in this section.

	2018 Actual	2019 Actual Jan-Jun	2019 Budget	2020 Budget	\$-Diff.	%-Diff.
Water Sales	\$24,056,708	\$11,111,241	\$24,817,595	\$25,686,370	\$868,775	3.5%
Assessment Income	19,003,536	9,724,236	19,448,472	20,218,572	770,100	4.0%
Contracted Billing Income	208,440	106,194	212,388	212,460	72	0.0%
Interest Income	637,672	614,553	505,383	707,747	202,364	40.0%
Other Income	766,273	369,651	553,614	664,790	111,176	20.1%
Total Revenues	\$44,672,629	\$21,925,875	\$45,537,452	\$47,489,939	\$1,952,487	4.3%

Total District Revenue
(\$,000)



Water Sales

Water sales consist of:

- **Metered Revenue** from residential, governmental, industrial and commercial customers. Customers are billed a monthly minimum based on meter size, which includes 1 hundred cubic feet (HCF) of water (748 gallons). For amounts greater than 1 HCF, customers pay based on a four-tier declining block. Current member rates are:

Monthly Water Usage:		
From	To	Rate
1 HCF	30 HCF	\$2.44
30 HCF	100 HCF	\$2.13
100 HCF	500 HCF	\$1.88
Greater than 500 HCF		\$1.06

- **Public Fire Protection** revenue from charges to municipalities for hydrants. Eleven communities pay a monthly fee based on the number of the hydrants in the community and proportionate share of water system costs to ensure water is available to fight fires.
- **Private Fire Protection** revenue from charges to private users for hydrants and sprinklers. Customers are assessed a monthly fee based on the service line to the hydrant/sprinkler. The fee is based on proportionate share of water system costs to ensure water is available to fight fires.
- **Other Water Revenue** such as interest on delinquent customer balances and customer penalties.

The 2020 Budget of \$25,686,370 reflects an assumed rate of usage determined on subsequent pages.

Water Sales rates have been adjusted annually. Average rate adjustments of 4.4% and 3.8% were made on May 2019 and 2018, respectively. Prior to 2016, all water rate adjustments were subject to review and approval by the Maine Public Utilities Commission. Starting in 2016, the District's Board of Trustees can approve rate adjustments solely through their actions. The Board will continue to follow the same public input process before authorizing rate changes.

	2018 Actual	2019 Actual Jan-Jun	2019 Budget	2020 Budget	\$-Diff.	%-Diff.
Metered Revenue	\$21,487,857	\$9,780,166	\$22,203,648	\$22,914,091	\$710,443	3.2%
Public Fire Protection	1,381,691	707,832	1,441,506	1,495,850	54,344	3.8%
Private Fire Protection	1,050,242	546,756	1,102,441	1,158,429	55,988	5.1%
Other Water Revenue	136,918	76,487	70,000	118,000	48,000	68.6%
Total Water Sales	\$24,056,708	\$11,111,241	\$24,817,595	\$25,686,370	\$868,775	3.5%

Water Sales - Cost of Service Study

Every 10 years, a cost of service study is completed that compares the revenue generated by each meter revenue customer class – residential, commercial, industrial and government – as well as fire protection with the costs of providing services to those customers. The most common and widely used cost of service or cost allocation process is presented in the American Water Works Association’s manual of practice M1 – Principles of Water Rates, Fees, and Charges. The process consists of several steps to determine the cost of providing service to various classes of customers.

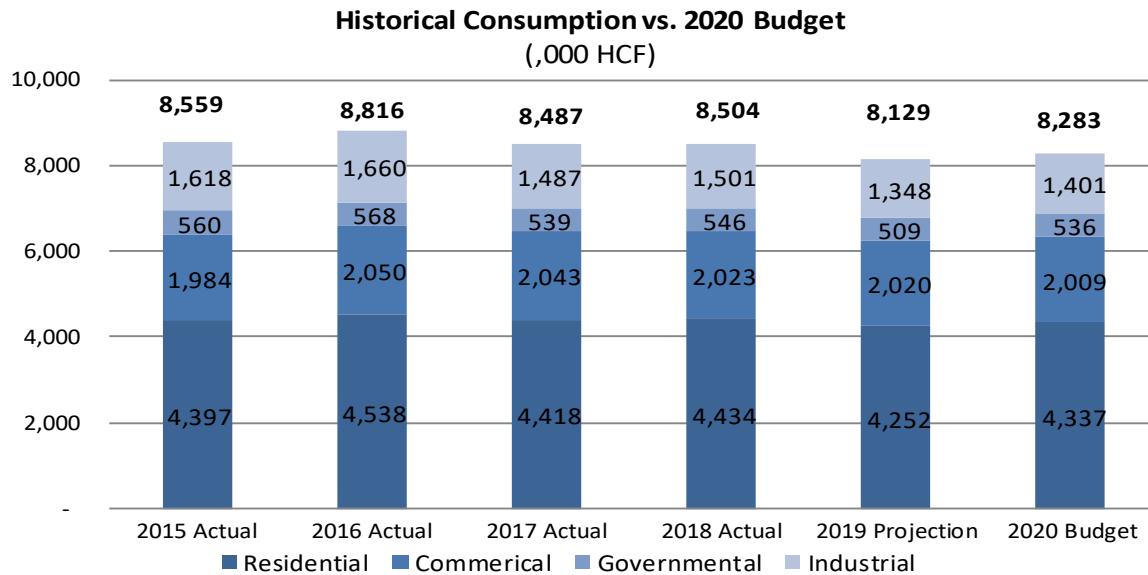
1. Costs are first assigned to various functions such as supply, treatment, pumping and distribution. The District’s accounting system readily provides this functional breakdown.
2. The functional costs are then allocated to various types of service provided by the water utility or cost components. The most common method is termed the “base-extra capacity method”. Under this method, the functional costs are allocated to the categories:
 - Base: costs that vary with the amount of water use, independent of peak demands
 - Extra Capacity: costs that are associated with meeting peak demand requirements
 - Customer: costs that are related to customer service and independent of water use. These are often subdivided into:
 - a. General or billing costs (meter reading, collection, etc.)
 - b. Meter and service costs (cost of meter or service line repair, maintenance and testing)
 - Direct Fire Protection: costs associated with public fire hydrants
3. Lastly, the costs that have been allocated to cost components are distributed to customer classes or groups based on the relative amount of use that each class has of the various cost components.

In general, we have followed the guidance in the AWWA’s M1 Manual to develop the cost of service analysis for the District.

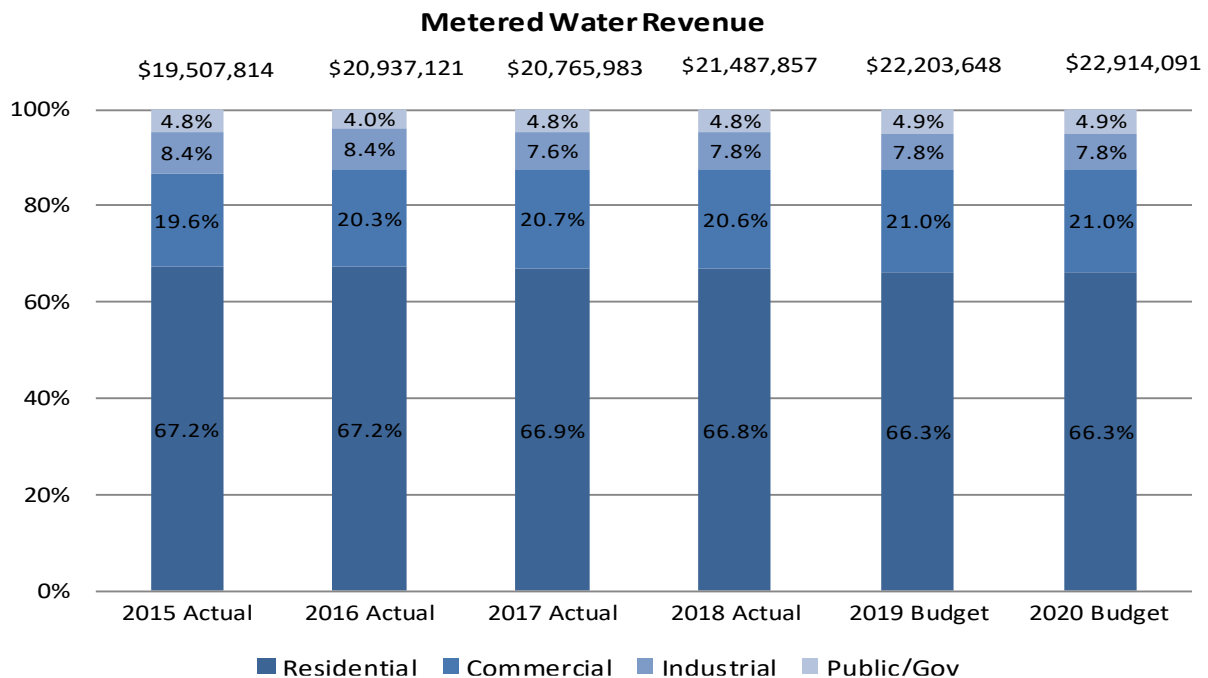
The last study was conducted in 2016. The study indicated that industrial and commercial customers were not paying the full cost of service. Because the rate change needed to those customers would create rate shock and impact economic development, a policy was established to gradually increase the rates impacting those customers over subsequent rate adjustments. The Board confirmed continuing the practice done since 2007 of increasing those rates at a rate of 150% of the rate adjustment for residential customers.

Water Sales – Metered Revenue

Metered water revenue has risen from \$19.5 million in 2015 to the 2020 budgeted amount of \$22.9 million (17.4% increase). The rise in revenue was the result of rate increases paired with slightly higher metered water usage. The District measures metered consumption by four customer classes: Residential, Commercial, Industrial, and Governmental/Public. The consumption patterns of each of these customer classes vary from one another and these variations have been taken into consideration in estimating the consumption used for the budget (see detailed discussion on subsequent pages).



The ratio of each customer class as a percentage of all sales (shown below) has been fairly stable.

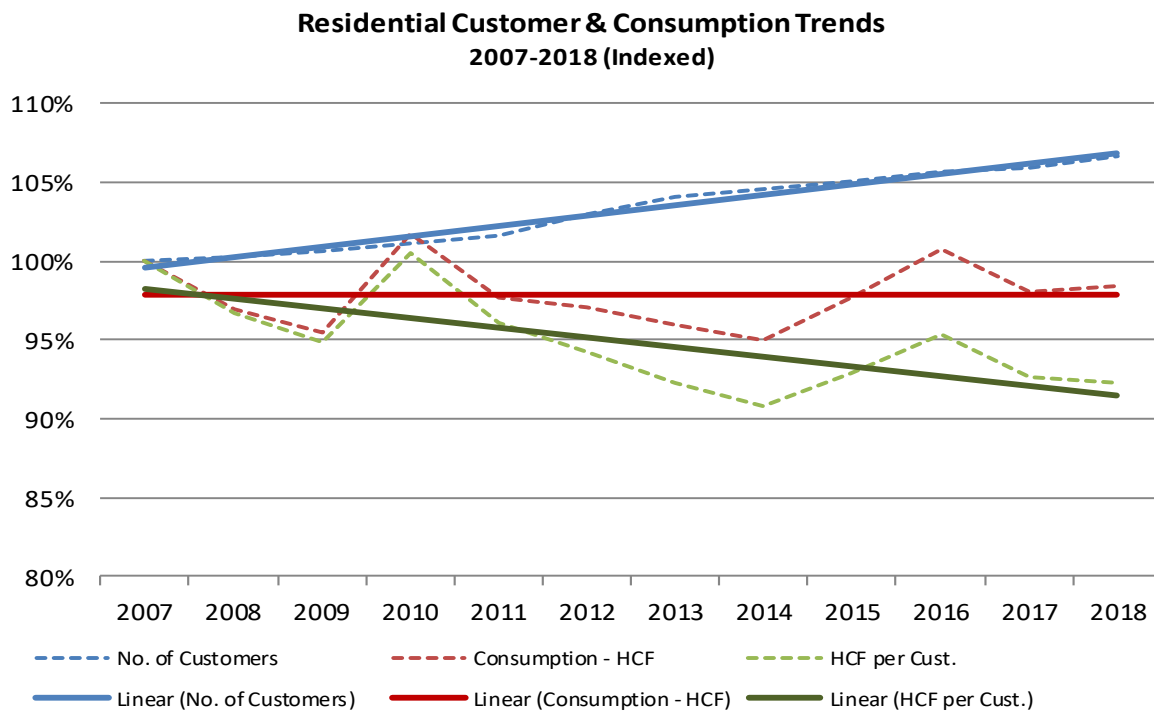


Water Sales – Metered Revenue - Consumption

Residential

Residential consumption makes up about 52% of total metered consumption and generates roughly 66.8% of the District's total metered water revenue. The two segments of residential consumption are monthly billed and seasonal customers. Monthly billed customers receive bills year round on a monthly basis. Seasonal customers receive a bill in the spring for the minimum consumption level and a bill in the fall for any excess usage above the minimum.

For monthly customers, consumption has been calculated by determining the core level of consumption, then estimating the amount of additional usage that largely occurs during the summer months. The monthly core level was reached by taking the average of the lowest three months of each year in the sample data and annualizing that value.

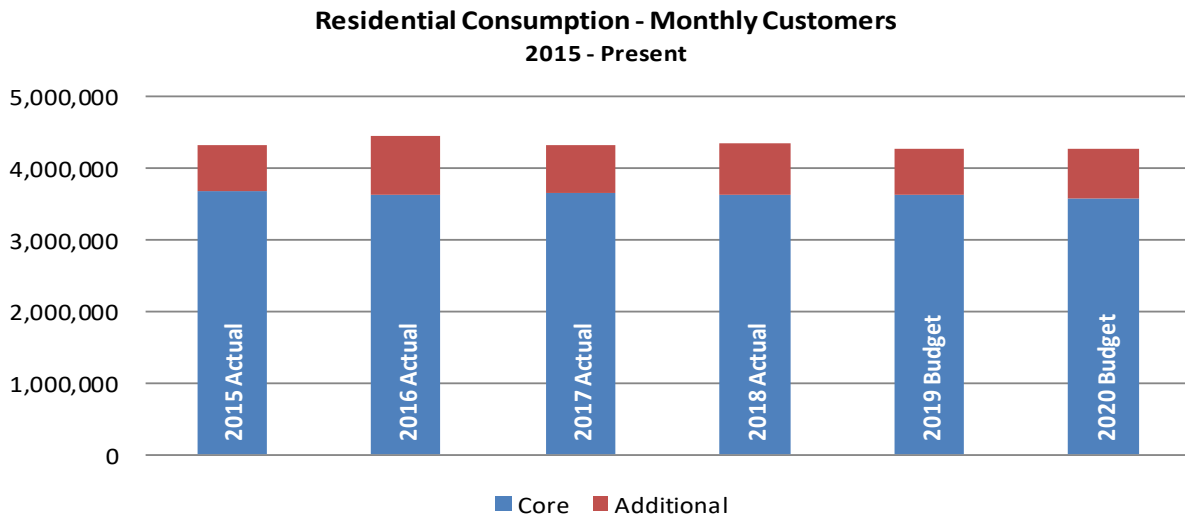


As shown above, overall consumption (red line) has been relatively flat over the last 10 years, even though the number of customers (blue) has been increasing. Therefore, the consumption per customer (green) has also been declining. These trends were taken into account when estimating the residential core usage for 2020.

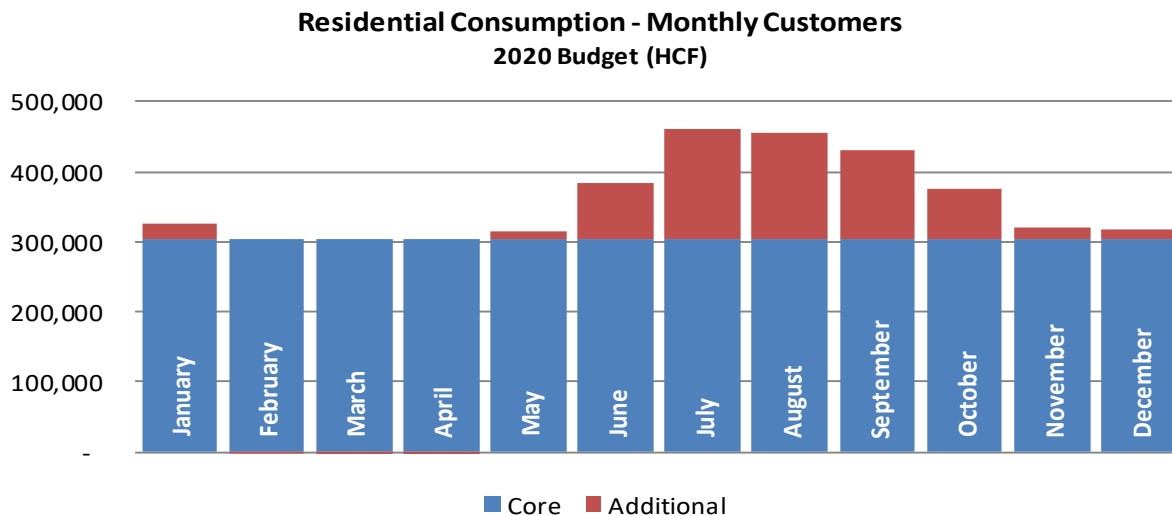
The additional usage was determined by averaging the percentage of additional consumption over the core in the sample years. For the 2020 budget, the core consumption was approximately 3.5 million HCF (hundred cubic feet) and the additional usage was 20% of the core. This falls in line with historical data.

Water Sales – Metered Revenue - Consumption

Residential (continued)



The monthly additional consumption was determined based on the average monthly consumption from a rolling three-year period ending December 2018. Approximately three-fourths of the additional consumption is used between the months of June through September.



Consumption by seasonal customers makes up only 1.34% of total residential consumption. Residential seasonal consumption for the budget was based on a five-year period from 2014-2018 and is approximately 58,000 HCF for the year.

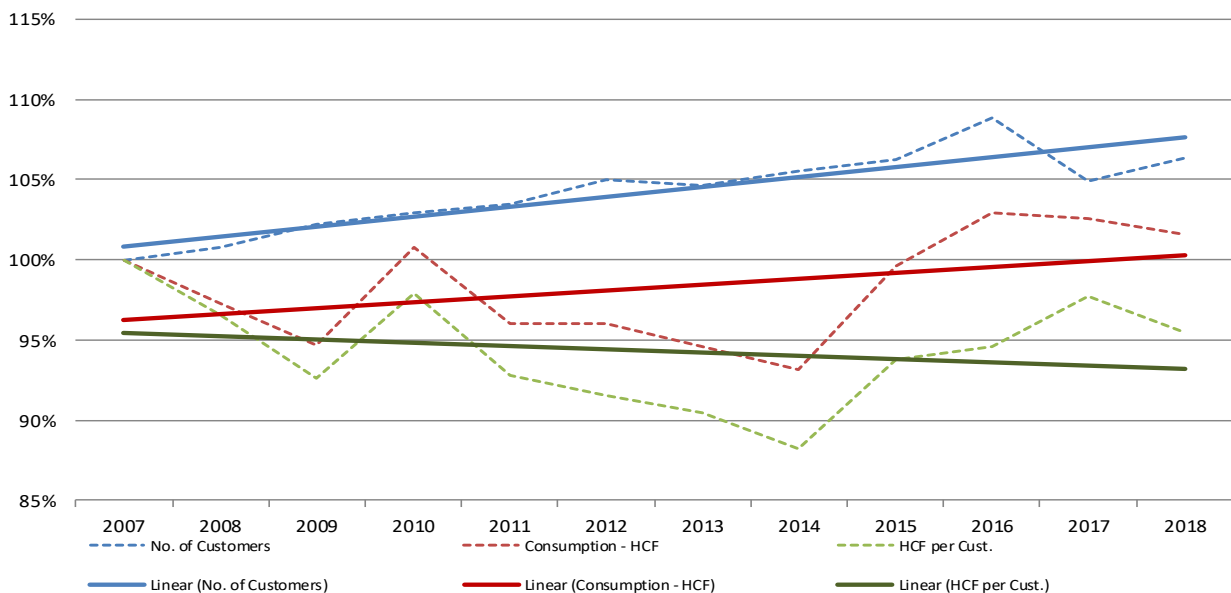
Water Sales – Metered Revenue - Consumption

Commercial

In estimating commercial usage, consumption was also split between monthly billed and seasonal customers, similar to the residential class.

In the same manner as residential consumption, monthly customer consumption has been calculated by determining the core level of consumption, then estimating the amount of additional usage. The monthly core level was reached by taking the average of the lowest three months of each year in the sample data and annualizing that value. The rate of increase in customers is greater for this class than residential, but the decrease in consumption per customer is more gradual than residential. However, overall consumption has been trending up slightly and this was factored into establishing a core usage amount for the commercial class for 2020.

**Commercial Customer & Consumption Trends
2007-2018 (Indexed)**

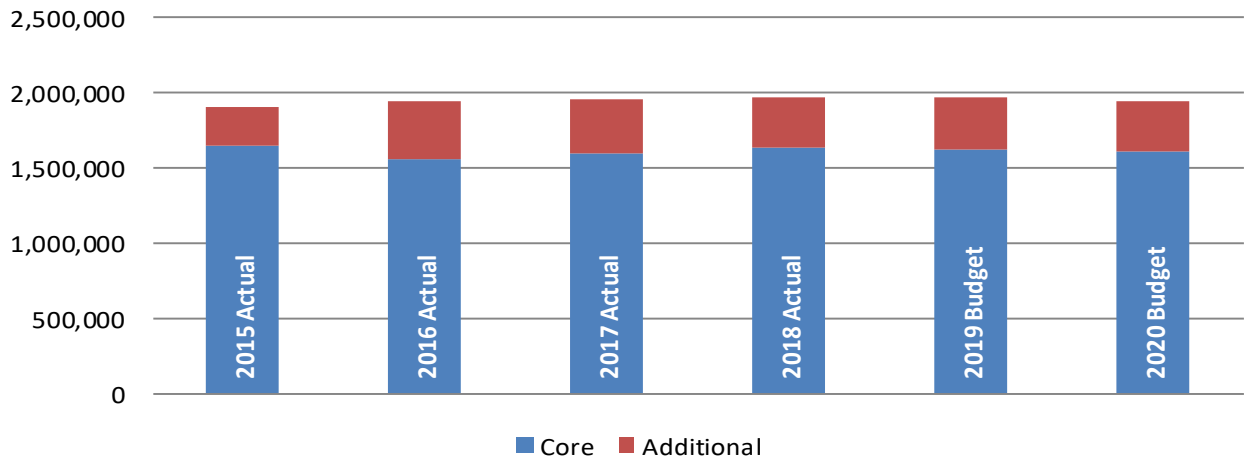


Additional usage was then determined by averaging the percentage of additional consumption over the core in the sample years. For the 2020 budget, the core consumption remained similar as last year around 1.59 million HCF. The additional usage budgeted for 2020 is 22.6% of the core.

Water Sales – Metered Revenue - Consumption

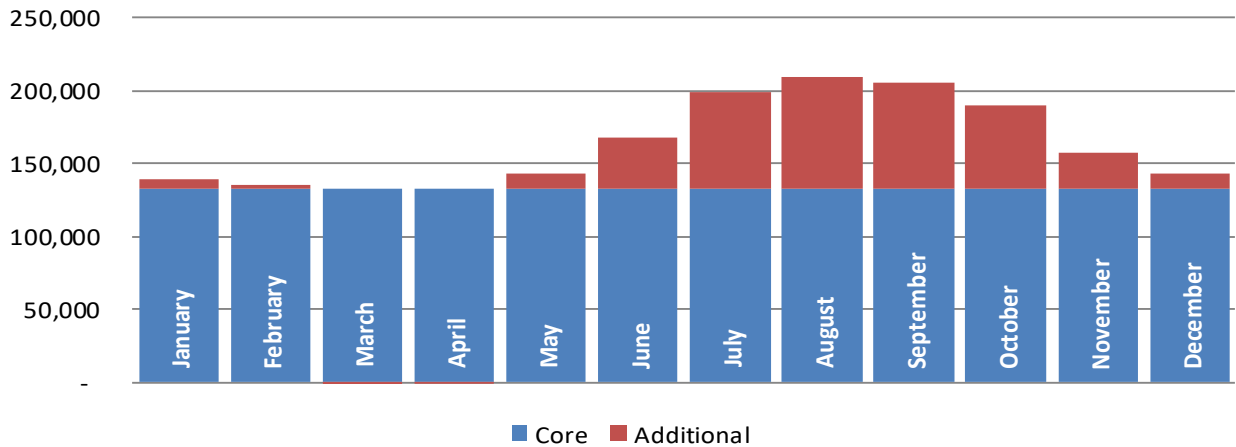
Commercial (continued)

Commercial Consumption - Monthly Customers
2015 - Present



The monthly additional consumption was determined based on the average monthly consumption from a rolling three-year period ending December 2018. Approximately two-thirds of the additional consumption is used between the months of June through September.

Commercial Consumption - Monthly Customers
2020 Budget (HCF)



Consumption by seasonal customers makes up only 2.9% of total commercial consumption. Commercial seasonal consumption for the budget was based on a five-year period from 2014-2018 and is approximately 58,600 HCF for the year.

Water Sales – Metered Revenue - Consumption

Industrial

Historically, approximately 90% of industrial usage has come from just five customers: Calpine, Texas Instruments, Sappi Fine Paper, ON Semiconductor, and B&G Foods. The District makes an effort every year to contact these customers to get an estimate of their expected water needs for the coming year. Overall Industrial usage is budgeted at 1.4 million HCF for 2020.

Calpine

The Calpine power plant is the District's largest customer. Located in Westbrook, Calpine uses two combustion turbines routed to two heat recovery steam generators that provide steam to a turbine. This facility produces enough electric power to meet the needs of more than 500,000 homes throughout New England. The energy market can significantly impact production at the plant. In 2018 and the first half of 2019, Calpine had some substantial breaks in usage when the plant was offline due to lack of demand and to save on overhead costs. Usage trend for Calpine has been highly variable with no clear trend so we plan to keep the usage at the same as last years' budget, 400,000 HCF. We have taken into consideration actual usage for 2019 and complete shutdowns of the plant to stay conservative.

Texas Instruments

Texas Instruments is a company that designs and makes semiconductors that are sold to electronics designers and manufacturers globally. In 2011, the company bought National Semiconductor, a semiconductor manufacturer specializing in analog devices and subsystems that operates a wafer fabrication plant in South Portland. They have had sporadic usage in the last few years, so we are using an average and weighing in how the 2019 projection is looking. Therefore the 2020 Budgeted usage has increased 10,000 to 280,000 HCF (3.7%) heavily due to 2018 actual and 2019 YTD Projected reaching for 300,000 HCF.

Sappi Fine Paper

Sappi Fine Paper North America is the leading producer and supplier of coated fine paper, pulp and release paper in the United States. The company has two facilities in Westbrook, a mill and a technology center. The mill is primarily a production facility for specialty release papers and films. The technology center is equipped with two state-of-the-art pilot coaters that enable prototype development for both coated fine papers and specialty release paper. We expect 2020 to follow along the lines of 2018 and 2019 mid-year actual usage.

ON Semiconductor (formerly Fairchild Semiconductor)

In September 2016, Fairchild Semiconductor was purchased by ON Semiconductor. The company still operates as a lead electronics component manufacturer, making tiny silicon chips used in a variety of industries, including cellular technology, home goods and automotive applications. ON operates a manufacturing facility in Portland and a business office in South Portland. They have been investing in the plant and expect production to remain the same for at least the next couple of years.

B&G Foods

B&G Foods and its subsidiaries manufacture, sell, and distribute a diversified portfolio of high-quality, branded shelf-stable foods across the United States, Canada and Puerto Rico. They own B&M Beans that operates a bean cannery in Portland. 2020 usage is determined by using the trend over the last few years which is consistently in the 70-80 thousand HCF range to come up with a 77,000 HCF budget.

Water Sales – Metered Revenue - Consumption

Public/Governmental

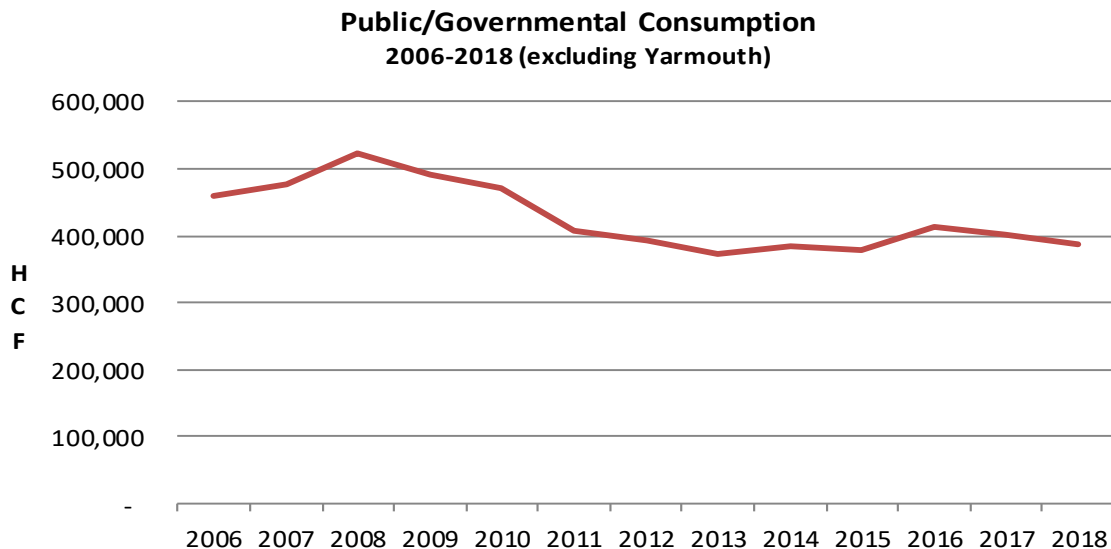
Yarmouth Water District

Approximately 28% of public/governmental consumption comes from usage by the Yarmouth Water District that provides water almost entirely to the Wyman Power Plant on Cousins Island. Wyman Power Plant is a spot producer of power for the Northeast and is only used during peak energy demand because, as an oil-fired generator, it has become obsolete. Because of low oil prices and the high price of electricity in the Northeast, the plant remains online.

Wyman ran consistently over the recent years because it supplements with natural gas fired units in New England. They generate roughly half the region's power and are much cheaper to operate. We are creating the budget off a 3 year actual average (2016-2018) as well as considering the projection of 2019 to bring it down from last years' budget of 170,000 hundred cubic feet to 155,000 HCF.

Other Public/Governmental Customers

Public/Governmental consumption has been in decline since the economic downturn. Government entities have sought out ways to decrease expenditures including their water and sewer bill. As a result, it is not anticipated that usage will return. In 2020 we have predicted that the usage will continue to fall similar to last year.



Water Sales – Metered Revenue – Rates

Water Rate Schedule

A 3.5% increase is proposed to be implemented effective 5/1/2020. Board of Trustees will review and approve any rate adjustment in the first quarter of 2020.

Current Rates: Effective 05/01/2019

Meter or Service Line Size	Member Rate	Non-member Rate
<u>Private Fire Monthly Fee</u>		
2	\$3.91	\$4.49
3	8.74	10.04
4	15.59	17.93
6	37.27	42.85
8	62.40	71.73
10	97.47	112.16
12	140.35	161.41
16	249.51	286.95
<u>Minimum Monthly Charges</u>		
5/8	\$9.75	\$11.21
3/4	11.49	13.19
1	14.90	17.16
1 1/2	26.10	30.01
2	37.60	433.22
3	68.22	78.42
4	102.68	118.08
6	198.40	228.15
8	313.24	360.24
10	453.55	521.59
12	600.39	690.43
Low income	2.44	2.81
<u>Monthly Volume Charge</u>		
First 100 Cf	minimum	minimum
Next 2,900 Cf	\$2.44	\$2.81
Next 7,000 Cf	2.13	2.47
Next 40,000 Cf	1.88	2.14
Over 50,000 Cf	1.06	1.50

Typical Customer Increases		Current	Proposed 3.5%	\$	%
Residential (per month)	.62" meter, 7 HCF	\$24.39	\$25.11	\$0.72	2.95%
Commercial (per month)	.75" meter, 80 HCF	188.75	196.13	7.38	3.91%
Small Industrial (per month)	2" meter, 1,300 HCF	1,857.46	1,944.24	\$86.78	4.67%
Large Industrial (per month)	8" meter, 56,000 HCF	60,115.10	62,949.46	2,834.36	4.71%
Sprinkler (per year)	6" meter	447.2	462.85	\$15.65	3.50%
Public Fire (per year)		1,461,652	1,512,678	51,026	3.49%
Seasonal (per year)	.62" meter	234.84	243.04	\$8.20	3.49%

Water Sales – Metered Revenue - Rates

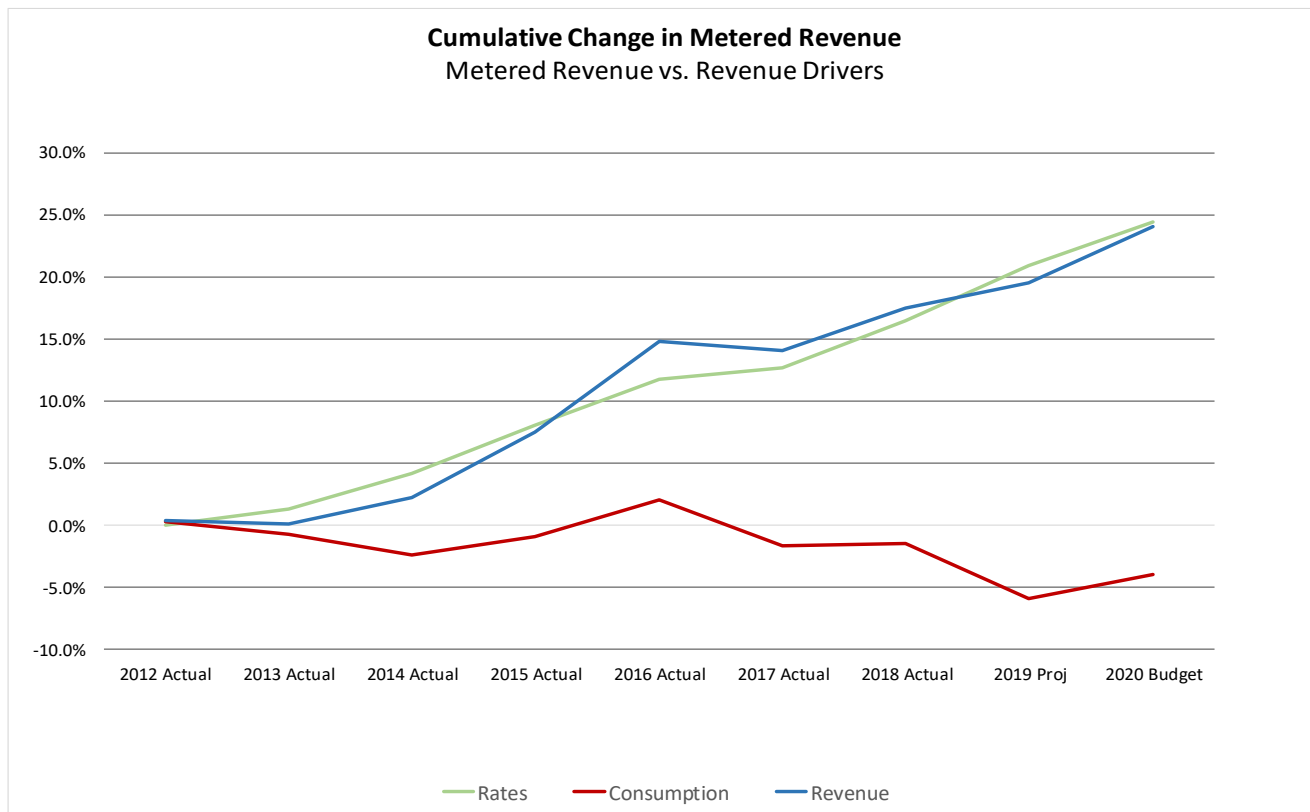
Water Rate Schedule (continue)

Water rates were unchanged from 2002 through 2006. Rate changes since that time were:

<u>Effective Date</u>	<u>Metered Rates</u>	<u>Public Fire Projection Rates</u>
01/01/07	3.5% increase	11.0% increase
01/01/08	3.8% increase	unchanged
01/01/09	7.0% increase	3.0% increase
05/01/10	3.6% increase	3.5% increase
05/01/11	2.0% increase	2.0% increase
05/01/13	1.3% increase	1.5% increase
05/01/14	2.9% increase	3.0% increase
05/01/15	3.8% increase	3.8% increase
05/01/16	3.7% increase	3.7% increase
05/01/17	1.0% increase	1.0% increase
05/01/18	3.8% increase	3.75% increase
05/01/19	4.4% increase	4.36% increase
05/01/20*	3.5% increase	3.49% Increase

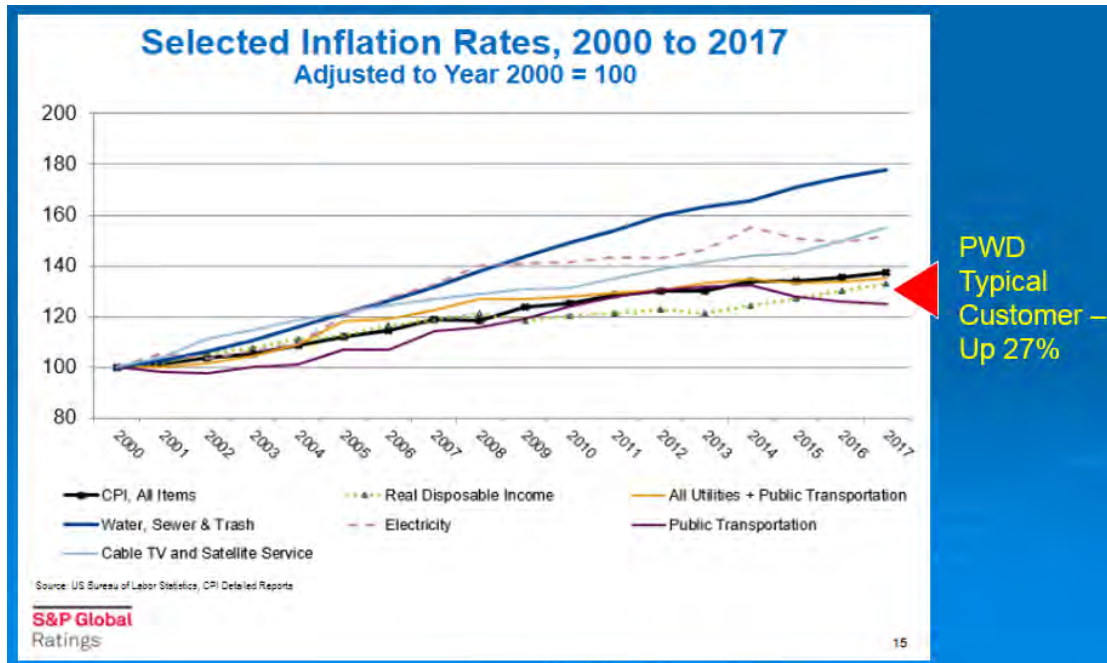
* = Proposed increase, subject to Board of Trustees approval.

Changes in metered revenue are strongly correlated to changes in rates. There is also a relationship between metered revenue growth and changes in consumption. The graph below reflects this correlation. The revenue line runs closely to rates, while changes in its slope correspond to changes in consumption. The 4.5% increase in water revenue from 2019 Projection to 2020 Budget was the result of a 3.5% increase in metered rates and a 1.9% uptick in forecasted consumption.

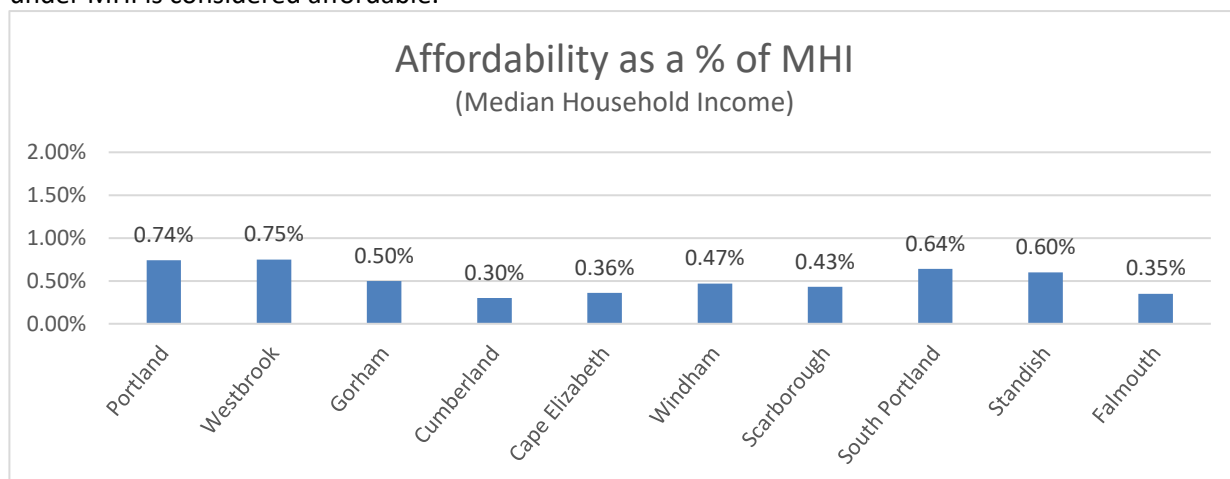


Water Sales – Rate Affordability Study

Though residential water rate adjustments since 2000 are below the change in the consumer price index (CPI), the past 5 years rate adjustments have exceeded CPI (2.7% vs 1.6%) and the 5-year financial forecast indicates an average annual rate adjustment of 4.5%. Higher rate adjustments are needed to fund necessary replacements and upgrade to water infrastructure. As the chart indicates below, Portland Water District's rate adjustments have been lower than other water utilities since 2000 despite significantly investing in our infrastructure. The operational efficiencies that enabled the lower rate adjustments will not be available in future years and rates adjustments will trend closer to the industry average.



With residential rates increasing, a study was conducted to understand the financial burden water rates are having on our customers. An industry benchmark compares a typical bill with the average usage for a month in a household of 4 to the median household income (MHI). From many studies and our purposes, a factor of 2% and under MHI is considered affordable.



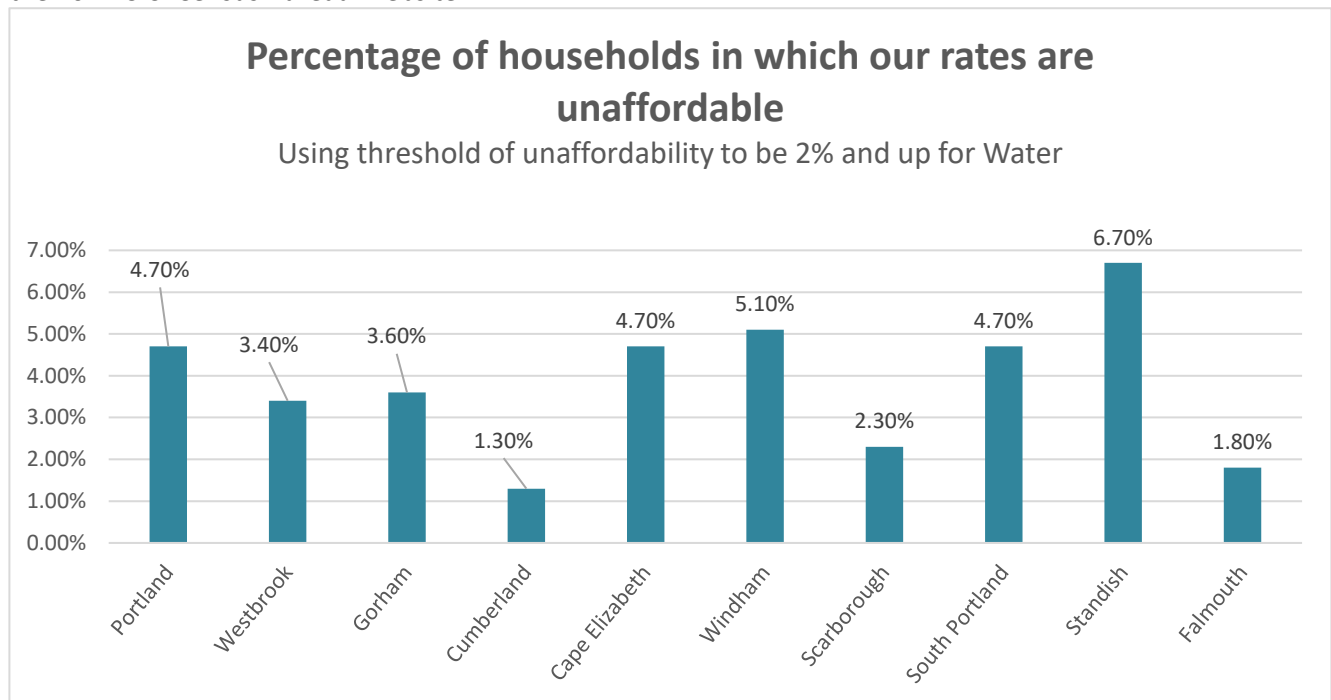
Water Sales – Rate Affordability Study (continued)

The table below indicates most customer's water bills are affordable (below 2% of MHI) with only customers in the lowest income and larger households reaching unaffordable levels (orange and red colors).

Water

Household Income	Value	Annual Bill as Percentage of Household Income by Household Size									
		HCF	2	5	7	10	12	14	17	19	22
		Household Size	1	2	3	4	5	6	7	8	9
20th Percentile	\$ 17,100		0.88%	1.41%	1.76%	2.29%	2.64%	3.00%	3.52%	3.88%	4.40%
40th Percentile	\$ 37,200		0.41%	0.65%	0.81%	1.05%	1.21%	1.38%	1.62%	1.78%	2.02%
Median	\$ 48,300		0.31%	0.50%	0.62%	0.81%	0.94%	1.06%	1.25%	1.37%	1.56%
60th Percentile	\$ 61,000		0.25%	0.40%	0.49%	0.64%	0.74%	0.84%	0.99%	1.09%	1.23%
80th Percentile	\$ 99,400		0.15%	0.24%	0.30%	0.39%	0.45%	0.52%	0.61%	0.67%	0.76%

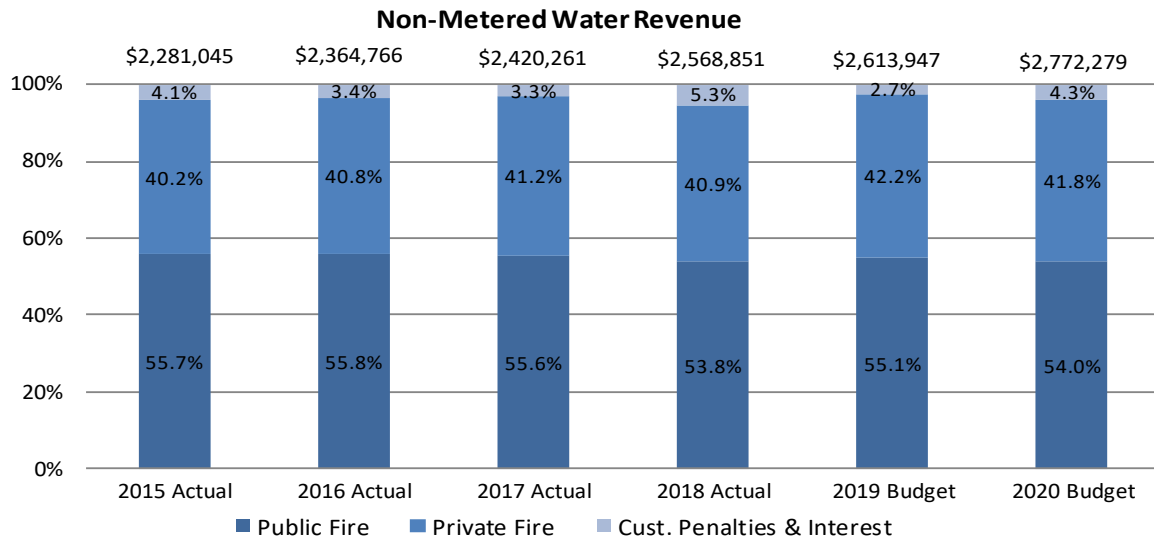
Using an alternative tool (Affordability Assessment Tool created by the University of North Carolina), an estimated number of households having unaffordable water bills was calculated. The tool uses information from the 2017 U.S. Census Bureau Website.



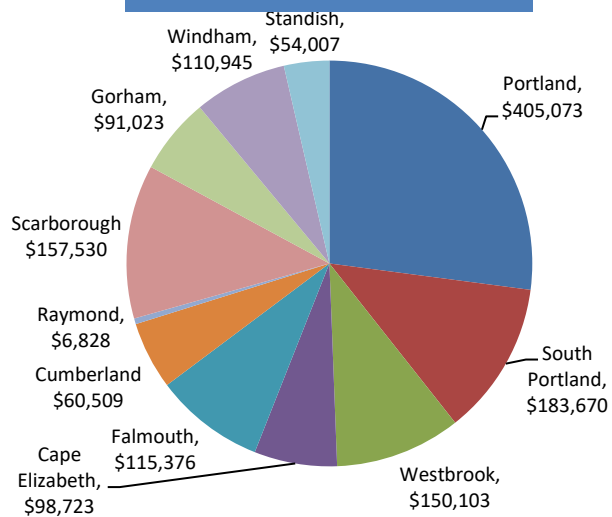
To assist low-income households, the District offers 2 different programs. Qualifying households are given a \$8 discount on each month's bill. Customers can also participate in the 'conservation program' that provides and installs low flow devices to reduce the customer water consumption and ultimately their bill.

Water Sales – Non-Metered Revenue

Non-metered water revenue has risen from \$2.2 million in 2015 to the budgeted amount of \$2.7 million (21.5%) for 2020. The rise in Customer Penalties and Interest budget was due to a newly implemented penalty fee for disconnection of multi-unit properties.



Public Fire Protection Revenue



Allocated based on number of hydrants and inch feet of mains in each municipality.

Private Fire Protection Revenue

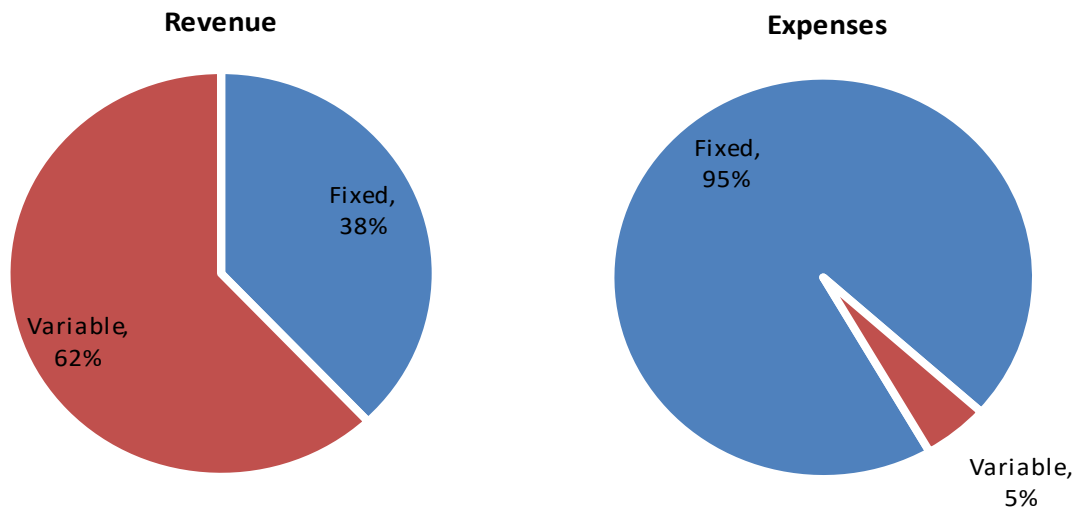
Service Line Size (inches)	Annual Fee	Number of Customers
2	\$ 46.92	344
3	\$ 104.88	0
4	\$ 187.08	227
6	\$ 447.24	1220
8	\$ 748.80	590
10	\$ 1,169.64	38
12	\$ 1,684.20	22
16	\$ 2,994.12	1

Allocated between service line sizes based on the relative demand on the water system.

Water Sales - Long-Term Considerations

Revenue & Expense: Fixed vs. Variable

As shown below, approximately 38% of the District's water revenue is fixed, generated from minimum charges on metered accounts and fire protection charges. The remaining 62% varies depending on consumption levels. In comparison, 95% of the District's expenses are fixed, largely infrastructure costs.



Slow Customer Growth

Population growth in the District's service area is lower than in other parts of the country and is not expected to increase. Customers in 2018 total versus 2017 had been increased by an average of 0.8% due to a reclassification from Industrial to Commercial accounts and an overall increase in Residential customers by 345 accounts.

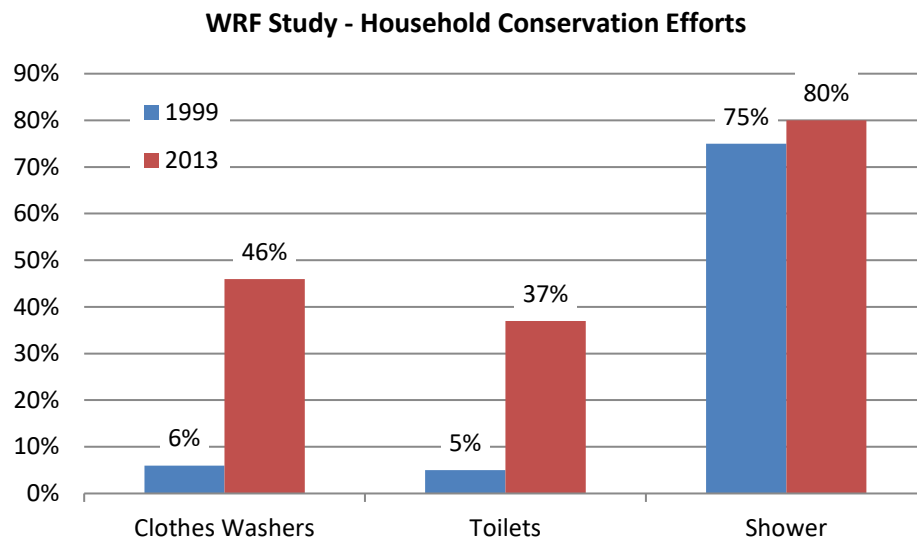
Cost of Service Gap

The last Cost of Service Study was completed in 2016. The study indicated that industrial/commercial customers generate less revenue than it costs to serve them. The Board requested the gap be closed over future rate adjustments by increasing revenue generated by industrial/commercial customers at higher increments. The proposed rate schedule will continue to have greater impact on larger customers by a factor of 150% compared to smaller ones.

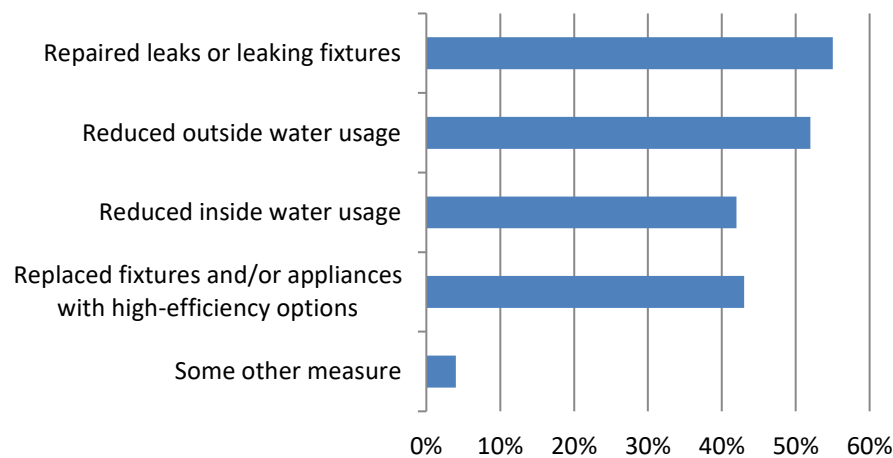
Water Sales - Long-Term Considerations (continued)

Decline in Consumption

There has been a nationwide trend in recent years toward lower consumption levels. This trend also appears in the District's consumption data. Some factors contributing to this decline are more efficient appliances and fixtures, increasing water/ sewer rates, and a decrease in average household size. A recent Water Resources Foundation Study found a significant increase in households using more water efficient fixtures and appliances.



On a recent survey the District's customers were asked, "In the past year, have you taken any of the following measures to reduce your water usage?" The graph below shows customers' responses to that question:



Wastewater Assessment & Contracted Billing Income

Wastewater Assessments are amounts payable by each municipality for wastewater services provided by the District. The assessments cover the operating and debt service costs of operating wastewater facilities maintained by the District. The assessments are billed in monthly installments. In 2020, the assessments for each municipality were increased excluding Falmouth (see table below).

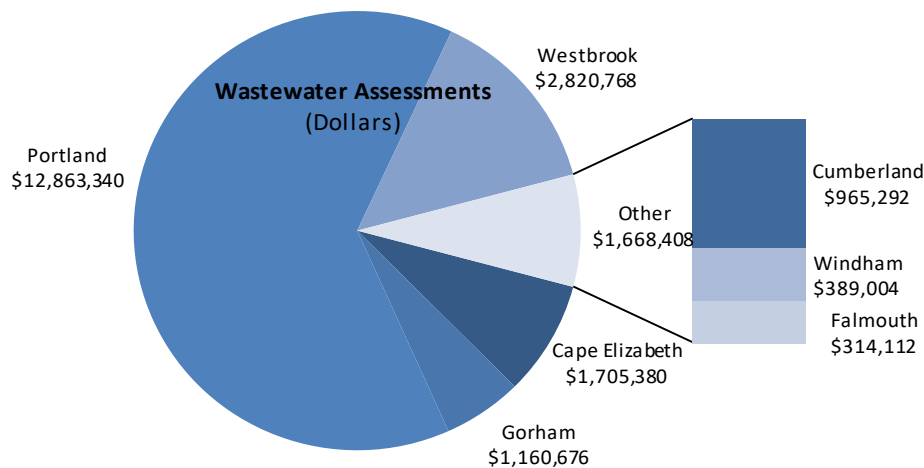
Wastewater Assessments

	2018 Actual	2019 Actual Jan-Jun	2019 Budget	2020 Budget	\$-Diff.	%-Diff.
Cape Elizabeth	\$1,539,840	\$786,456	\$1,572,912	\$1,705,380	\$132,468	8.4%
Cumberland	905,364	452,682	905,364	965,292	59,928	6.6%
Falmouth	310,056	157,056	314,112	314,112	-	0.0%
Gorham	1,106,148	566,718	1,133,436	1,160,676	27,240	2.4%
Portland	12,248,424	6,308,040	12,616,080	12,863,340	247,260	2.0%
Westbrook	2,533,176	1,269,900	2,539,800	2,820,768	280,968	11.1%
Windham	360,528	183,384	366,768	389,004	22,236	6.1%
	\$19,003,536	\$9,724,236	\$19,448,472	\$20,218,572	\$770,100	4.0%

Contracted Billing Income is revenue paid by municipalities for wastewater billing services provided. Scarborough and South Portland operate and maintain their own wastewater collection and treatment systems. The District only provides billing-related services for those communities.

Contracted Billing Income

	2018 Actual	2019 Actual Jan-Jun	2019 Budget	2020 Budget	\$-Diff.	%-Diff.
Scarborough	11,256	5,628	11,256	11,328	72	0.6%
South Portland	197,184	100,566	201,132	201,132	-	0.0%
	\$208,440	\$106,194	\$212,388	\$212,460	\$ 72	0.0%



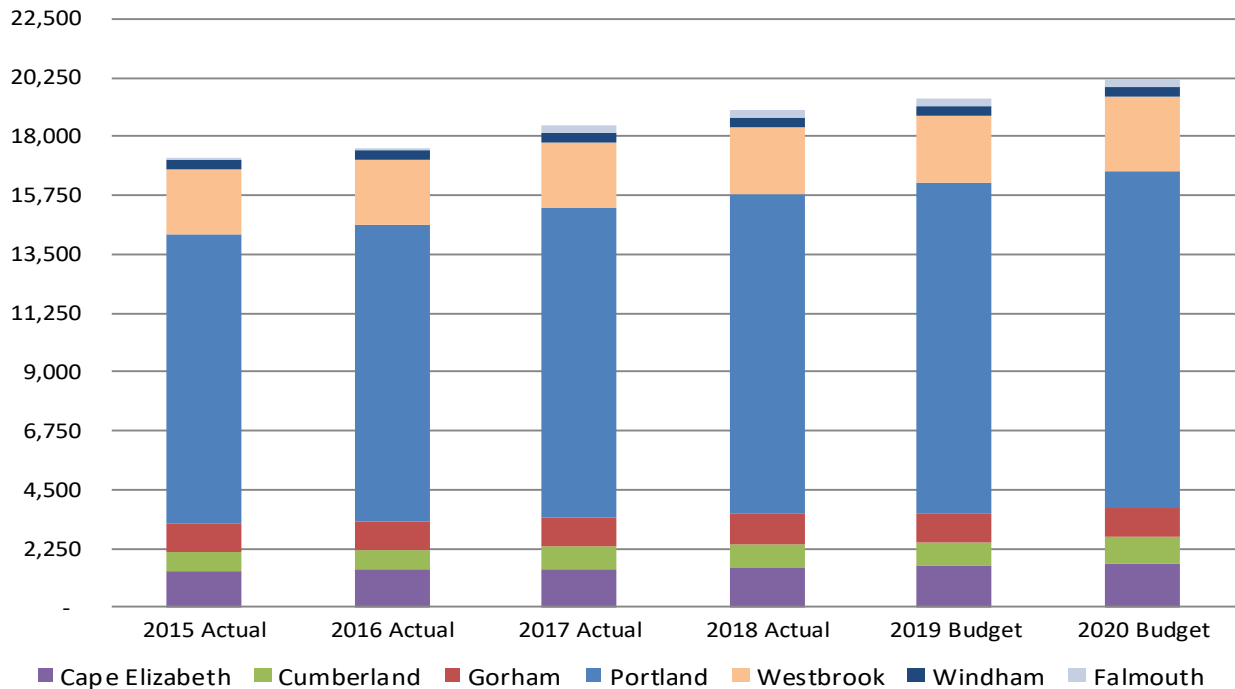
Wastewater Assessments Revenue Trend

Wastewater assessments rose from \$17.1 million in 2015 to a budgeted \$20.2 million in 2020 (an increase of 18%). While operating costs did increase over this time period, the majority of the increases were due to capital projects done to upgrade existing wastewater facilities.

Wastewater Assessments by Fund:

	Cape Eliz.	Cumberland	Gorham	Portland	Westbrook	Windham	Falmouth	Total
2015 Actual	1,412,112	731,784	1,106,148	10,981,308	2,533,176	351,756	15,012	17,131,296
2016 Actual	1,443,408	750,072	1,106,148	11,308,040	2,533,176	351,756	36,012	17,528,612
2017 Actual	1,468,692	844,584	1,106,148	11,841,972	2,533,176	360,528	263,604	18,418,704
2018 Actual	1,539,840	905,364	1,106,148	12,248,424	2,533,176	360,528	310,056	19,003,536
2019 Budget	1,572,912	905,364	1,133,436	12,616,080	2,539,800	366,768	314,112	19,448,472
2020 Budget	1,705,380	965,292	1,160,676	12,863,340	2,820,768	389,004	314,112	20,218,572

Assessments by Fund (2015-Present)
(\$,000)



Current Municipal Wastewater Rates

Wastewater rates are established by each municipality. The rates are designed to cover the municipal costs, including the District's annual assessment. The table below indicates the municipal sewer fees for municipalities for whom the District provides billing services. These fees are included on the monthly bill, which includes the District's water fees. Customers remit their payments for both water and sewer fees to the District. On a weekly basis, the sewer fees are then remitted to the municipalities. Once a month, the municipality pays 1/12th of the annual assessment to the District from these sewer fees.

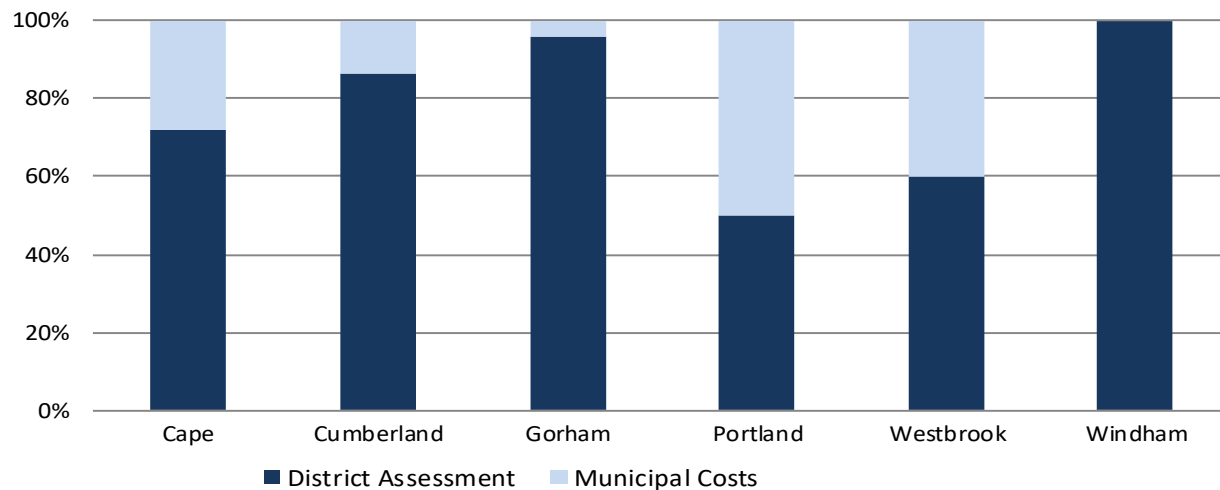
Sewer Rates Effective 5/01/2019

	Minimum HCF	Minimum Charge	Additional HCF
Portland	1	\$10.40	\$10.40
Cumberland	0	36.92	5.52
South Portland	1	5.20	5.20
Cape Elizabeth	1	49.50	5.68
Westbrook	1	11.53	6.53
Gorham	1	13.74	6.29
Windham	5	48.84	3.24

HCF= Hundred Cubic Feet (748 gallons)

The chart below indicates the percent of sewer fees collected in 2018 that the municipalities used to pay the District's assessment and their internal costs. In 2018, Windham's sewer fees were less than the District's assessment by \$36,592. The shortfall was covered by the town's prior year surplus or general fund appropriation.

Municipal Sewer Fees Collected in 2018



Interest Income

The District's investment policy limits investments to US Government obligations, certificates of deposit that are fully insured or collateralized, and other similar issues with the goal of protecting the District's principal balances. The budgeted rate of return on investments was based on the current annual returns as of July 2019 and cash balances as of December 2018. Rates of return have been trending upward since 2016.

In 2008, the Windham fund purchased assets from the Westbrook fund. This purchase was funded by a loan between funds of \$264,733 and has an average interest rate of 4.395%. Westbrook will receive \$4,800 from that loan in 2020.

	2018 Actual	2019 Actual Jan-Jun	2019 Budget	2020 Budget	\$-Diff.	%-Diff.
Water Fund	\$349,235	\$329,325	\$285,521	\$408,100	\$122,579	42.9%
Wastewater Operating Funds:						
Cape Elizabeth	19,685	16,399	14,143	20,884	6,741	47.7%
Cumberland	12,665	12,060	9,980	13,303	3,323	33.3%
Falmouth	2,334	1,220	409	1,100	691	168.9%
Gorham	26,287	24,528	19,518	18,455	(1,063)	-5.4%
Portland	136,641	140,432	104,939	164,504	59,565	56.8%
Westbrook	80,339	79,776	62,258	72,695	10,437	16.8%
Windham	<u>8,449</u>	<u>8,087</u>	<u>6,690</u>	<u>8,103</u>	<u>1,413</u>	<u>21.1%</u>
	286,400	282,502	217,937	299,044	81,107	37.2%
Contracted Billing:						
Scarborough	122	114	97	103	6	6.2%
South Portland	<u>1,915</u>	<u>2,612</u>	<u>1,828</u>	<u>500</u>	<u>(1,328)</u>	<u>-72.6%</u>
	2,037	2,726	1,925	603	(1,322)	-68.7%
Total	\$ 637,672	\$ 614,553	\$ 505,383	\$ 707,747	\$ 202,364	40.0%

Other Income

Other revenues consist of fees charged for various other services including fees related to new water assets, new account setups, work done for outside parties and the acceptance of septage. The specific fees are outlined below:

Revenue Type	Revenue Description
Cross Connection Fees	Fees collected for work relating to the inspection of water backflow devices.
Customer Connection Fees	Application fees for new mains, services and meters.
Customer Activation Fees	Fees for new account activations.
Jobbing Revenue	Revenue for work performed by District employees that is billable to outside parties.
Septage Hauler Fees	Fees from outside septage haulers for the treatment of wastewater delivered to District wastewater treatment facilities.
Wastewater Misc. Income	Treatment services provided at the Westbrook Regional Wastewater Treatment Facility for Portland's Riverside area per inter-municipal agreement.

Water Fund:	2018 Actual	2019 Actual Jan-Jun	2019 Budget	2020 Budget	\$-Diff.	%-Diff.
Cross Connection Fees	\$58,326	\$25,987	\$35,800	\$50,000	\$14,200	39.7%
Customer Connection Fees	82,169	42,213	72,600	82,000	9,400	12.9%
Customer Activation Fee	80,830	32,860	79,000	80,000	1,000	1.3%
Jobbing Surcharge	58,401	21,215	66,914	50,000	(16,914)	-25.3%
Miscellaneous Income	<u>231,560</u>	<u>49,500</u>	<u>119,800</u>	<u>164,290</u>	<u>44,490</u>	<u>37.1%</u>
Total Water Division	\$511,285	\$171,775	\$374,114	\$426,290	\$52,176	13.9%

Wastewater Funds:	2018 Actual	2019 Actual Jan-Jun	2019 Budget	2020 Budget	\$-Diff.	%-Diff.
Septage - Gorham	\$882	\$0	\$0	\$0	\$0	0.0%
Septage - Portland	209,646	70,725	141,600	200,000	58,400	41.2%
Septage - Westbrook	10,657	0	0	0	0	0.0%
Septage - Windham	182	0	0	0	0	0.0%
Miscellaneous Income	<u>38,628</u>	<u>1,500</u>	<u>37,900</u>	<u>38,500</u>	<u>600</u>	<u>1.6%</u>
Total Wastewater Division	259,995	72,225	179,500	238,500	59,000	32.9%
Total Water & Wastewater	\$771,280	\$244,000	\$553,614	\$664,790	\$111,176	20.1%

Fund Balance

Fund Balance, or Surplus, is the excess of revenues over expenses on a budgetary basis (see Financial Policy section for differences between budgetary and generally accepted accounting principles). In addition, a portion of water net income is reserved in a watershed protection land fund and debt service on capital projects (Capital Reserve). Also, a portion of revenue from the Portland Wastewater fund is reserved for potential expansion of capacity at the Westbrook Wastewater fund's treatment plant.

Additionally, the Board ordered that the proceeds from the sales of certain surplus properties be reserved in the Land Cash Reserve used for watershed protection. In 2009, the District's Board of Trustees (BOT) adopted a policy setting targets for operating fund balances (25% of net budget) and the watershed protection reserve (15% of water revenues). These policies do not apply to the Contracted Billing municipalities. It is projected that all of the funds with the exception of Windham (10.7%) will be above the operating fund target of 25.0% at the end of 2020. The balances of the renewal and replacement funds and water main capital reserve fund are listed in the Capital Finance section.

	Balance 1/1/2019	Projected 2019	Budget 2020	Balance 12/31/2020	Target Balance	Projection %
Water	\$6,824,532	\$391,376	\$1,473	\$7,217,381	\$6,629,822	27.2%
Cape Elizabeth	398,772	40,250	-	439,022	431,566	25.4%
Cumberland	256,136	-	-	256,136	244,649	26.2%
Gorham	253,103	41,680	-	294,783	294,783	25.0%
Portland	3,216,008	282,817	-	3,498,825	3,306,961	26.5%
Westbrook	811,223	(24,409)	-	786,814	732,991	26.8%
Windham	64,277	(21,960)	-	42,317	99,277	10.7%
	<u>\$11,824,051</u>	<u>\$709,754</u>	<u>\$1,473</u>	<u>\$12,535,278</u>	<u>\$11,740,049</u>	<u>26.7%</u>

Falmouth & Contracted Billing Operating Surpluses:

	Balance 1/1/2019	Projected 2019	Budget 2020	Balance 12/31/2020
Falmouth	\$4,331	\$10,567	\$7,912	\$22,810
Scarborough	6,995	594	-	7,589
So. Portland	133,779	(81,500)	(9,179)	43,100
	<u>\$145,105</u>	<u>(\$70,339)</u>	<u>(\$1,267)</u>	<u>\$73,499</u>

Combined Surpluses **\$11,969,156** **\$639,415** **\$206** **\$12,608,777**

Watershed Protection Land Funds (Goal 15.0%)

	Balance 1/1/2019	Projected 2019	Budget 2020	Balance 12/31/2020	Target Balance	Projection %
Watershed Reserve	\$1,587,520	\$117,694	(\$9,803)	\$1,695,411	\$3,722,639	6.8%
Land Cash Reserve	661,915	(34,907)	(9,074)	617,934		
	<u>\$2,249,435</u>	<u>\$82,787</u>	<u>(18,877)</u>	<u>\$2,313,345</u>	<u>\$3,722,639</u>	<u>9.0%</u>

Other Reserves:

	Balance 1/1/2019	Projected 2019	Budget 2020	Balance 12/31/2020
Capital Reserve	\$575,547	\$127,838	\$279,927	\$983,312
Portland Wastewater	\$67,593	\$7,500	\$7,500	\$82,593

Fee Schedule for Non-Water Tariff Services

Schedule of latest fees adopted by the Board of Trustees effective August 1, 2018.

	Description	Fee
A. Water		
1. Winter hydrant inspection	Inspection of private hydrants to verify the operability of hydrant during winter months	\$3 per month on monthly water bill. Cost covers the average cost to inspect hydrant
2. Damage Hydrants	Repair of hydrants damaged by customers	Costs to repair including labor, benefit overhead, stock items with normal markup (25%), third-party expenses and \$7 finance department administrative fee
B. Wastewater		
1. Industrial pretreatment permit	Initial and periodic review of the customer premises to assure compliance with IPT regulations	\$300 for initial and every 3-year renewal.
2. Septage and Holding Tank Waste	Qualifying haulers may deliver septage, holding tank and other waste to PWD treatment facilities (see policy 6.20-03)	Consistent with the 'Acceptance Fee Schedule' included in Policy 6.20-03.
3. Submeter Fee -Monthly	Covers the operating and capital cost of the submeter program	\$2 per month at the request of Cumberland, Gorham, South Portland and Westbrook
4. Submeter Fees -Other	The cost to investigate why a submeter cannot be read after the initial installation of meter/Encoder Receiver Transmitter (ERT).	Sub meter verification fee \$19
5. Submeter Fees – Portland Only	Costs or replacing submeters for Portland residents.	Submeter Replacement ERT & Meter \$150 Submeter ERT Only Upgrade fee \$105 Fees are per City's request.
C. General		
1. Purchases from Stock Room	Qualified third-parties and employees may purchase items from the stockroom – see policy 7.15-02.	Inventory value plus a 50% mark up (See Policy 7.15-02).
2. Freedom of Information Request	Members of the Public requesting access to public records (see policy 7.05-05).	\$1 for first page, \$0.50 for each additional page, optional \$15/hour to compile data. Payment in advance may be required. (See Policy 7.05-05)

Introduction

Operating Expenses are recorded to each department by expense category by fund and program. A summary of all expense categories is provided with an explanation of major assumptions and changes. Additionally, operating expenses for each department is provided. The District has five departments – Water Operations, Wastewater Operations, Environmental Services, Engineering Services and Administrative Services. For each department, the following information is provided:

- Description of Core Services
- Key Statistics
- Performance Benchmarks
- Past Accomplishments
- Current Year Projects and Initiatives
- Financial Summary in total and by sub-departments with a summary of each sub-department fund and program expenses

2020 Financial Summary by Category

	2019 Budget	2020 Budget	Diff \$	Diff %
Salaries & Wages	\$11,507,789	\$12,149,805	\$642,016	5.6%
Employee Benefits	5,520,409	5,577,447	\$57,038	1.0%
Biosolids Disposal	1,674,962	1,722,166	\$47,204	2.8%
Chemicals	1,137,386	1,221,909	\$84,523	7.4%
Contracted Services	4,484,961	4,521,570	\$36,609	0.8%
Deferred Cost W/O	10,100	-	-\$10,100	-100.0%
Heat/Fuel Oil	331,981	386,485	\$54,504	16.4%
Insurance	196,845	211,175	\$14,330	7.3%
Materials & Supplies	1,764,434	1,760,135	-\$4,299	-0.2%
Other Expense	782,000	836,146	\$54,146	6.9%
Purchased Power	1,751,432	1,930,289	\$178,857	10.2%
Regulatory/Taxes	213,965	244,649	\$30,684	14.3%
Tele/Other Utilities	356,021	365,099	\$9,078	2.5%
Transportation	1,139,310	1,167,423	\$28,113	2.5%
Dept Expense	30,871,595	32,094,298	\$1,222,703	4.0%
Trans Offset	(829,454)	(840,466)	-\$11,012	1.3%
Fund Expense	30,042,141	31,253,832	\$1,211,691	4.0%

2020 Financial Summary by Department

	Number of Employees	2019 Budget	Number of Employees	2020 Budget	Budget Diff \$	Budget Diff %
Water Services	54	\$8,795,473	56	\$9,207,119	\$411,646	4.7%
Wastewater Services	39	9,567,783	39	10,149,276	581,493	6.1%
Environmental Services	16	2,068,960	16	2,124,837	55,877	2.7%
Engineering Services	31	4,356,957	31	4,259,770	(97,187)	-2.2%
Administration	42	5,821,457	44	6,064,147	242,690	4.2%
Non-Departmental	0	260,965	0	289,149	28,184	10.8%
	182	30,871,595	186	32,094,298	1,222,703	4.0%

Departmental Expense by Category

Salaries/Wages:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
660111 - SALARIES/WAGES NON-UNION	\$4,126,499	\$2,167,664	\$4,552,112	\$4,781,060	\$228,948	5.0%
660112 - WAGES/OVERTIME NON-UNION	212	317	-	-	-	n/a
660121 - WAGES/REGULAR UNION	5,749,301	2,834,552	6,041,999	6,375,012	333,013	5.5%
660122 - WAGES/OVERTIME UNION	476,299	223,472	513,046	557,763	44,717	8.7%
660123 - WAGES/DOUBLETIME UNION	54,577	20,677	59,805	67,408	7,603	12.7%
660124 - WAGES/STANDBY TIME UNION	148,253	70,558	137,677	163,272	25,595	18.6%
660131 - WAGES - REGULAR - TEMPS	109,081	46,905	171,150	178,290	7,140	4.2%
660132 - WAGES - OVERTIME- TEMPS	116	-	-	-	-	n/a
660136 - CONTRACTED - TEMP	1,232	-	5,000	-	(5,000)	-100.0%
66014 - VACATION ACCRUAL	69,334	-	-	-	-	n/a
660141 - TRUSTEES COMPENSATION	21,650	12,825	27,000	27,000	-	0.0%
66015 - SICKTIME ACCRUAL	29,208	-	-	-	-	n/a
Salaries & Wages Total	10,785,763	5,376,970	11,507,789	12,149,805	642,016	5.6%

Labor rates for Non-Union employees were assumed to be 3.0% higher than the rates paid on July 1, 2019.

The Union contract calls for increases of 3.0% in November of 2018, 2019 and 2020.

Combined, the two regular labor accounts (660111 & 660121) increased \$561,961 (5.3%). Total hours increased 8,807 (2.4%) primarily due to the addition of four (4) positions. The average wage change between the budget years was 2.8%.

Budgeted hours for overtime/double-time/standby rose 5.8% (781 hours), 9.3% (107 hours) and 14.3% respectively to reflect anticipated need while hours for temporary employees (included contracted) increased 2.1% (250 hours).

The budgeted dollars for labor reflect work on operating (O&M) activities. Labor planned for capital projects is included as part of the Capital Improvement Plan (CIP) later in this document. Overall, the percentage of labor planned for CIP projects decreased from 3.3% of total labor in 2019 to 3.1% in 2020 (a decrease of \$6,121 or 1.6%).

District's overall number of regular (non-temporary) employees increased to 186.

Positions	2019 Budget	2020 Budget	Change
Full Time	180	185	5
Part Time	2	1	-1
Total	182	186	4

The Human Resources section has additional details.

Departmental Expense by Category (continued)

Employee Benefits:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
660401 - FICA - EMPLOYERS' SHARE	\$813,788	\$406,738	\$879,970	\$929,460	\$49,490	5.6%
660405 - SAFETY/WHY PROGRAM ITEMS	30,888	7,750	39,090	40,725	1,635	4.2%
660411 - MEALS ALLOWANCE	10,320	5,883	8,690	9,610	920	10.6%
660413 - PWD TRAINING PROGRAM	203	-	-	-	-	n/a
6604151 - FIELD UNIFORMS	1,584	1,457	1,290	1,290	-	0.0%
660418 - STIPENDS	13,500	11,800	15,800	15,400	(400)	-2.5%
660419 - EMPLOYEE BENEFITS-MISC OTH	58,971	8,825	34,936	35,920	984	2.8%
660491 - FRINGE BENEFITS-REG/SAL	4,468,164	2,132,951	4,540,633	4,545,042	4,409	0.1%
Employee Benefits Total	5,397,419	2,575,405	5,520,409	5,577,447	57,038	1.0%

The amount noted is the operating funds' portion of employee benefit cost. As with labor, a small portion of benefit expense is charged to capital projects.

The largest item (Fringe Benefits - 660491) covers the District's portion of employee benefits, most notably health insurance and pension. This charge is applied as a percentage of regular labor (excluding overtime, double time, etc.) charges. In the 2020 Budget, the percentage was 40.74%, which is a decrease from 2019's percentage of 42.86% mostly due to maintaining costs flat while adding 4 additional staff.

The Human Resource section has additional details.

Biosolids Disposal:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
663571 - BIOSOLIDS DISPOSAL	\$1,790,923	\$923,853	\$1,674,962	\$1,722,166	\$47,204	2.8%
Biosolids Disposal Total	1,790,923	923,853	1,674,962	1,722,166	47,204	2.8%

The material remaining at the end of the wastewater treatment process is called biosolids. The cost of biosolids disposal is the volume disposed (wet tons) times the rate per ton:

Facility	2019	2020	Change	%	2019 % Solids	2020 % Solids
Portland (East End)	20,100	19,650	(450)	-2.2%	21.0%	21.0%
Westbrook	4,086	4,229	143	3.5%	21.0%	21.0%
Cape Elizabeth	300	300	0	0.0%	21.0%	21.0%
Peaks Island	70	59	(11)	-15.7%	21.0%	21.0%
Total	24,556	24,238	(318)	-1.3%		

The agreement with the disposal vendor allows for an annual price increase of 80% of the Northeast Urban CPI or 3.5%, whichever is lower. The current rate is \$67.70; the 2020 Budget assumes a 2.3% CPI increase and an estimated 2020 rate of \$68.95. Due to potential issues with per- and poly-fluoroalkyl substances (PFAS) an additional \$2.10 per wet ton was budgeted. The combined rate of \$71.05/wet ton is a 4.2% increase over the 2019 budgeted disposal rate of \$68.21.

Departmental Expense by Category (continued)

Chemicals:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
66181 - AMMONIA	\$23,691	\$12,149	\$23,752	\$21,080	(\$2,672)	-11.2%
661811 - SODIUM BICARBONATE	15,386	8,530	14,620	13,800	(820)	-5.6%
661812 - SODIUM BISULFITE	120,988	87,628	172,100	217,846	45,746	26.6%
66182 - CAUSTIC SODA	110,454	45,008	144,945	92,416	(52,529)	-36.2%
66183 - FLUORIDE	36,095	15,473	40,340	33,164	(7,176)	-17.8%
66184 - ZINC ORTHOPHOSPHATE	64,272	45,524	74,727	80,318	5,591	7.5%
66185 - SODIUM HYPOCHLORITE	345,412	171,437	402,830	398,282	(4,548)	-1.1%
66189 - POLYMER	222,814	198,721	195,270	256,765	61,495	31.5%
661892 - LIQUID OXYGEN (LOX)	68,412	40,316	61,902	88,900	26,998	43.6%
661899 - OTHER CHEMICALS	25,528	8,726	19,038	19,338	12,438	180.3%
Chemicals Total	1,033,052	633,511	1,149,524	1,221,909	84,523	7.4%

Chemicals are primarily used at the District's two water and four wastewater treatment facilities. The budget increase above was driven by both increases in usage and price (see chart below). Actual unit prices will be known in December. Volumes used were adjusted up or down depending upon historic usage or operational changes.

The overall decrease at the Water Treatment plant was mostly driven by changes in per unit cost. The East End WWTF in Portland saw large increases (Polymer) and decreases (Sodium Hypochlorite) in volume combined with large increases in per unit cost. The Westbrook WWTF, which just upgraded its dewatering system, budgeted both large increases in volume and unit price.

	2019 Assumption		2020 Assumption		% Change		Budget
	Units	Per Unit	Units	Per Unit	Units	Per Unit	Dollars
<u>Water Treatment (Ozone)</u>							
Ammonia	16,269	\$1.46	15,500	\$1.36	-4.7%	-6.8%	-\$2,672
Caustic Soda	89,958	\$1.55	84,972	\$0.97	-5.5%	-37.4%	-\$57,012
Fluorine Compound	19,162	\$2.09	18,600	\$1.77	-2.9%	-15.4%	-\$7,176
Liquid Oxygen	121,377	\$0.51	127,000	\$0.70	4.6%	37.3%	\$26,998
Sodium Hypochlorite	146,112	\$0.85	140,000	\$1.01	-4.2%	18.8%	\$17,205
Zinc Orthophosphate	18,451	\$4.05	18,652	\$4.31	1.1%	6.3%	<u>\$5,591</u>
							-\$17,066
<u>East End WWTF</u>							
Polymer	174,870	\$0.93	200,000	\$1.02	14.4%	9.7%	\$41,371
Sodium Bisulfite	121,440	\$1.31	123,924	\$1.63	2.0%	24.4%	\$42,910
Sodium Hypochlorite	294,500	\$0.85	219,000	\$1.01	-25.6%	18.8%	<u>-\$29,135</u>
							\$38,080
<u>Westbrook WWTF</u>							
Polymer	32,120	\$0.93	49,980	\$1.02	55.6%	9.7%	\$21,111
Sodium Bisulfite	5,500	\$2.33	6,521	\$2.43	18.6%	4.3%	\$3,031
Sodium Hypochlorite	31,000	\$0.85	33,488	\$1.01	8.0%	18.8%	<u>\$7,473</u>
							\$31,615

Departmental Expense by Category (continued)

Contracted Services:

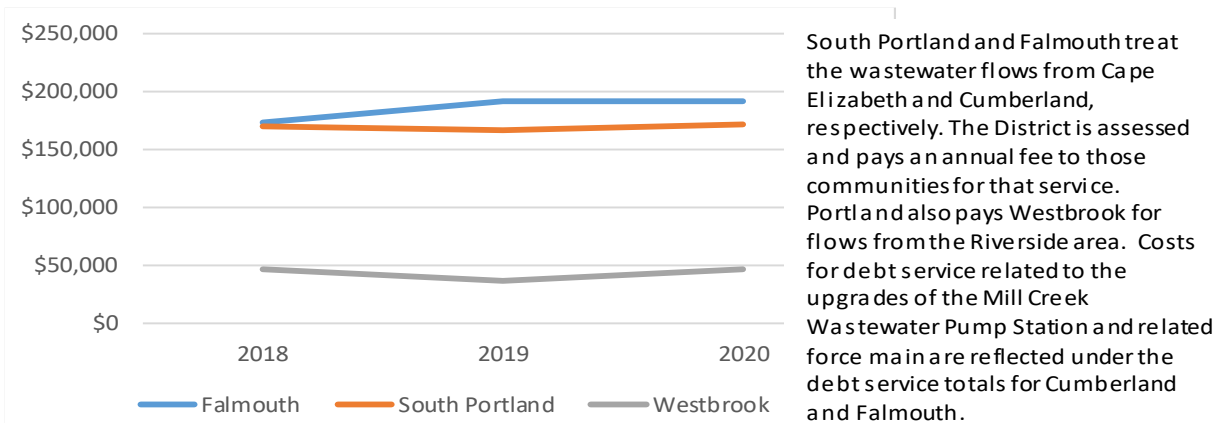
	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
662063 - COPIER MAINTENANCE/TONER	\$14,054	\$8,671	\$13,000	\$15,000	\$2,000	15.4%
6631 - ENGINEERING SERVICES	86,528	18,071	199,500	217,075	17,575	8.8%
6632 - ACCOUNTING SERVICES	35,000	35,500	35,500	37,500	2,000	5.6%
66331 - LEGAL - LABOR RELATIONS	86,236	33,103	85,000	65,000	(20,000)	-23.5%
66333 - BOND COUNSEL	7,500	-	7,500	7,500	-	0.0%
66339 - LEGAL - OTHER	13,427	5,347	34,500	19,500	(15,000)	-43.5%
66352 - CONSTRUCTION SERVICES	3,474	-	5,500	3,500	(2,000)	-36.4%
663521 - TRAFFIC CONTROL	98,976	52,519	60,050	72,800	12,750	21.2%
6635221 - PAVING - MINOR REPAIR	467,740	117,742	526,000	526,000	-	0.0%
663523 - SIDEWALK	17,229	12,216	18,500	18,500	-	0.0%
663524 - STREET OPENING	56,348	23,785	61,100	61,100	-	0.0%
663525 - CONTRACTOR CONSTRUCTION	582,172	174,872	613,500	633,500	20,000	3.3%
66353 - REPAIR SERVICES	28,413	11,346	57,500	63,000	5,500	9.6%
66354 - MAINTENANCE SERVICES	719,270	335,385	710,715	786,666	75,951	10.7%
663542 - LARGE METER TESTING	7,516	-	6,500	6,500	-	0.0%
663543 - CSO FLOW MONITORING	102,880	-	156,375	156,375	-	0.0%
663544 - MAINT SERVICES - CCTV	76,300	-	65,350	61,250	(4,100)	-6.3%
663545 - RADIO SERVICING AND EQUIP	12,266	1,148	3,500	4,000	500	14.3%
663546 - MAINTENANCE - SNOW REMOVL	110,896	59,540	112,119	129,890	17,771	15.9%
663547 - WASTE SLUDGE TRANSPORT	39,859	12,950	32,000	33,800	1,800	5.6%
663551 - LAB ANALYSIS	31,890	18,128	45,060	51,445	6,385	14.2%
663561 - COMPUTER LICENSES	84,798	67,232	87,190	91,945	4,755	5.5%
663562 - COMPUTER MAINTENANCE	288,289	123,137	402,350	288,006	(114,344)	-28.4%
663563 - COMPUTER CONSULTING/OTHER	19,499	34,118	20,600	25,600	5,000	24.3%
663572 - GRIT & SCREENS DISPOSAL	41,327	17,235	74,450	74,450	-	0.0%
663573 - GREASE DISPOSAL	25,549	9,824	30,200	30,700	500	1.7%
663574 - DISPOSAL SERVICES	24,153	19,022	37,960	44,440	6,480	17.1%
6635801 - EMPLOYEE HEALTH SERVICES	8,473	4,413	10,000	10,000	-	0.0%
663581 - UTILITY BILLING PRINTING	71,658	33,384	81,094	83,933	2,839	3.5%
663582 - PAYMENT PROCESSING	150,134	64,301	150,215	154,630	4,415	2.9%
663583 - RECEIVABLE COLLECTIONS	9,270	3,654	10,000	10,000	-	0.0%
663584 - BANK SERVICE CHARGES	22,105	12,443	22,800	26,400	3,600	15.8%
663585 - TREATMENT CONTRACT SERVIC	510,730	198,967	395,483	410,470	14,987	3.8%
6635851 - WW DEWATERING SERVICES	3,998	1,674	5,100	5,020	(80)	-1.6%
6635852 - WW DEWATERING SRVS CREDIT	(3,998)	(1,674)	(5,500)	(5,000)	500	-9.1%
663587 - COURIER SERVICES	22,237	11,414	23,300	24,300	1,000	4.3%
663588 - EQUIPMENT MAINTENANCE	15,269	2,817	17,470	17,520	50	0.3%
663589 - SECURITY SERVICES	85,836	42,594	84,000	30,000	(54,000)	-64.3%
663592 - RECRUITING SERVICES	2,451	2,620	7,000	7,000	-	0.0%
663594 - DIGSAFE	56,828	20,006	71,000	63,000	(8,000)	-11.3%
663595 - OUTPLACEMENT SERVICES	-	-	1,000	1,000	-	0.0%
663598 - HR CONSULTANT SERVICES	1,900	350	8,000	45,000	37,000	462.5%
6635982 - TREE TRIMMING / REMOVAL	-	-	7,000	7,000	-	0.0%
6635984 - LANGUAGE INTERPRETATION	32	51	355	355	-	0.0%
6635985 - VEHICLE FLEET GPS SERVICE	21,560	10,780	25,000	25,000	-	0.0%
663599 - MISC OTHER SERVICES	40,197	23,536	45,325	34,650	(10,675)	-24.0%
6636 - TECHNICAL SERVICES	5,868	8,479	24,800	46,250	21,450	86.5%
Contracted Services Total	4,106,137	1,630,701	4,484,961	4,521,570	36,609	0.8%

Departmental Expense by Category (continued)

Contracted Services covers a large variety of services provided by outside vendors. Budget changes of note include:

- Computer Maintenance – These are the costs associated with maintenance agreements with vendors on the District's computer systems. The costs decreased by \$114,344 due to the anticipated go live dates of the Asset and Billing being pushed back to late 2020.
- Maintenance Services – This account increased \$75,951 (10.7%). The Portland East End WWTF increased its budget \$42k. The Water fund added \$25k to the 2020 Budget for water storage tank cleaning.

Treatment Contracted Services (663585) was budgeted for \$410,471 in 2020:



Deferred Cost Write-Off:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
66754 - DEFERRED COSTS WRITE OFF	\$561,101	\$5,050	\$10,100	\$0	(\$10,100)	-100.0%
Deferred Cost W/O Total	561,101	5,050	10,100	-	(10,100)	-100.0%

The Deferred Cost Write-Off contains the annual amortization of studies or other items that have multi-year impacts. The last project in this category will be written off in 2019. The 2018 amount includes the write-off of the costs related to computerized maintenance management system project that it was decided not to implement.

Departmental Expense by Category (continued)

Heat/Fuel Oil:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
66161 - HEATING OIL	\$110,067	\$61,102	\$95,939	\$106,701	\$10,762	11.2%
661621 - PIPELINE DELIVERED PROPAN	141,046	77,223	155,196	160,016	4,820	3.1%
661622 - CONTAINER DELIVERED	73,029	58,276	56,796	95,718	38,922	68.5%
66166 - UNLEADED GAS	22,922	8,714	24,050	24,050	-	0.0%
Heat/Fuel Oil Total	347,064	205,314	331,981	386,485	54,504	16.4%

The first three accounts in this category (66161 to 661622) involve fuel used for facilities' heat or backup generators. Unleaded Gas (66166) is for District vehicles that fuel up at remote locations and for the boat used in the District's Sebago Lake monitoring efforts. The increase in the category is primarily due to a rise in per unit costs and increase usage of natural gas at the Westbrook Treatment Plant.

	2019 Assumption		2020 Assumption		% Change	
	Units	Per Unit	Units	Per Unit	Units	Per Unit
Heating Oil:						
Water Treatment/Ozone Plant	35,484	\$1.85	35,650	\$2.15	0.5%	16.2%
Westbrook WWTF	6,000	\$2.45	6,000	\$2.10	0.0%	-14.3%
Cape Elizabeth WWTF	2,393	\$2.44	3,288	\$2.08	37.4%	-14.8%
Peaks Island WWTF	2,129	\$3.45	2,240	\$3.19	5.2%	-7.5%
Water - Throttling Valve Building	964	\$2.50	1,100	\$2.20	14.1%	-12.0%
	46,970	\$2.04	48,278	\$2.19	2.8%	7.1%
Natural Gas:						
Portland (East End) WWTF	87,836	\$1.15	84,658	\$1.21	-3.6%	5.2%
Dana Court WWPS (Westbrook)	2,609	\$1.15	2,479	\$1.21	-5.0%	5.2%
Douglass Street	42,609	\$1.15	42,144	\$1.21	-1.1%	5.2%
	130,445	\$1.15	126,802	\$1.21	-2.8%	5.2%

Insurance:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
6656 - VEHICAL INSURANCE	\$26,758	\$14,433	\$32,233	\$30,888	(\$1,345)	-4.2%
6657 - GEN LIABILITY INSURANCE	52,252	27,983	55,966	59,884	3,918	7.0%
66592 - DAMAGES & CLAIMS-GOODWILL	5,726	200	4,000	4,500	500	12.5%
66593 - UMBRELLA INSURANCE COVER	9,074	4,812	9,606	10,297	691	7.2%
66594 - PROFESSION/CRIME BONDING	25,587	12,961	26,027	27,736	1,709	6.6%
66599 - PROPERTY & BOILER INSUR	71,218	37,491	69,013	77,870	8,857	12.8%
Insurance Total	190,615	97,879	196,845	211,175	14,330	7.3%

Insurance costs include premiums paid on coverage for District property as well as small claims paid directly to outside parties.

Departmental Expense by Category (continued)

Materials & Supplies:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
6619 - ASSET PURCHASES	168,182	84,901	219,475	281,075	61,600	28.1%
662012 - CRUSHED GRAVEL	3,592	829	550	1,750	1,200	218.2%
662016 - SAND	-	-	3,820	3,820	-	0.0%
662017 - SAND AND SALT	1,824	1,260	3,452	3,452	-	0.0%
662018 - BANKRUN GRAVEL	1,166	454	-	2,000	2,000	n/a
662019 - GRAVEL - TYPE A (DOT)	620	1,627	-	2,000	2,000	n/a
66202 - TOOLS	45,712	19,094	45,500	43,500	(2,000)	-4.4%
66203 - VENDOR PURCHASED SUPPLIES	520,328	184,150	546,870	524,968	(34,040)	-6.1%
662041 - MATERIALS INVENTORY	209,089	113,543	203,965	220,075	16,110	7.9%
662042 - SUPPLIES INVENTORY	107,188	48,664	89,775	94,435	4,660	5.2%
66204201 - INVENTORY - QPR	204	1,464	2,500	2,500	-	0.0%
66204202 - INVENTORY - BNKRUN GRAVEL	11,021	6,884	14,000	14,500	500	3.6%
66204203 - INVENTORY - CRUSHD GRAVEL	19,692	5,498	18,750	18,750	-	0.0%
66204204 - INVENTORY - CRUSHED STONE	1,938	2,974	1,700	2,250	550	32.4%
66204205 - INVENTORY - LOAM	3,039	152	2,250	1,250	(1,000)	-44.4%
66204206 - INVENTORY - TYPE A GRAVEL	15,838	8,176	-	-	-	n/a
662043 - TOOL INVENTORY	124,223	53,659	92,025	94,025	2,000	2.2%
66204301 - INVENTORY - TONER	1,089	698	1,000	500	(500)	-50.0%
66204302 - INVENTORY - PAPER	3,444	2,254	2,300	4,300	2,000	87.0%
66204303 - INVENTORY-COMPUTER EQUIP	18,504	7,528	19,891	20,452	561	2.8%
662044 - METER INVENTORY	56,762	1,519	17,850	17,850	-	0.0%
662046 - HYDRANT INVENTORY	45,845	16,867	69,400	59,000	(10,400)	-15.0%
662047 - GARAGE INVENTORY	20,316	9,194	16,450	15,750	(700)	-4.3%
66204701 - INVENTORY - UNLEADED GAS	101,285	48,611	121,550	102,850	(18,700)	-15.4%
66204702 - INVENTORY - DIESEL	41,175	24,937	57,057	48,741	(8,316)	-14.6%
66204703 - INVENTORY - TIRES	9,766	8,561	15,000	15,000	-	0.0%
66205 - CONSUMABLE SUPPLIES	82,107	41,766	95,550	93,200	(2,350)	-2.5%
66206 - COMPUTER RELATED EQUIP	73,866	25,191	91,616	72,142	(19,474)	-21.3%
Materials & Supplies Total	1,687,816	720,455	1,752,296	1,760,135	(4,299)	-0.2%

This group is a wide array of items including vehicle fuel and parts, bulk materials such as gravel, water infrastructure items (mains, meters, hydrants, and fittings) and office supplies. These items are consumed during normal operations and are used for the repair and maintenance of District assets. The 2020 Budget is flat with an overall decrease of 0.2%. Vehicle fuel prices (see below) dropped, as the District was able to lock in lower costs for most of 2020.

The assumptions for vehicle fuel were:

Fuel Type	2019 Assumption		2020 Assumption		% Change	
	Units	Per Unit	Units	Per Unit	Units	Per Unit
Diesel	23,100	\$2.47	23,100	\$2.11	0.0%	-14.6%
Unleaded Gas	<u>55,000</u>	\$2.21	<u>55,000</u>	\$1.87	<u>0.0%</u>	-15.4%
	78,100		78,100		0.0%	

Departmental Expense by Category (continued)

Other Expense:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
6641 - BUILDING/REAL PROP RENT	\$6,160	\$0	\$6,600	\$6,600	\$0	0.0%
66411 - INTERNAL RENTAL CHARGES	48,600	25,515	51,030	51,030	-	0.0%
6642 - EQUIPMENT RENT	61,738	29,835	19,700	20,000	300	1.5%
66601 - PUBLIC RELATIONS	7,520	2,129	15,300	19,050	3,750	24.5%
66609 - OTHER ADVERTISING	15,485	7,187	9,350	10,750	1,400	15.0%
6670 - BAD DEBT EXPENSE	19,950	15,000	30,000	27,500	(2,500)	-8.3%
6675111 - INSTATE TRAINING/CONF	66,869	43,382	98,795	105,845	7,050	7.1%
6675112 - OUT OF STATE TRAINING/CON	38,745	31,440	51,650	59,150	7,500	14.5%
667513 - DUES	83,288	8,605	93,757	95,178	1,421	1.5%
667514 - PROFESSIONAL LICENSES	9,608	7,730	13,205	13,000	(205)	-1.6%
667515 - PERIODICAL SUBSCRIPTIONS	5,914	3,398	8,595	9,665	1,070	12.4%
667516 - PERMITS	27,775	5,877	29,281	29,781	500	1.7%
667518 - REGULATORY REQUIRED FEES	10,465	-	14,000	14,000	-	0.0%
667519 - REGULATORY FINES	16,500	-	-	-	-	n/a
667521 - POSTAGE - THIRD PARTY	204,857	99,109	228,780	250,691	21,911	9.6%
667522 - POSTAGE - INTERNAL	13,970	7,663	16,766	16,816	50	0.3%
667523 - POSTAGE - EXPRESS DELIVER	2,500	1,662	2,800	2,550	(250)	-8.9%
667531 - PRINTING COSTS	53,915	31,375	69,276	73,276	4,000	5.8%
667533 - FORMS STOCK	-	-	1,325	1,325	-	0.0%
667552 - SAFETY TRAINING	3,710	382	5,250	6,450	1,200	22.9%
667553 - DOT SUBSTANCE ABUSE	1,362	1,271	2,000	2,000	-	0.0%
667554 - EPA / OSHA COMPLIANCE	160	-	2,000	2,000	-	0.0%
667555 - SAFETY EXPENSES	22,525	28,893	35,645	69,170	33,525	94.1%
667556 - FREIGHT CHARGES (STOCK)	61	-	8,000	5,000	(3,000)	-37.5%
667561 - WATERSHED GRANTS/SUPPORT	40,637	47,473	54,100	43,300	(10,800)	-20.0%
6675611 - GRANTS - PASS-THROUGH	23,379	-	-	-	-	n/a
667581 - ANNUAL LAND CONTRIB CAPE	2,500	2,500	2,500	-	(2,500)	-100.0%
667591 - UNIFORMS	1,959	2,766	2,150	2,300	150	7.0%
667592 - FOOD SUPPLIES	6,812	2,350	8,910	9,060	150	1.7%
667598 - GEN MANAGER CONTINGENCY	-	-	61,500	50,000	(11,500)	-18.7%
6675981 - GEN MNG - TRUSTEES	8,338	6,631	11,550	12,750	1,200	10.4%
6675982 - GEN MNG - COMMUNITY	29,721	7,342	27,215	27,215	-	0.0%
667599 - OTHER MISCELLANEOUS	17,699	246	2,100	2,224	49	2.3%
6676 - EXPENSE OFFSET	(210,653)	(109,803)	(218,130)	(218,530)	(400)	0.2%
6706 - AMORT OF U P ACQ ADJUSTS	17,000	8,500	17,000	17,000	-	0.0%
Other Expense Total	659,070	301,958	782,000	836,146	54,146	6.9%

Other expenses include postage (\$270,057), training and conferences (\$164,995) and dues (\$95,178). Postage expense is higher partly due to the planned implementation of the Billing & Customer Relation system. The implementation will require customer to re-register for paperless bill delivery resulting in an increase in the number of bills to be mailed until customer re-register. The Expense Offset (6676) contains expenses transferred to other departments or capital projects.

Departmental Expense by Category (continued)

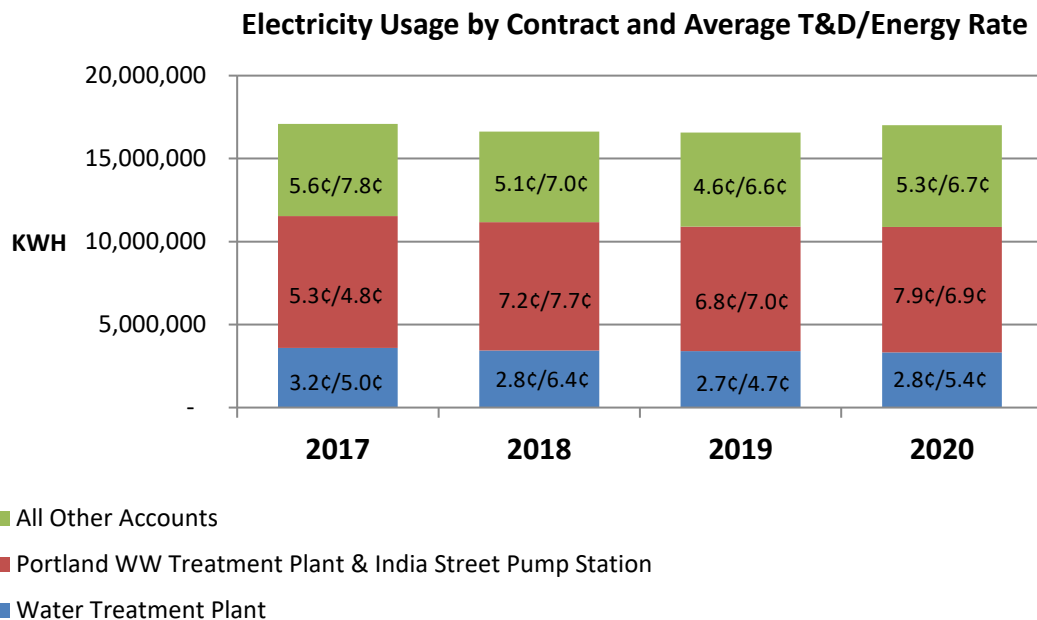
Purchased Power:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
66151 - POWER - LARGE ENERGY	\$473,773	\$257,110	\$469,301	\$512,038	\$42,737	9.1%
66152 - POWER - LARGE T&D	494,389	222,490	438,628	506,079	67,451	15.4%
66153 - POWER - MEDIUM ENERGY	386,543	191,387	322,410	347,020	24,610	7.6%
66154 - POWER - MEDIUM T&D	234,567	124,453	197,030	253,427	56,397	28.6%
66155 - POWER - SMALL ENERGY	62,587	35,222	52,375	61,912	9,537	18.2%
66156 - POWER - SMALL T&D	69,302	39,591	64,715	73,195	8,480	13.1%
66157 - POWER - OTHER CHARGES	110,050	41,238	105,995	97,108	(8,887)	-8.4%
66158 - LOAD RESPONSE	(21,985)	(5,596)	(20,800)	(10,300)	10,500	-50.5%
66159 - POWER - CAPACITY	141,521	75,213	121,778	89,810	(31,968)	-26.3%
Grand Total	1,950,747	981,109	1,751,432	1,930,289	178,857	10.2%

Electricity is delivered through the Central Maine Power transmission & distribution (T&D) system. The average 2020 rate per kwh ranges from \$0.047 to \$0.079.

The District purchases its electricity from Constellation Energy through an energy aggregation group - Maine Power Option. Energy contracts for small and medium accounts have been signed through December 2022. The contract for the Water Treatment Plant has been signed through December 2022 and the contracts for the Wastewater Treatment Plant and India Street Pump Station are in effect through November 2022.

The chart below shows the average rates for these 3 large accounts as well as the remaining 106 small and medium sized accounts.



Departmental Expense by Category (continued)

Regulatory/Taxes:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
670821 - STANDISH REAL ESTATE TAX	\$49,035	\$24,152	\$47,800	\$50,500	\$2,700	5.6%
670822 - OTHER R/E TAX(NON-STANDI)	8,038	5,288	8,000	8,874	874	10.9%
670823 - PUC ASSESSMENT	85,583	94,327	79,500	90,000	10,500	13.2%
670824 - ME DRINKING WTR PROGRAM	82,438	82,438	68,665	80,275	11,610	16.9%
670825 - PUC PUBLIC ADVOCATE	3,069	-	10,000	15,000	5,000	50.0%
Regulatory/Taxes Total	228,163	206,205	213,965	244,649	30,684	14.3%

The District pays real estate taxes to the Town of Standish (670821) & Towns of Windham and Gorham (670822). The District also pays annual assessments to the Maine Public Utility Commission (PUC) and the Maine Drinking Water Program. The PUC fee is based on each utility's revenues and time spent on matters related to each industry sector.

Telephone/Other Utilities:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
66101 - WATER	\$103,317	\$51,751	\$91,567	\$95,659	\$4,092	4.5%
66102 - WASTEWATER	70,511	34,699	57,202	80,438	23,236	40.6%
66103 - STORMWATER CHARGES	30,965	19,706	32,083	32,283	200	0.6%
66111 - TELEPHONE LINES	26,470	15,090	26,722	25,712	(1,010)	-3.8%
66112 - DATA LINES	105,754	67,724	103,650	89,504	(14,146)	-13.6%
66113 - CELLULAR PHONES	47,028	35,752	43,904	41,100	(2,804)	-6.4%
66114 - PAGERS	922	-	893	403	(490)	-54.9%
Tele/Other Utilities Total	384,967	224,723	356,021	365,099	9,078	2.5%

An external audit of communications services resulted in an overall decrease in the Telephone, Data and Cellular line items. Stormwater Charges (66103) are a relatively new fee that the City of Portland charges property owners based on the amount of their impermeable surfaces such as roofs and paved surfaces.

Transportation:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
66501 - TRANSPORTATION - INTERNAL	\$581,634	\$305,188	\$647,851	\$731,875	\$84,024	13.0%
665019 - TRANS INTERNAL INACTIVE	421,442	199,902	403,575	353,083	(50,492)	-12.5%
66502 - TRANSPORTATION - EXTERNAL	48,290	19,949	66,750	58,050	(8,700)	-13.0%
66503 - MILEAGE REIMBURSEMENT	19,839	11,928	21,134	24,415	3,281	15.5%
Transportation Total	1,071,205	536,966	1,139,310	1,167,423	28,113	2.5%

A standard 40-hour week is charged for most vehicles, when the vehicle is in use it is charged to Transportation Internal (66501) and the balance to the Inactive (665019) account. Transportation External (66502) involves ferry related fees to go the islands served and vehicles rented from outside vendors. Mileage Reimbursement (66503) is paid to employees who use their own vehicles when conducting District business.

Water Services

Hydrant Flushing



In an effort to improve the water quality in the distribution system, the District performs multi-directional flushing to remove any sediment that deposits on the bottom of these mains. This sediment can cause a reduction in the area's chlorine residual and increase customer's water quality inquiries.

During the past four years, staff began to de-chlorinate water discharges, especially in areas of impaired streams and areas with Municipal Separate Stormwater Sewer Systems (MS4).

	2018 Actual	2019 Projected	2020 Goal
% of System Flushed	33%	32%	34%

PWD Flushing Program Overview

- ☐ Corporate Goal to Flush 1/3 of the system each year
- ☐ Mains Less than 16" In Diameter
- ☐ Roughly 850 Miles of Main < 16" – Approximately 283 Miles Per Year
- ☐ Usually start in late March if weather permits.
- ☐ Successfully moved a majority of flushing to daytime during 2017, to reduce the number of days that employees work night shifts. Some areas do require nighttime flushing due to traffic and customer impact.
- ☐ Communities flushed in 2019: Cumberland/North Yarmouth, Scarborough, Portland East and West End, Gorham, Raymond, Steep Falls and Standish

Water Services – Purpose Statement

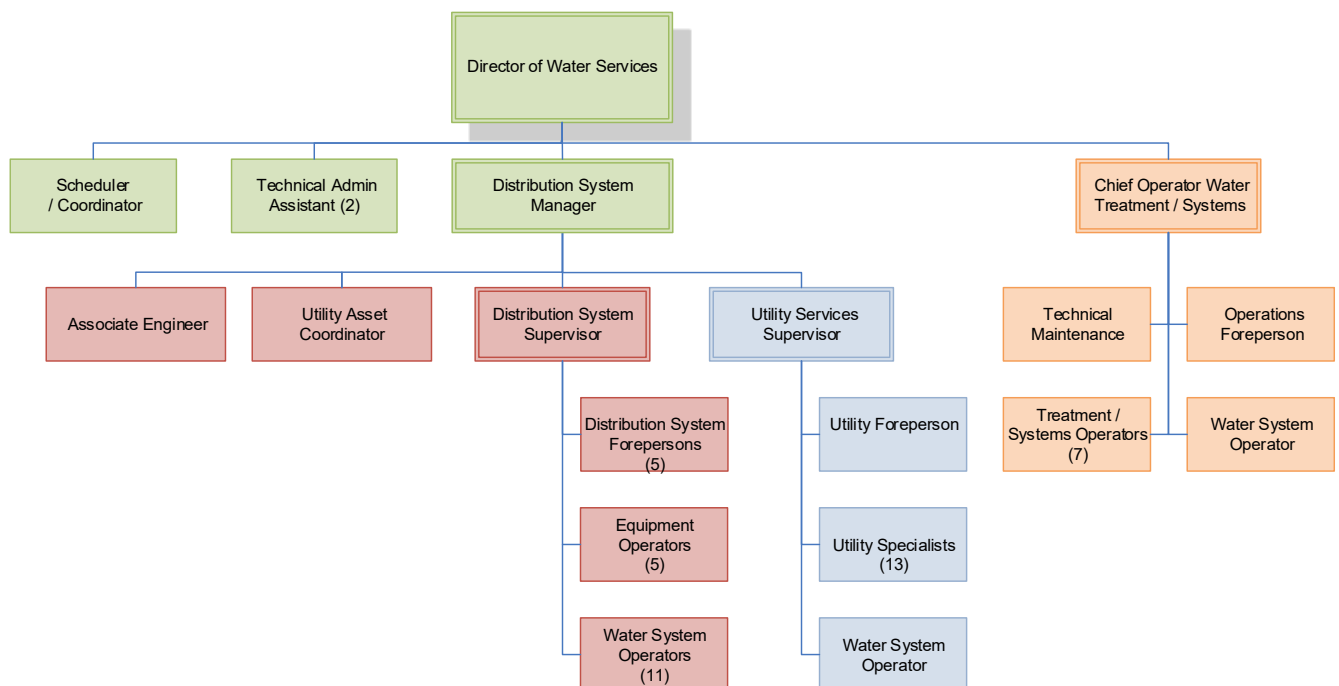
To operate and maintain water system infrastructure including the treatment, water storage and distribution systems.

Core Services

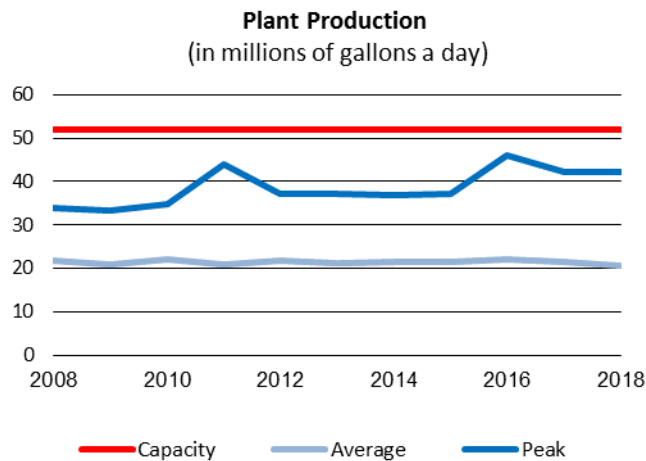
Water Operations is responsible for operating and maintaining the Sebago Lake and Steep Falls Well treatment and water distribution systems by providing the following services:

- Operation and maintenance of distribution system including emergency response, contractor inspection (Transmission/Distribution Group – A2; **red** in the organization chart). Two additional positions added in 2020 – Equipment and Water System Operators.
- Operation and maintenance of the pumping, treatment, storage and chemical addition facilities (Treatment Group - A3; **orange** in organization chart).
- Field support services including customer meter and water quality inquiries, back-flow inspection, system flushing, hydrant inspection and contractor inspection (Utility Services Group – A6; **blue** in the organization chart).

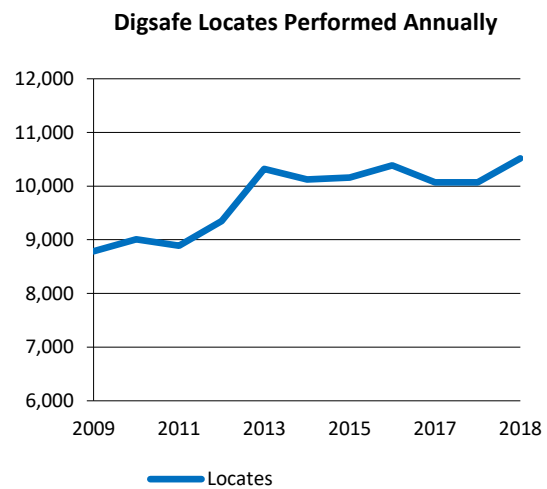
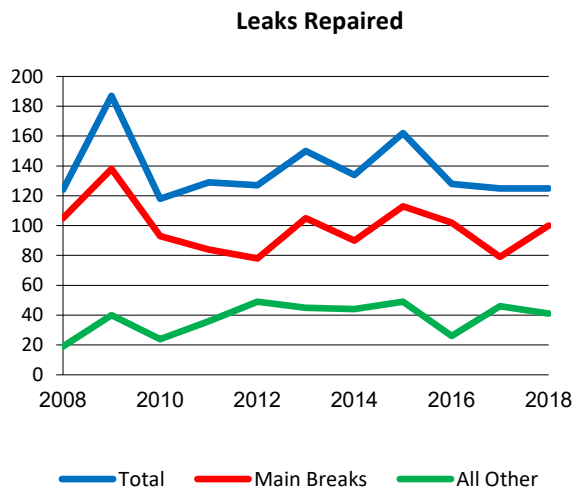
Water Operations has a five-person group (Administration Group- A1; **green** in organization chart) that directs, oversees and provides administrative support.



Key Statistics



Water Supply	Surface – 99%
	Groundwater -1%
Water Treatment	Ozone, Ultraviolet, Chloramination, Corrosion Control, Fluoridation
Water Mains	1002 miles
Valves	11,971
Hydrants	5,123
Service Lines	55,245
Water Storage	10 (+2 non-active)
Booster Stations	6
Backflow Devices	4,805



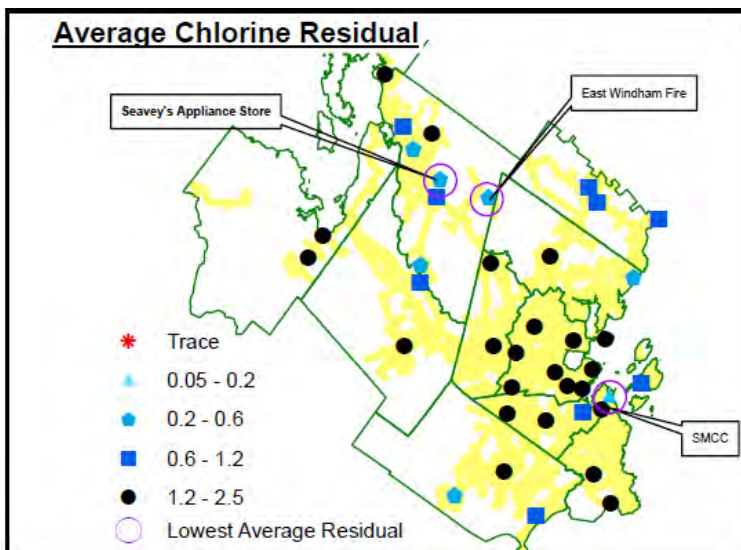
- Leaks repaired each year vary by number/severity of leaks and is a significant budgetary variable.
- Digsafe locates include marking of water and wastewater infrastructure for others who are working near our assets.

Performance Benchmarks

	2018 Actual	2019 Projected	2020 Goal
Corporate Goal – Public Health			
Compliance of Water Regulations	100%	100%	100%
95% of Distribution System Chlorine Residuals	0.50 mg/l	0.50 mg/l	> 0.50 mg/l
Corporate Goal – Public Safety			
Meeting with Municipal Fire Chiefs	1	2	2
Hydrant Outage Index	2.7	3.0	3.0
Corporate Goal – Reliability			
Water Outage Index	13.2	< 20	< 20
Leaks per 100 mile of main	10	< 10	< 10
Transmission valves exercised	332	449	416
Distribution valves exercised	27	45	100
Customer Appointments On-time	99.9%	99.9%	100%
Corporate Goal – Affordability			
Water Facility Maintenance Ratio	66% / 34%	75% / 25%	75% / 25%
Department Cost / million gal	\$1,132	\$1,107	\$1,202
Treatment Cost / million gal	\$303	\$309	\$337
Unaccounted for Water %	13.6%	13.3%	13.0%
Corporate Goal – Employees and Work Environment			
Employee Training Hours	100	95	80

Distribution System Chlorine Residuals

(monthly report indicating the average for the month)



Past Accomplishments

Water Field (A2 and A6)

- (2) New F-550 crew trucks were purchased in 2019
 - Employee suggestions were implemented as part of the purchase.
 - All aluminum bodies will last longer & LED lighting in the cabinets and rear of the trucks to help visibility at night.
 - Outfitted trucks with higher quality tools.



- Highway transmission main crossings work and coordination with Maine Turnpike Authority (MTA)
 - Locates ends of casings, GPS each location, and measure distances to determine level of impact the widening will have on PWD mains
 - Significant time was spent on this with little notice from MTA.
- I-95 Crossing Leak
 - Underground Testing Services, LLS provided 2 line stops to minimize the shut down and customer impact. The shutdown would have put many businesses out of water for several days while valves were installed on either side of the highway crossing to isolate the leak. With the line stop, only a single customer was impacted.



This was the first time Water Operations used line stops and it proved to be a cost effective way to isolate the leak and minimize the shutdown impact.

Accomplishments (continued)

- Other notable projects for 2019
 - Mayberry St South Portland, water main renewal project to remove a 2" galvanized water main. Contractor support was not available so this became a Water Operations-led project. Completed on 9/26/2019.
 - Black Point Rd Scarborough, directional drill through the marsh to eliminate temporary dead end due to a leak. The leak has been isolated and the leak location was under the marsh. Directional drilling a new section in the road way is the most cost effective option. The location of the existing main and tides created issues with a standard repair option. This will be bid out for Spring 2020.
 - Massachusetts Avenue, Portland transmission valve replacement. A crew is scheduled to replace this critical valve in 2019. Line stops will be used to isolate the valve and to minimize the size of the shutdown in this busy area. The work will need to be performed at night due to traffic impact to Congress St.
- Water Operations have requested another Equipment Operator and a Water System Operator in 2020. The main drivers for these additions include increased contractor inspection support for water main renewal, the backlog of maintenance work, and increased coverage needed for on-call and vacation time.
- The Utility Services department within Water Field is also fast growing area for the District. Each year we see an increase in the workload and increased construction within our service area has had a large impact on our resources. Below is a glimpse of year to date as of October 2019 for this department.
 - Work Requests – 18,172 year to date
 - Dig Safe Locates – 10,690 year to date
- The large meter testing program took a big step forward in 2019. We refined our procedures for QA/QC for the testing. Utility services staff visited Sensus Meter headquarters for some hands on training with meter testing as well as a tour of their testing facility. The knowledge and contacts made at Sensus will help as we continue to develop our program.



Accomplishments (continued)

Water Plant (A3)

- Zero reportable accidents or lost time injuries.
- Met all Primary and Secondary Regulations associated with the Surface Water Treatment Rules, including 100% compliance with ozone treatment regulations. SLWTF also achieved >99.99% compliance with UV treatment regulation associated to Long Term 2 Enhanced Surface Water Treatment Regulations, easily surpassing EPA's 95% compliance requirement. With 1711 Total Coliform rule (TCR) samples collected in 2017, and 1220 so far in 2018, there were zero positive coliform TCR samples collected in 2018 & 2019.
- After more than five years of operation, SLWTF Operators completed a change out of all 84 UV lamps in UV Reactor #1. The project also included a hand cleaning of all 84 quartz sleeves that house and protect the UV lamps within the UV Reactor. The UV lamps in Reactor #2 will be swapped out for new lamps by early 2020.

UV Reactor #1 Lamp Power Connections



- Successfully limited SLWTF electrical power demand to a minimum (<10kW) during ISO-NE's peak annual demand hour (July 31st, 2019, @ 23,969 megawatts), which sets Forward Capacity charges beginning June 2020.
- Completed the inspection, cleaning, and condition assessment reporting of four water storage facilities: Freeman Hill Reservoir, Gowen Road Tank, Standish Tank & Steep Falls Tank.

2020 Projects and Initiatives

Corporate Goal – Public Health

- Corporate Initiative
 - Continuously improve the water quality in the Distribution System, using guidelines and action plans developed through the AWWA Partnership for Safe Water (PSW) for Distribution Systems. PWD on track in 2019 to meet PSW guidelines for distribution system chlorine residual (> 0.50 mg/L for 95% of all TCR samples collected in the Distribution System) for the second consecutive year. PWD continues to realize improved water quality at the far ends of the Distribution system because of the dual primary disinfectants (ozone and UV light) being applied at the SLWTF.
- Departmental Initiatives
 - Continue to meet 100% of all Primary and Secondary Surface Water Treatment Rules.
 - Continue with the 2019 initiative on programming SCADA control strategy for the use of hypochlorite for emergency 4-log virus disinfection in the event of an ozone system failure. This 2019 initiative will continue, with work planned to be completed in 2020. An RFP has been developed, and the initial framework is in place. The next step involves PWD hiring an integrator to program the necessary SCADA changes.

Corporate Goal – Public Safety

- Departmental Initiative
 - Regular replacement of magnetic locators for accurate locating of underground assets, to keep current with changes in technology (employee suggestion).
 - A3 Water Treatment: Because of continued compliance with Lead & Copper Rule compliance, the PWD requires 50 samples be collected and tested every 3 years. The next round of Lead & Copper Rule samples are scheduled to be collected in 2020. The last four LCR test results have shown the PWD's 90th percentile for lead to be consistently 5 parts per billion (ppb) or lower, well below the current 15 PPB Action Level.

Corporate Goal – Reliability

- Corporate Initiative
 - After the initial operator training and test run of the Emergency Pumper, which took place in September 2019, Operations will schedule on site test runs of the pumper at two distribution sites in 2020 where the unit could potentially be deployed in the future during an actual emergency event.



2020 Projects and Initiatives (continued)

Corporate Goal – Reliability (continued):

- Departmental Initiatives
 - Continue condition assessment of transmission mains to help prioritize investments and determine potential areas of concern.
 - Extend Right-of-Way Maintenance Program into the more developed areas; initiate tracking of current conditions and make plans to repair significant deficiencies. Maintain areas that have already been cleared.

- Continue to replace 1-2 transmission valves each year.

Transmission valves are 16 inches in diameter or larger.



- Develop a detailed scope of work for the rebuild of Raw Water Pump #1 & Motor in an effort to secure the most realistic bid prices possible. An independent analysis by Predictive Maintenance Diagnostics has indicated bearing wear and reported this pump should be next in line for maintenance in the near future. The rebuild is planned to be completed in 2020.

- Continue to develop long-term maintenance plan for Storage Facilities to meet AWWA and Partnership for Safe Water standards to insure cost effective reliability, viability, and water quality.



2020 Projects and Initiatives (continued)

Corporate Goal – Affordability

- Departmental Initiatives
 - Test at least 50 large water meters, meters that are 3” in diameter and larger, during 2020, while ensuring accuracy of the testing. Consider changes to terms and conditions to compel large customers to accommodate timely testing and meter changes.
 - Operations is looking to purchase a larger vacuum excavator. Vacuum excavation can be more efficient, quicker, and requires less restoration than conventional digging. Much of the Operations backlog work can be done at a faster rate with this method. In addition, the pavement restoration expense will be significantly less.



- Complete the project to upgrade the emissions system involving the installation of a catalytic convertor on Standby Generator #1 at the SLWTF to allow non-emergency operations. This would provide significantly more latitude to meet Load Reduction commitments as well as lower SLWTF Demand during the ISO-NE peak annual hour of electrical demand, which will lower PWD’s Forward Capacity charges. This was a 2018 initiative, and Energy Choice has been contracted to complete the project by early 2020.

Corporate Goal – Employees and Work Environment

- Corporate Initiatives
 - Maintain an average of 80 hours of training per employee
- Departmental Initiatives
 - SLWTF will improve Fall Protection and chemical handling safety through purchase of proper safety equipment and operator training
 - Active staff participation in safety initiatives, such as a District wide effort to train employees on Confined Space Entry

Financial Overview

The Water Services Budget for 2020 has increased 4.7% or \$411,646. The majority of the increases are for wages & benefits, contracted services, materials and supplies, and chemicals.

A1 – The Water Administration area increased 3.1%, of \$16,488. The increase is largely in labor, which includes an additional intern to be shared with Wastewater. The intent is to bring in a student that is majoring in Wastewater/Water Operations.

A2 – At \$224,044, Water Transmission & Distribution is increasing by 5.4%. The increase is largely in labor and benefits (\$141,330 salaries/wages and \$40,476 in benefits). A2 will be adding 2 union positions (1 equipment operator and 1 water system operator) for 2020 to meet the growing construction demand on resources and to keep up with critical system maintenance. Contracted services represent an increase of \$10,500 or 0.8% mainly due to increased traffic control costs. The training budget has also increased by \$5,000 for A2 as more new hires require CDL training.

A3 – Water Treatment 2020 budget is increasing 5.0%, or \$121,847. Some of the increase can be associated to the cost per unit of liquid oxygen (LOX). PWD has limited competitive bid options because of the higher grade of oxygen required to safely and efficiently generate ozone. PWD's budget for LOX increased by \$27,000 in 2020 as a result, a 43.6% increase from 2019. With the increased focus on safely addressing fall protection and chemical handling issues, safety expenses increased by \$12,000. Materials Inventory budget will increased by \$15,750, or 86%. This is a correction from previous budgets to be more in line with recent year expenses for critical components required to maintain reliable operation our critical instrumentation equipment. Low sulphur diesel fuel, used to heat the SLWTF and operate the standby power generators, has increase by \$0.30 gallon, which resulted in an A3 budgetary increase of \$11,011. Although the SLWTF takes considerable efforts to control the cost of power, industry increases in \$/kW resulted in a 22% increase (\$27,978) in the large energy power budget, which is the power consumed at the Sebago Lake Facility.

A6 – The Utility Services 2020 budget is increasing by \$49,267 or 3.0%. Wages (\$36,007) are increasing and benefits (-\$1,656) are decreasing due to contractual obligations. Materials and supplies continue to increase for work related to meters, hydrants, and locating (\$5,612.) Asset Purchases (\$7,050) is increasing to outfit the spare vans with needed equipment. Training (\$5,250) increased due to the Maine Water Utilities Association Trade Show being held in Augusta rather than in Portland.

Water Services: Total

Financial Summary:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Sub-Group:						
A1 - Water Administration	\$514,662	\$259,143	\$534,590	\$551,078	\$16,488	3.1%
A2 - Wtr Transmission/Distrib	3,822,121	1,683,837	4,134,847	4,358,891	224,044	5.4%
A3 - Water Treatment	2,429,960	1,160,086	2,456,365	2,578,212	121,847	5.0%
A6 - Water Utility Services	1,503,259	718,470	1,669,671	1,718,938	49,267	3.0%
Grand Total	8,270,002	3,821,537	8,795,473	9,207,119	411,646	4.7%
Expense Type:						
Salaries & Wages	\$3,096,542	\$1,537,459	\$3,262,724	\$3,495,009	\$232,285	7.1%
Employee Benefits	1,459,806	693,143	1,462,802	1,499,604	36,802	2.5%
Chemicals	408,250	218,116	466,126	451,897	-14,229	-3.1%
Contracted Services	1,427,395	461,183	1,648,966	1,679,234	30,268	1.8%
Heat/Fuel Oil	99,577	57,073	90,088	103,044	12,956	14.4%
Insurance	22,398	11,656	22,772	24,944	2,172	9.5%
Materials & Supplies	577,769	269,826	609,673	634,717	25,044	4.1%
Other Expense	58,795	16,741	70,208	89,795	19,587	27.9%
Purchased Power	374,898	170,159	342,578	383,631	41,053	12.0%
Tele/Other Utilities	91,541	50,534	94,127	83,217	-10,910	-11.6%
Transportation	653,032	335,648	725,409	762,027	36,618	5.0%
Grand Total	8,270,002	3,821,537	8,795,473	9,207,119	411,646	4.7%
Headcount:						
Full Time	54	54	54	56	2	3.7%
Part Time	0	0	0	0	0	n/a
Total	54	54	54	56	2	3.7%

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Salaries & Wages						
660111 - SALARIES/WAGES NON-UNION	\$554,908	\$275,508	\$612,811	\$597,709	(\$15,102)	-2.5%
660121 - WAGES/REGULAR UNION	2,034,505	1,040,878	2,125,211	2,312,321	187,110	8.8%
660122 - WAGES/OVERTIME UNION	310,731	143,497	311,386	350,768	39,382	12.6%
660123 - WAGES/DOUBLETIME UNION	38,075	14,780	38,703	45,288	6,585	17.0%
660124 - WAGES/STANDBY TIME UNION	111,070	53,051	104,533	121,723	17,190	16.4%
660131 - WAGES - REGULAR - TEMPS	34,130	9,744	66,080	67,200	1,120	1.7%
660132 - WAGES - OVERTIME- TEMPS	32	-	-	-	-	-
660136 - CONTRACTED - TEMP	1,232	-	4,000	-	(4,000)	-100.0%
66014 - VACATION ACCRUAL	3,415	-	-	-	-	-
66015 - SICKTIME ACCRUAL	8,443	-	-	-	-	-
Salaries & Wages Total	3,096,542	1,537,459	3,262,724	3,495,009	232,285	7.1%
Employee Benefits						
660401 - FICA - EMPLOYERS' SHARE	234,896	115,367	249,295	267,364	18,069	7.2%
660405 - SAFETY/WHY PROGRAM ITEMS	9,646	3,106	15,000	14,920	(80)	-0.5%
660411 - MEALS ALLOWANCE	10,190	5,763	8,060	8,960	900	11.2%
660418 - STIPENDS	5,300	5,100	6,700	6,300	(400)	-6.0%
660419 - EMPLOYEE BENEFITS-MISC OTH	22,123	1,300	10,231	16,500	6,269	61.3%
660491 - FRINGE BENEFITS-REG/SAL	1,177,650	562,507	1,173,516	1,185,560	12,044	1.0%
Employee Benefits Total	1,459,806	693,143	1,462,802	1,499,604	36,802	2.5%
Chemicals						
66181 - AMMONIA	23,691	12,149	23,752	21,080	(2,672)	-11.2%
66182 - CAUSTIC SODA	110,176	40,781	139,675	85,166	(54,509)	-39.0%
66183 - FLUORIDE	36,095	15,473	40,340	33,164	(7,176)	-17.8%
66184 - ZINC ORTHOPHOSPHATE	64,272	45,524	74,727	80,318	5,591	7.5%
66185 - SODIUM HYPOCHLORITE	105,604	63,873	125,730	143,269	17,539	13.9%
661892 - LIQUID OXYGEN (LOX)	68,412	40,316	61,902	88,900	26,998	43.6%
Chemicals Total	408,250	218,116	466,126	451,897	(14,229)	-3.1%
Contracted Services						
6631 - ENGINEERING SERVICES	41,439	-	112,000	112,075	75	0.1%
66352 - CONSTRUCTION SERVICES	3,474	-	5,500	3,500	(2,000)	-36.4%
663521 - TRAFFIC CONTROL	96,804	51,179	59,500	72,000	12,500	21.0%
6635221 - PAVING - MINOR REPAIR	467,256	117,742	526,000	526,000	-	0.0%
663523 - SIDEWALK	17,229	12,216	18,500	18,500	-	0.0%
663524 - STREET OPENING	56,297	23,785	61,100	61,100	-	0.0%
663525 - CONTRACTOR CONSTRUCTION	501,926	152,030	588,000	588,000	-	0.0%
663527 - EMERGENCY RESPONSE- FEMA	425	425	-	-	-	-
66353 - REPAIR SERVICES	5,634	1,402	25,500	30,500	5,000	19.6%
66354 - MAINTENANCE SERVICES	152,099	62,261	157,579	172,334	14,755	9.4%
663542 - LARGE METER TESTING	7,516	-	6,500	6,500	-	0.0%
663546 - MAINTENANCE - SNOW REMOVL	35,964	19,344	36,219	41,090	4,871	13.4%
663561 - COMPUTER LICENSES	16,737	11,517	17,163	18,725	1,562	9.1%
663574 - DISPOSAL SERVICES	1,716	4,063	4,690	6,990	2,300	49.0%
663587 - COURIER SERVICES	2,223	1,141	2,320	2,400	80	3.4%
663588 - EQUIPMENT MAINTENANCE	11,228	1,087	10,470	10,520	50	0.5%
663594 - DIGSAFE	500	1,000	-	-	-	-
6635982 - TREE TRIMMING / REMOVAL	-	-	7,000	7,000	-	0.0%
663599 - MISC OTHER SERVICES	8,927	1,991	10,925	2,000	(8,925)	-81.7%
Contracted Services Total	1,427,395	461,183	1,648,966	1,679,234	30,268	1.8%

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Heat/Fuel Oil						
66161 - HEATING OIL	\$80,603	\$39,247	\$68,055	\$79,066	\$11,011	16.2%
661622 - CONTAINER DELIVERED	18,973	17,826	22,033	23,978	1,945	8.8%
Heat/Fuel Oil Total	99,577	57,073	90,088	103,044	12,956	14.4%
Insurance						
66592 - DAMAGES & CLAIMS-GOODWILL	393	-	-	-	-	
66599 - PROPERTY & BOILER INSUR	22,004	11,656	22,772	24,944	2,172	9.5%
Insurance Total	22,398	11,656	22,772	24,944	2,172	9.5%
Materials & Supplies						
6619 - ASSET PURCHASES	37,941	24,621	47,275	64,325	17,050	36.1%
662012 - CRUSHED GRAVEL	3,592	829	550	1,750	1,200	218.2%
662014 - CRUSHED STONE	461	879	-	-	-	
662015 - LOAM	397	-	-	-	-	
662016 - SAND	-	-	3,820	3,820	-	0.0%
662017 - SAND AND SALT	1,824	1,260	3,452	3,452	-	0.0%
662018 - BANKRUN GRAVEL	1,166	454	-	2,000	2,000	n/a
662019 - GRAVEL - TYPE A (DOT)	620	1,627	-	2,000	2,000	n/a
66202 - TOOLS	22,080	6,258	25,850	25,850	-	0.0%
66203 - VENDOR PURCHASED SUPPLIES	128,856	59,053	119,820	116,368	(3,452)	-2.9%
662041 - MATERIALS INVENTORY	147,862	73,440	148,190	164,350	16,160	10.9%
662042 - SUPPLIES INVENTORY	49,816	21,362	37,365	42,350	4,985	13.3%
66204201 - INVENTORY - QPR	204	929	2,500	2,500	-	0.0%
66204202 - INVENTORY - BNKRUN GRAVEL	10,695	6,566	14,000	14,500	500	3.6%
66204203 - INVENTORY - CRUSHD GRAVEL	19,408	2,541	18,750	18,750	-	0.0%
66204204 - INVENTORY - CRUSHED STONE	1,953	1,393	1,700	2,250	550	32.4%
66204205 - INVENTORY - LOAM	2,973	157	2,250	1,250	(1,000)	-44.4%
66204206 - INVENTORY - TYPE A GRAVEL	15,829	9,191	-	-	-	
662043 - TOOL INVENTORY	79,521	36,905	62,850	65,050	2,200	3.5%
66204301 - INVENTORY - TONER	-	71	-	-	-	
66204302 - INVENTORY - PAPER	90	-	-	-	-	
66204303 - INVENTORY-COMPUTER EQUIP	2,668	1,042	1,100	1,113	13	1.2%
662044 - METER INVENTORY	(12,667)	(2,478)	17,850	17,850	-	0.0%
662045 - TRUCK INVENTORY	(84)	-	-	-	-	
662046 - HYDRANT INVENTORY	42,081	17,040	69,400	59,000	(10,400)	-15.0%
662047 - GARAGE INVENTORY	2,729	1,397	3,150	3,150	-	0.0%
66205 - CONSUMABLE SUPPLIES	3,512	2,729	12,200	10,550	(1,650)	-13.5%
66206 - COMPUTER RELATED EQUIP	14,242	2,561	17,601	12,489	(5,112)	-29.0%
Materials & Supplies Total	577,769	269,826	609,673	634,717	25,044	4.1%

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Other Expense						
6641 - BUILDING/REAL PROP RENT	\$6,160	\$0	\$6,600	\$6,600	\$0	0.0%
6642 - EQUIPMENT RENT	31,519	-	13,000	11,950	(1,050)	-8.1%
6675111 - INSTATE TRAINING/CONF	27,046	14,519	29,145	35,145	6,000	20.6%
6675112 - OUT OF STATE TRAINING/CON	1,259	5,555	7,000	11,500	4,500	64.3%
667513 - DUES	1,000	-	4,688	2,950	(1,738)	-37.1%
667514 - PROFESSIONAL LICENSES	2,561	940	4,720	4,595	(125)	-2.6%
667515 - PERIODICAL SUBSCRIPTIONS	123	99	200	200	-	0.0%
667516 - PERMITS	80	-	781	781	-	0.0%
667518 - REGULATORY REQUIRED FEES	416	-	-	-	-	-
667521 - POSTAGE - THIRD PARTY	2,100	10	4,378	4,378	-	0.0%
667522 - POSTAGE - INTERNAL	292	120	100	100	-	0.0%
667523 - POSTAGE - EXPRESS DELIVER	98	497	200	200	-	0.0%
667531 - PRINTING COSTS	8,005	3,420	8,676	8,676	-	0.0%
667554 - EPA / OSHA COMPLIANCE	160	-	2,000	2,000	-	0.0%
667555 - SAFETY EXPENSES	543	3,992	14,720	26,720	12,000	81.5%
667556 - FREIGHT CHARGES (STOCK)	23	-	-	-	-	-
667591 - UNIFORMS	268	-	-	-	-	-
667592 - FOOD SUPPLIES	1,108	302	460	460	-	0.0%
667599 - OTHER MISCELLANEOUS	1,234	519	-	-	-	-
6676 - EXPENSE OFFSET	(25,200)	(13,230)	(26,460)	(26,460)	-	0.0%
Other Expense Total	58,795	16,741	70,208	89,795	19,587	27.9%
Purchased Power						
66151 - POWER - LARGE ENERGY	144,391	65,918	121,315	149,293	27,978	23.1%
66152 - POWER - LARGE T&D	90,410	39,029	91,830	92,561	731	0.8%
66153 - POWER - MEDIUM ENERGY	42,824	18,731	39,116	47,561	8,445	21.6%
66154 - POWER - MEDIUM T&D	36,524	18,657	32,978	43,423	10,445	31.7%
66155 - POWER - SMALL ENERGY	15,257	6,884	15,511	12,625	(2,886)	-18.6%
66156 - POWER - SMALL T&D	18,138	8,441	18,715	16,064	(2,651)	-14.2%
66157 - POWER - OTHER CHARGES	35,804	11,309	36,570	30,234	(6,336)	-17.3%
66158 - LOAD RESPONSE	(17,445)	(5,680)	(14,500)	(9,000)	5,500	-37.9%
66159 - POWER - CAPACITY	8,996	6,872	1,043	870	(173)	-16.6%
Purchased Power Total	374,898	170,159	342,578	383,631	41,053	12.0%
Tele/Other Utilities						
66101 - WATER	4,057	1,848	3,500	4,000	500	14.3%
66102 - WASTEWATER	19,479	3,971	20,000	20,000	-	0.0%
66103 - STORMWATER CHARGES	43	1,058	-	-	-	-
66111 - TELEPHONE LINES	5,642	2,911	5,580	4,920	(660)	-11.8%
66112 - DATA LINES	46,941	30,397	47,820	39,720	(8,100)	-16.9%
66113 - CELLULAR PHONES	15,083	10,348	16,980	14,520	(2,460)	-14.5%
66114 - PAGERS	296	-	247	57	(190)	-76.9%
Tele/Other Utilities Total	91,541	50,534	94,127	83,217	(10,910)	-11.6%
Transportation						
66501 - TRANSPORTATION - INTERNAL	391,542	206,727	417,671	512,400	94,729	22.7%
665019 - TRANS INTERNAL INACTIVE	236,433	114,959	255,663	206,912	(48,751)	-19.1%
66502 - TRANSPORTATION - EXTERNAL	20,828	11,347	47,400	38,100	(9,300)	-19.6%
66503 - MILEAGE REIMBURSEMENT	4,229	2,615	4,675	4,615	(60)	-1.3%
Transportation Total	653,032	335,648	725,409	762,027	36,618	5.0%
Grand Total	8,270,002	3,821,537	8,795,473	9,207,119	411,646	4.7%

Water Services: Water Administration (A1)

Financial Summary:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$323,509	\$165,802	\$345,159	\$364,460	\$19,301	5.6%
Employee Benefits	179,282	84,476	175,528	174,348	(1,180)	-0.7%
Materials & Supplies	3,835	971	1,700	1,713	13	0.8%
Other Expense	5,588	4,682	9,378	8,140	(1,238)	-13.2%
Tele/Other Utilities	1,859	2,764	2,100	1,752	(348)	-16.6%
Transportation	588	448	725	665	(60)	-8.3%
Grand Total	514,662	259,143	534,590	551,078	16,488	3.1%
Programs:						
27 - Shore Acre Tank	9,751	7,071	9,547	-	(9,547)	-100.0%
98 - Training	19,131	13,217	16,653	28,002	11,349	68.1%
99 - Administration	485,780	238,855	508,390	523,076	14,686	2.9%
Grand Total	514,662	259,143	534,590	551,078	16,488	3.1%
Funds:						
10 - General	123,608	60,344	99,587	-	(99,587)	-100.0%
20 - Water General	391,054	198,799	435,003	551,078	116,075	26.7%
Grand Total	514,662	259,143	534,590	551,078	16,488	3.1%
Headcount:						
Full-Time	5	5	5	5	0	0.0%
Part-Time	0	0	0	0	0	n/a
Total	5	5	5	5	0	0.0%
Total	5	5	5	5	0	0.0%

Sebago Lake
Water Treatment
Facility



Water Services: Water Transmission/Distribution (A2)

Financial Summary:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$1,220,240	615,320	1,236,456	1,377,786	141,330	11.4%
Employee Benefits	548,996	267,221	539,679	580,155	40,476	7.5%
Contracted Services	1,181,008	368,181	1,389,550	1,400,050	10,500	0.8%
Insurance	393	-	-	-	-	-
Materials & Supplies	350,976	162,281	363,635	369,097	5,462	1.5%
Other Expense	27,385	8,492	40,700	45,450	4,750	11.7%
Tele/Other Utilities	13,186	10,636	12,853	8,220	(4,633)	-36.0%
Transportation	479,936	251,706	551,974	578,133	26,159	4.7%
Grand Total	3,822,121	1,683,837	4,134,847	4,358,891	224,044	5.4%
Programs:						
1 - Seasonal Mains	123,313	68,641	132,316	130,270	(2,046)	-1.5%
10 - General Distribution	341,704	113,615	260,380	267,305	6,925	2.7%
11 - Mains & Valves Maint	1,291,222	615,904	1,563,299	1,653,000	89,701	5.7%
12 - Services Maintenance	642,395	298,206	591,299	725,197	133,898	22.6%
13 - Emergency Maintenance	138	-	-	-	-	-
14 - Distribution Flushing	2,453	-	-	-	-	-
15 - Digsafe Locates	1,904	1,375	563	575	12	2.1%
17 - Hydrant Maintenance	250,239	74,840	269,385	259,986	(9,399)	-3.5%
18 - Water Treatment Maint	111	-	-	-	-	-
2 - Meter Reading	2,275	1,192	9,328	8,799	(529)	-5.7%
20 - Meter Service	1,529	451	-	-	-	-
34 - Distribution Maintenance	564	558	-	-	-	-
4 - Paving (Mains)	167,824	33,285	308,316	306,556	(1,760)	-0.6%
44 - WW Pumping	7,189	4,188	1,195	7,398	6,203	519.1%
45 - WW Treatment	160	2,490	3,339	2,621	(718)	-21.5%
90 - Vehicles	52,629	19,721	33,160	46,038	12,878	38.8%
91 - Snow Removal	37,723	27,899	28,289	36,357	8,068	28.5%
92 - Bulk Materials Adjustment	7,784	(2,687)	2,500	2,500	-	0.0%
98 - Training	84,908	68,136	110,621	122,321	11,700	10.6%
99 - Administration	806,025	356,025	820,857	789,968	(30,889)	-3.8%
Grand Total	3,822,121	1,683,837	4,134,847	4,358,891	224,044	5.4%
Funds:						
10 - General	671,830	328,971	612,928	82,395	(530,533)	-86.6%
20 - Water General	3,141,430	1,347,516	3,515,345	4,264,523	749,178	21.3%
30 - Water Standish	1,511	671	2,040	1,954	(86)	-4.2%
51 - WW Cape Elizabeth	-	-	457	-	(457)	-100.0%
53 - WW Cumberland	7,189	3,866	-	-	-	-
57 - WW Portland	160	2,812	3,515	9,445	5,930	168.7%
62 - WW Westbrook	-	-	281	287	6	2.1%
64 - WW Joint Westbrook	-	-	281	287	6	2.1%
Grand Total	3,822,121	1,683,837	4,134,847	4,358,891	224,044	5.4%
Headcount:						
Full-Time	22	22	22	24	2	8.3%
Part-Time	0	0	0	0	0	n/a
Total	22	22	22	24	2	8.3%

Water Services: Water Treatment (A3)

Financial Summary:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$716,149	\$348,432	\$732,469	\$768,116	\$35,647	4.9%
Employee Benefits	333,961	157,490	332,413	331,575	(838)	-0.3%
Chemicals	408,250	218,116	466,126	451,897	(14,229)	-3.1%
Contracted Services	222,341	89,450	242,446	262,164	19,718	8.1%
Heat/Fuel Oil	99,577	57,073	90,088	103,044	12,956	14.4%
Insurance	22,004	11,656	22,772	24,944	2,172	9.5%
Materials & Supplies	154,558	73,237	136,225	150,182	13,957	10.2%
Other Expense	3,261	(4,542)	(3,424)	7,526	10,950	-319.8%
Purchased Power	374,898	170,159	342,578	383,631	41,053	12.0%
Tele/Other Utilities	61,560	23,512	62,014	61,785	(229)	-0.4%
Transportation	33,400	15,504	32,658	33,348	690	2.1%
Grand Total	2,429,960	1,160,086	2,456,365	2,578,212	121,847	5.0%
Programs:						
1 - Seasonal Mains	-	-	2,652	2,709	57	2.1%
11 - Mains & Valves Maint	989	1,467	2,607	2,765	158	6.1%
12 - Services Maintenance	39	514	758	861	103	13.6%
17 - Hydrant Maintenance	-	-	133	135	2	1.5%
18 - Water Treatment Maint	135,584	71,690	98,078	105,985	7,907	8.1%
2 - Meter Reading	817	-	133	135	2	1.5%
24 - Distribution Operations	362,630	149,145	291,470	325,498	34,028	11.7%
25 - Water Storage Maintenance	11,054	12,807	31,687	32,779	1,092	3.4%
28 - Monitoring	16	-	-	-	-	
34 - Distribution Maintenance	73,505	19,362	37,132	77,998	40,866	110.1%
45 - WW Treatment	641	-	-	-	-	
6 - Water Treatment	1,582,495	792,013	1,730,905	1,767,510	36,605	2.1%
94 - Technology Teams	-	-	1,774	362	(1,412)	-79.6%
98 - Training	30,187	28,922	51,819	46,606	(5,213)	-10.1%
99 - Administration	232,002	84,166	207,217	214,869	7,652	3.7%
Grand Total	2,429,960	1,160,086	2,456,365	2,578,212	121,847	5.0%
Funds:						
10 - General	211,959	90,466	217,081	-	(217,081)	-100.0%
20 - Water General	2,165,003	1,044,503	2,190,029	2,511,701	321,672	14.7%
30 - Water Standish	52,357	25,118	49,255	66,511	17,256	35.0%
57 - WW Portland	641	-	-	-	-	
Grand Total	2,429,960	1,160,086	2,456,365	2,578,212	121,847	5.0%
Headcount:						
Full-Time	11	11	11	11	0	0.0%
Part-Time	0	0	0	0	0	n/a
Total	11	11	11	11	0	0.0%

Water Services: Water Utility Services (A6)

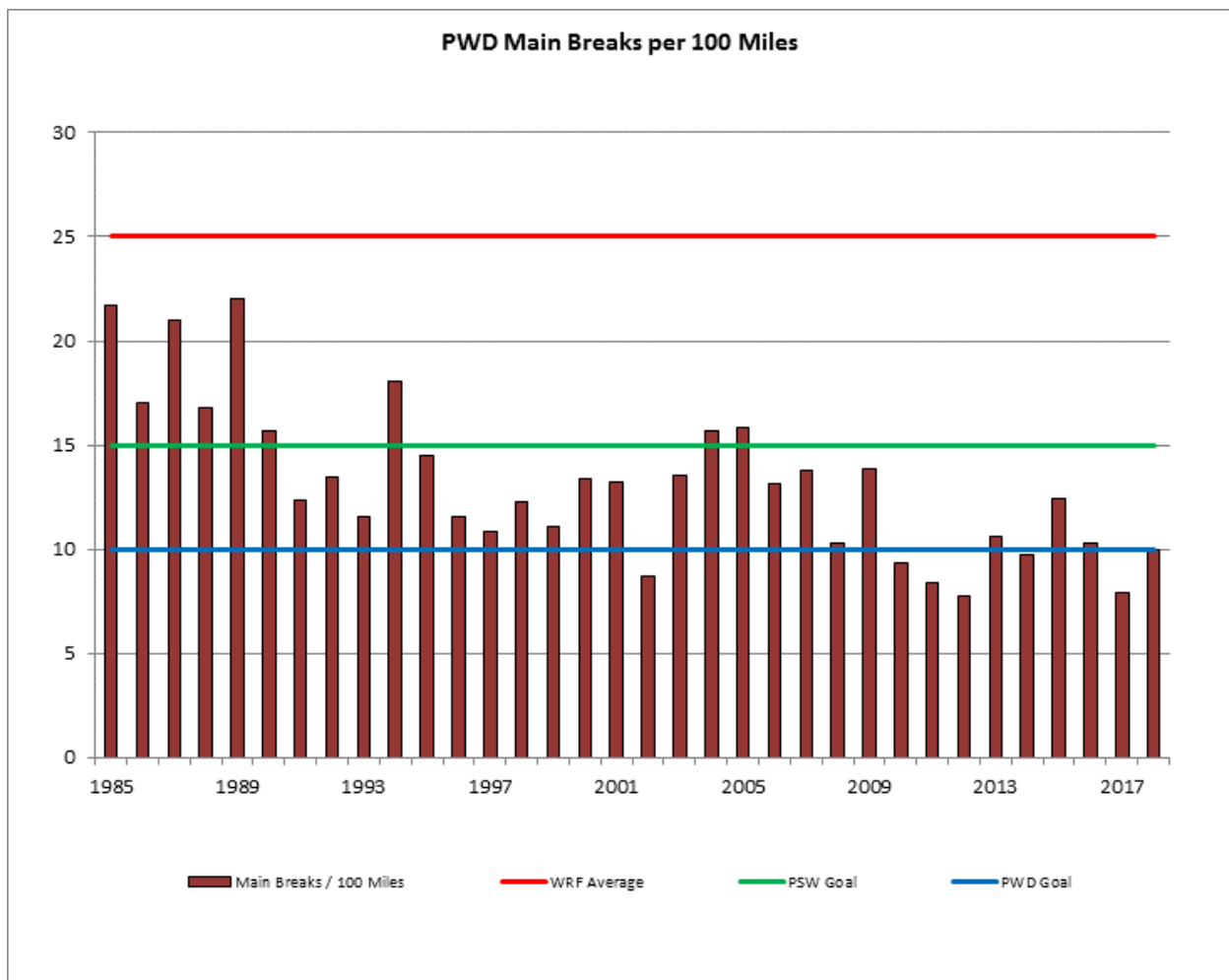
	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$836,644	\$407,905	\$948,640	\$984,647	\$36,007	3.8%
Employee Benefits	397,566	183,955	415,182	413,526	(1,656)	-0.4%
Contracted Services	24,046	3,552	16,970	17,020	50	0.3%
Materials & Supplies	68,399	33,337	108,113	113,725	5,612	5.2%
Other Expense	22,560	8,110	23,554	28,679	5,125	21.8%
Tele/Other Utilities	14,937	13,622	17,160	11,460	(5,700)	-33.2%
Transportation	139,107	67,991	140,052	149,881	9,829	7.0%
Grand Total	1,503,259	718,470	1,669,671	1,718,938	49,267	3.0%
Programs:						
1 - Seasonal Mains	51,651	25,689	58,716	60,144	1,428	2.4%
10 - General Distribution	60,082	21,308	63,871	65,421	1,550	2.4%
11 - Mains & Valves Maint	10,383	4,368	10,167	11,284	1,117	11.0%
12 - Services Maintenance	2,084	1,482	3,432	3,801	369	10.8%
14 - Distribution Flushing	65,468	29,287	88,971	92,156	3,185	3.6%
15 - Digsafe Locates	231,648	100,655	234,507	242,990	8,483	3.6%
16 - Cross Connection	28,259	10,347	24,520	26,008	1,488	6.1%
17 - Hydrant Maintenance	81,357	55,465	144,804	146,922	2,118	1.5%
19 - Winter Hydrant Pump	56,466	1,460	52,608	58,901	6,293	12.0%
2 - Meter Reading	82,478	42,538	104,208	109,239	5,031	4.8%
20 - Meter Service	97,395	57,309	114,839	120,008	5,169	4.5%
21 - Large Meter Testing	8,931	992	37,393	36,334	(1,059)	-2.8%
22 - Meter Replacement Program	-	-	608	63	(545)	-89.6%
26 - Submeters	1,087	328	1,260	1,300	40	3.2%
3 - Leak Surveys	377	42	6,607	6,233	(374)	-5.7%
31 - Vehicle Cleaning	1,211	1,295	3,490	3,638	148	4.2%
7 - General Investigation	181,774	82,795	236,479	247,195	10,716	4.5%
76 - Collection	14,863	7,729	20,682	20,937	255	1.2%
90 - Vehicles	4,036	631	1,896	2,113	217	11.4%
94 - Technology Teams	2,826	712	-	-	-	
98 - Training	79,607	65,489	82,661	87,174	4,513	5.5%
99 - Administration	441,278	208,549	377,952	377,077	(875)	-0.2%
Grand Total	1,503,259	718,470	1,669,671	1,718,938	49,267	3.0%
Funds:						
10 - General	524,344	269,364	500,497	183,093	(317,404)	-63.4%
20 - Water General	965,108	447,170	1,162,659	1,528,946	366,287	31.5%
30 - Water Standish	2,638	905	5,255	5,599	344	6.5%
51 - WW Cape Elizabeth	436	634	197	203	6	3.0%
53 - WW Cumberland	5,927	53	197	203	6	3.0%
57 - WW Portland	189	207	236	244	8	3.4%
59 - WW South Portland	441	17	236	244	8	3.4%
61 - WW Gorham	3,662	19	197	203	6	3.0%
62 - WW Westbrook	11	11	197	203	6	3.0%
64 - WW Joint Westbrook	247	-	-	-	-	
65 - WW Joint LF	257	91	-	-	-	
Grand Total	1,503,259	718,470	1,669,671	1,718,938	49,267	3.0%
Headcount:						
Full-Time	16	16	16	16	0	0.0%
Part-Time	0	0	0	0	0	n/a
Total	16	16	16	16	0	0.0%

Water Services

A key determinant of Water Services budget is the number of water main breaks. Main breaks occur for a number of reasons, including age, pressure surges, and cold weather. The long-term trend indicates a declining number of leaks partially due to the capital investments made in prior years by targeting the replacement of aging pipes.

The Water Research Foundation (WRF) states that the average number of main breaks in North America is 25 breaks per 100 miles of main per year. The Partnership for Safe Water (PSW), a group supported by US EPA and the American Water Works Association, among others, recommends a goal of less than 15 main breaks per 100 miles of main per year. The Portland Water District (PWD) strives to meet a service level goal of 10 main breaks per 100 miles of main per year.

The operating budget assumes the typical number of main breaks in a year. As the chart indicates, some years are significantly higher than average resulting in significantly higher expenses.



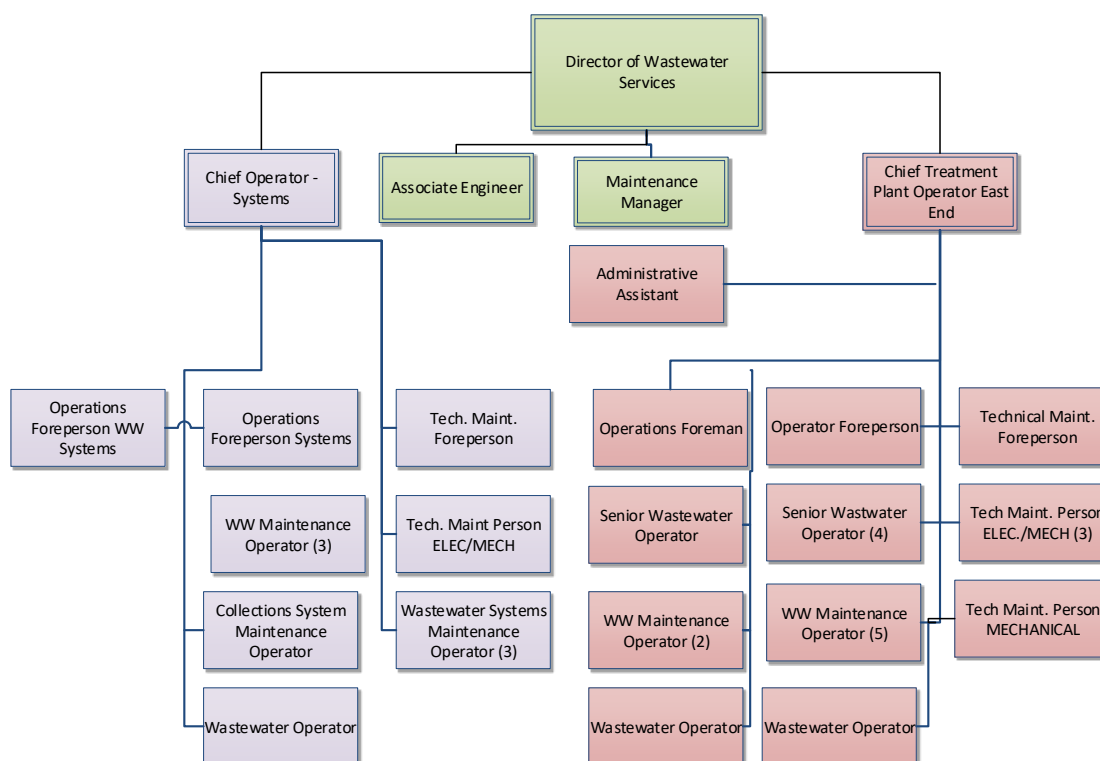
Wastewater Services – Purpose Statement

To provide effective high quality customer-oriented wastewater collection and treatment services in an efficient and responsive manner meeting all federal and State of Maine discharge standards while protecting the surface and receiving waters of Casco Bay.

Core Services

The Portland Water District's Wastewater Services Group is responsible for portions of the wastewater infrastructure in Cape Elizabeth, Cumberland, Gorham, Portland (including Peaks Island), Westbrook and Windham. Further, the Portland Water District owns and operates the Westbrook/Gorham/Windham Regional treatment plant, the Cape Elizabeth treatment plant, the Peaks Island treatment plant, and the East End treatment plant in Portland.

Administration for the Wastewater Services Group is comprised of the Director of Wastewater Services who oversees and provides administrative support to the operational units (Wastewater Administration – B1; green in organization chart). In 2017, the maintenance manager position was created to further our asset management system. Operation and maintenance staff of 23 are directly responsible for the operation and maintenance of our four treatment plants (Treatment – B3; red in organization chart). Operators from each area are regularly involved in the operation of all four treatment facilities' and several of our pump stations. Wastewater Systems staff of 13 people is responsible for the operation and maintenance of interceptors, force mains, pump stations, collectors, flow monitoring, and combined sewer regulators in with the water operations groups (Systems – L9; purple in organization chart). The operator training program includes regular laboratory training to ensure our operators can perform the required regulatory testing to assist in the monitoring of our wastewater operations.

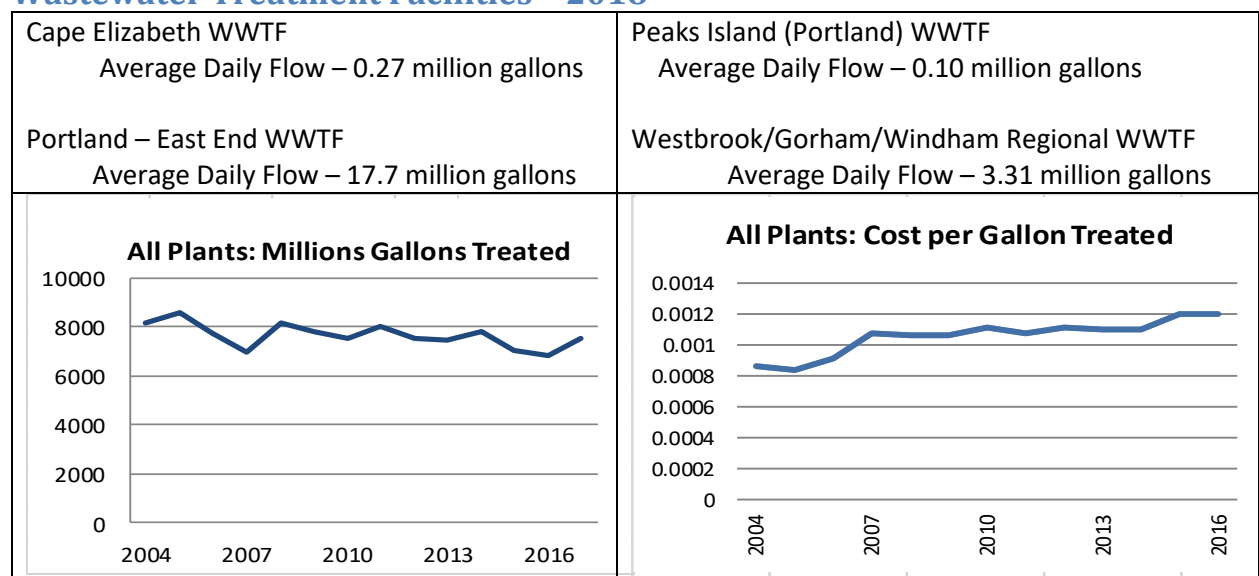


Key Statistics

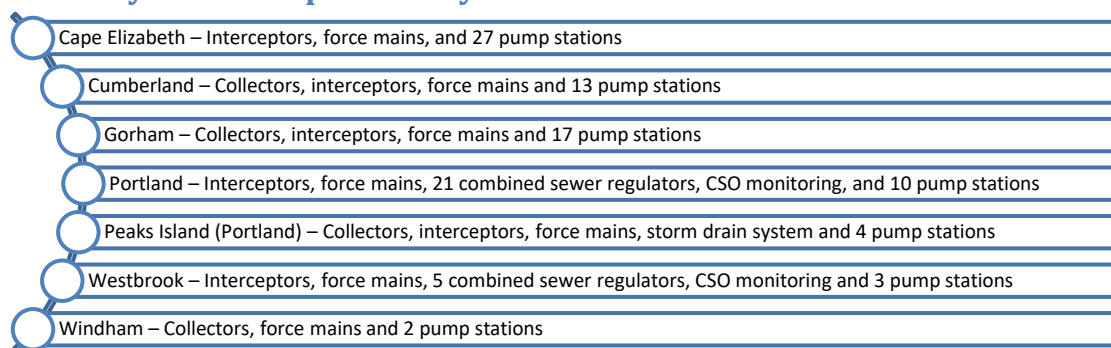
Wastewater Services Group Facts

- The Wastewater Services Group operates four wastewater treatment plants and provides sewer services to six communities. The East End treatment plant is the largest municipal treatment facility in Maine.
- Our Combined Sewer Overflow (CSO) program includes a web-based system that allows for near real-time monitoring and alarming of over 90% of the total overflow sites for PWD and several member municipalities. The majority of these meters were replaced in 2017. The system regularly demonstrates a 95% uptime rate.
- The East End Treatment plant maximizes flow to the treatment facility during wet weather events as a critical component of the City of Portland's CSO management efforts, treating about half of the total wet weather flow generated in the collection system. This effort reduces the overall CSO discharge in Portland by nearly 50%.
- The Wastewater Operator apprentice program has in place for the past eight years. This effort has helped address workforce management issues due to employee retirements. These positions work in each of our treatment plants and the wastewater systems and pumping group. This effort has been essential and very beneficial, as nearly the entire operations team has been replaced through retirements and changes in job assignments.
- Nutrient optimization efforts continue at the East End WWTF. Efforts in 2019 have been similar, with initial results being close to the 72 percent seasonal mass loading reduction achieved in 2018.
- Efforts to manage odors from treatment plants and pump stations continue to reduce odors and the associated complaints. To date, there were 16 odor complaints related to the East End Facility in Portland (and zero at pump stations, Westbrook, and Peaks Island).

Wastewater Treatment Facilities – 2018



Wastewater Systems Responsibility



Cape Elizabeth – Interceptors, force mains, and 27 pump stations
Cumberland – Collectors, interceptors, force mains and 13 pump stations
Gorham – Collectors, interceptors, force mains and 17 pump stations
Portland – Interceptors, force mains, 21 combined sewer regulators, CSO monitoring, and 10 pump stations
Peaks Island (Portland) – Collectors, interceptors, force mains, storm drain system and 4 pump stations
Westbrook – Interceptors, force mains, 5 combined sewer regulators, CSO monitoring and 3 pump stations
Windham – Collectors, force mains and 2 pump stations

Performance Benchmarks

	2018 Actual	2019 Projected	2020 Goal
<u>Wastewater Systems</u>			
Corporate Goal - Environment			
Wet wells cleaned	180	150	>125
Feet of pipe cleaned	18,409	18,000	>20,000
Feet of pipe televised*	50,579	30,000	>30,000
Dry weather overflows	10	5	0
Corporate Goal -Reliability			
Corrective Maintenance tasks	152	110	<200
Corporate Goal -Affordability			
Preventive Maintenance tasks	1,602	1,500	1,500
<u>Treatment Operations</u>			
Corporate Goal - Environment			
Total license excursions	26	15	0
Corporate Goal -Reliability			
Biosolids removed (wet tons)	26,773	27,000	<25,500
% BOD removed	94	94	>85
% suspended solids removed	95	94	>85

*Note: PWD has completed a 10-year effort to inspect/CCTV the collection and interception system. These levels will decrease as the results of this program are evaluated.

Past Accomplishments

- Flow monitoring of combined sewer overflow events:
 - PWD continuously monitors over 90% of all combined sewer overflows in Portland, Westbrook, and Cape Elizabeth. This program has assisted in the development of Long Term CSO Control Plans in Portland, Westbrook, and Cape Elizabeth.
 - The Draft Ottawa Road CSO Long Term Control Plan was submitted to Maine Department of Environmental Protection in December 2011 and was approved in September 2013. The 5-year plan began in 2014. The plan's projects are expected to lower the frequency and volume of overflow during extreme wet weather events by addressing private sources of infiltration and inflow in the collection systems of Cape Elizabeth and South Portland. Both the Town of Cape Elizabeth and the City of South Portland have completed an inventory of private sources of inflow & infiltration (I/I). Cape Elizabeth is currently working to install additional storm drainage to accommodate possible redirected private sources of I/I to the storm sewer system and has addressed 35 of 37 known sources of private I/I in 2018. South Portland completed work on Drew Rd. to separate known sources of I/I from homes.
 - Using data from the flow monitoring system, sources of seawater inflow to the Portland collection system are monitored and any increases are investigated to minimize the inflow of seawater. The Long Wharf Tide Gate was replaced to eliminate excessive inflow from the outlet. The tide gate replacement for India St. and the Northeast Outfall will further support the effort to mitigate seawater inflow. Seawater inflow accounts for approximately 5 - 8% of the annual treatment plant flow in Portland.
- Effluent Permits and East End Nutrient Optimization Efforts
 - The Cape Elizabeth Wastewater Treatment Facility permit was renewed in late 2016. The permit included a significant reduction in routine monitoring requirements due to the plant's historical performance relative to regulatory standards. Monitoring of effluent nitrogen was required from May through October 2017. Monthly monitoring from May through October 2019 was continued. The facility is generally able to reduce the effluent total nitrogen.
 - The East End Wastewater Treatment Facility permit was renewed in 2017. This effort included a number of stakeholders and the Department of Environmental Protection. The negotiated "nutrient optimization approach" for managing nitrogen includes effluent monitoring from May to October, operational efforts to reduce nitrogen (leveraging improvements made during the aeration system upgrade), and participation in the City of Portland's Integrated Planning efforts. The permit included a significant reduction in routine monitoring requirements due to the plant's historical performance relative to regulatory standards. From May through September 2019, a 67 percent reduction in effluent nitrogen was achieved (the target was a 20 to 40 percent seasonal reduction with 2018 at 72 percent).

Past Accomplishments (continued)

- The Westbrook/Gorham Regional Wastewater Treatment Facility permit was renewed in 2017. The permit included a significant reduction in routine monitoring requirements due to the plant's historical performance relative to regulatory standards along with monthly requirements to monitor effluent phosphorus during the summer months.
- The Peaks Island Wastewater Treatment Facility permit was renewed in 2017. The permit included a significant reduction in routine monitoring requirements due to the plant's historical performance relative to regulatory standards. Monitoring of effluent nitrogen was required from May through October. The facility is generally able to reduce the effluent total nitrogen.
- Westbrook/Gorham/Windham Regional Treatment Facility upgrades
 - The dewatering system was replaced in 2018 with a new screw press. In 2019, the equipment has operated as intended with a significant reduction in sludge disposed.
 - We expect that phosphorus (and possibly nitrogen) limits may be considered in future permit renewals, including the upcoming 2022 renewal. The design of the aeration system will consider this in design flexibility.
- Improvements to Pump Station reliability
 - PWD monitors all systems through a SCADA computer system. Treatment plants can be remotely operated from the East End Treatment Facility, the Westbrook/Gorham Regional Treatment Facility, or the Douglass St. Office during emergencies using the SCADA system.
 - To improve the reliability of systems during power interruption, PWD requires generators at new pump stations and has installed an average of 3 generators per year at its existing pump stations. The majority of pump stations that require emergency generators have been upgraded or have had generators installed during construction as part of our new infrastructure standards. Bypass connections are also installed to allow the stations to be serviced by a portable pumping unit if needed.
 - Staff completed an assessment of all pump stations in 2014. A summary report has been prepared for each community that PWD serves. These findings continue to guide the development and implementation of our long-range capital improvement program. The assessment is updated following station upgrades.
 - In 2016, treatment plant staff assumed daily operational responsibility for the Northeast Pump Station (located at the foot of the East End treatment plant). Treatment operators already assist with the daily operation of the Spurwink Pump Station in Cape Elizabeth and with the routine management of screenings at Westbrook pump stations.
 - The Fore River Pump Station pumps were replaced in 2017 with the second phase of the upgrade is underway.
 - The Dana Court Pump Station upgrade was completed in 2019. Final work to finish the upgrade continues.
 - The Northeast Pump Station was upgraded with an odor control system to manage odors from the facility. Coupled with the aeration upgrade at the East End Plant, and staff housekeeping efforts, odors from the facility have decreased significantly.

Past Accomplishments (continued)

- Wastewater Services Department changes
 - The Wastewater Operator apprentice program continues to train operators to assist with workforce management as pending retirements in the coming years. Operators from this program have moved into higher-level positions. The addition of laboratory training in 2016 further enhanced the program. Nearly 80% of our wastewater operators have been through the program and have subsequently advanced.
 - With the acceptance of full responsibility for the Industrial Pretreatment Program in Portland, the WW Systems crew has taken the lead in industrial sampling efforts to monitor industrial discharges.
 - With the retirement of one of the Chief Operators in 2017, the position of a Maintenance Manager (Planning and Scheduling) was created. This position assists Chief Operators and staff in the further refinement of operational scheduling and preventive maintenance efforts. This position will take a lead role in the upcoming asset management system replacement.
 - An Associate Engineer position was added to the Wastewater Services to assist with Capital Project Implementation and operational enhancement efforts. This position has also played a significant role in assisting with the management of the disinfection systems during our nitrogen reduction efforts.
- East End Wastewater Treatment Plant
 - The construction of the diffused air system at the East End treatment plant was completed in the summer of 2017. Staff has noted a significant reduction in odors from the aeration system and improved process performance.
 - One rotary press was rebuilt in 2017/2018. This has improved the performance of the system and solids concentrations have increased to just over 20%. Routine maintenance, at defined operating intervals, was scheduled in completed in 2019. Well maintained equipment is essential for efficient operation.
 - One primary clarifier was upgraded in 2018 with the remaining 2 clarifiers ongoing in 2019.
 - New local limits for BOD and TSS were implemented in 2017. The aeration system improvements have resulted in increased monthly allowable loadings and the program has been changed to regulate the mass discharge of high strength waste dischargers. This has eliminated the screening uniform local limit that challenged a number of dischargers. This change is still protective of the treatment plant.
 - An on-line ammonia analyzer was installed to enable staff to continuously monitor effluent nitrogen levels during our nutrient optimization efforts.

2020 Projects and Initiatives

B1 – Administration

- We continue to monitor changing regulations related to phosphorus, nitrogen, and high flow management. With the renewal of permits at the treatment plants, we will monitor efforts that could affect the next permit in 2022.
- The City of Portland has embarked on a two-year Integrated Planning effort to prioritize water quality commitments. This effort will assess combined sewer, stormwater, and wastewater treatment obligations and prioritize the use of resources to address the various efforts with a goal of improving receiving water quality. Staff is engaged in this effort.
- Staff will continue to work closely with our municipal partners in the planning and execution of Long Term Control Plans and other efforts to further manage and mitigate peak wet weather flows. The City of Westbrook has been very active in the implementation of a number of projects that are expected to reduce wet weather flows.
- With the completion of the Island Avenue sewer extension project and eventual connect of those customers adjacent to the new sewer, the capacity in the treatment plant on Peaks Island has essentially been reached. In 2018, an analysis of the current capacity, along with suggested upgrades or opportunities for capacity improvements was completed. The Peaks Island Plant has reached the full capacity with I/I reductions likely providing the greatest opportunity for further capacity.
- A “nutrient optimization” report that describes the efforts and challenges of the plant’s efforts to attempt to manage the effluent nitrogen loading was completed in 2018. This is a requirement of the 2017 permit. While there have been some disinfection system struggles due to the impact of ammonia removal, the plant has achieved an average of 72 percent reduction in historical nitrogen loading from May to September in 2018 and to date in 2019 has realized a 67 percent reduction in effluent nitrogen loading.
- Staff participated in the Casco Bay Estuary Partnership’s Nutrient Council. The final report identifies challenges, suggested efforts, and recommendations to address nutrient levels in Casco Bay.

B3, L9 – Operations

- Treatment Plant Operators continue to focus on effluent compliance including making process control adjustments to the operation of the treatment plant as needed, most recently in efforts to manage effluent nitrogen from the Cape Elizabeth, Peaks Island, and East End WWTFs.
- The operations team continues to focus on implementing safe work practices throughout the workplace. Focus areas include confined space, lock-out tag-out programs, electrical safety, and the regular use of personal protective equipment by staff. The new Maintenance Manager (Planning and Scheduling) will help to move this effort forward.
- Staff continues to work to manage odors from our treatment facilities. The number of odor complaints has been reduced significantly.
- In 2016, wastewater systems acquired a new Vactor 2100 series truck that replaced the 13-year-old vactor truck. The addition of this truck will further enable operations crews to maintain wet wells, clean lines, and remove debris from catch basins. A new remote control feature and longer reach with its “snorkel” have already proven useful, allowing operators to access difficult sites in a safe manner more readily. After a brief adjustment period, staff is now very comfortable with the new truck. This unit has been used to regularly maintain and clean our systems.
- Systems staff has taken a lead role in the sampling efforts required by the Industrial Pretreatment Program in Portland and Westbrook/Gorham.

2020 Projects and Initiatives (continued)

Corporate Goal – Reliability

B1 – Administration

- Assist with the implementation of SCADA Standards through regular coordination with AMaP and Operations staff.

B3, L9 – Operations

- The Maintenance Manager (Planning and Scheduling) is helping to further refine the preventive maintenance program as the new Maintenance Management Computer system is implemented.
- Continue developing preventive maintenance practices that lead to or exceed a 75%/25% mix of preventive to corrective work order history. It is anticipated that the new asset management system will further enhance these efforts.
- Monitor pump system's ability to minimize pump station downtime. The installation of generators at key pump stations along with bypass pumping connections helps to minimize service interruptions.
- As part of the Maintenance Manager (Planning and Scheduling)'s responsibilities, our preventive maintenance program continues to be enhanced. This will include a review of the workload and assignment of work. Part of this review includes the review of current staff utilization and the need for additional staffing or resources. This will include a review of resources that might include remote access capability to obtain information on equipment and processes.
- Continue the condition assessment program of combining line cleaning and CCTV inspection of 10% of each community's buried infrastructure. We completed assessment of our entire buried sewer infrastructure by the end of 2018. The results are being evaluated and staff will develop a monitoring plan over the next two years.
- The Peaks Island Facility Controls were upgraded in 2013 to further enhance the operation of the plant and to allow for improved remote operation of the facility. In the spring of 2015, a new ultraviolet (UV) treatment system was installed at the Peak's Island facility. This has improved the disinfection system significantly.
- In 2016, an evaluation of the electrical distribution systems at each treatment plant was completed. This resulted in a prioritized plan to address these aging and critical systems. The first projects from this assessment are currently under design. A recent agreement with Central Maine Power to site a substation at the plant has revised the scope of the project. Enhancement of the in-plant electrical distribution will be completed.
- A comprehensive evaluation of the HVAC systems at each treatment plant began in 2016. This evaluation identified aging systems in need of refurbishment and replacement. The project included a review of energy management in the recommendation of future projects. The first projects from this assessment are currently preparing for bidding and construction.

2020 Projects and Initiatives (continued)

Corporate Goal – Affordability

B1 – Administration

- The EEWTF continues to participate in electricity Demand Response through ISO New England and receives roughly \$7,000 for its participation.
- Work with operations staff to manage overtime and off-shift coverage.

B3, L9 – Operations

- Manage departmental budgets with area supervisors that lead to cost savings measures, i.e. improved dewatered solids at the Westbrook/Gorham and East End WWTFs, station visits, chemical use, etc. Major budget items, including chemicals, power, biosolids, and others are monitored using the WIMS data management system to monitor and control operations and budgets.
- Continue to implement process control measures in the operation of wastewater treatment facilities. Operations Plans have been developed for each facility and an on-line computer based Operations Manuals continue to be updated to serve as guidance for the Operations Team.
- Continue to support the use of the District's asset management systems to efficiently manage equipment and systems. Operations staff and maintenance staff are working with the AMaP Department to complete our asset inventory and to develop preventive maintenance tasks for each facility. Engineering interns completed the plant water system in the summer of 2019.

Corporate Goal – Environment

B1 – Administration

- Continue to monitor existing performance and developing regulations.

B3, L9 – Operations

- Treatment and Systems teams work to ensure facilities operate in accordance with permit requirements.
- Through process control enhancements at the Peaks Island and Cape Elizabeth WWTF's, these plants are managing effluent nitrogen levels. With the upgraded aeration system and the requirement for a "nutrient optimization approach" at the East End, efforts to manage and monitor effluent nitrogen began 2018. The configuration of these plants has made this possible with minor control upgrades and the process control enhancements. This will not be possible at the Westbrook/Gorham/Windham Regional WWTF without significant capital investment.
- Beginning in 2016, our goal is zero exceedances each year from all treatment plants. This goal continues to direct our operational and compliance efforts into the future.
- The developing concern over a class of chemicals referred to as PFAS will present challenges to the management of biosolids generated through wastewater treatment statewide. Staff is engaged locally, regionally, and nationally in ongoing efforts to manage biosolids given the awareness of PFAS.

2020 Projects and Initiatives (continued)

Corporate Goal – Employees and Work Environment

B1 – Administration

- Promote the District's professional development program of a minimum 80 hours of training each year.
- In 2016, the Wastewater Study Group was created. This monthly session involves operators in hands-on learning designed to prepare operators for certification exams and their daily activities in our treatment plants and systems. This group continues to meet and the class content is currently being refined.
- Operators are encouraged to obtain required licenses and to continue with advanced licenses for wastewater treatment and collections.

B3, L9 – Operations

- Provide support to employees through annual performance reviews and regular support.
- Following injuries during the opening of manhole covers, and at the suggestion of employees, additional manhole cover opening magnets will be purchased. Once provided, staff will be expected to use the equipment to more safely lift and secure these heavy covers.
- Develop and maintain a safe working environment in each area of responsibility. Develop wastewater operators through the apprentice program; operators rotate through systems, treatment plants, the wastewater laboratory, and the Water Services Department.
- To ensure safety of our employees near chemical storage facilities and other identified areas, an investment in forced air personal respirator systems was made in 2019. This will enhance our ability to implement an aggressive painting and maintenance program in our facilities.

Financial Overview

The Wastewater Services Group continues to operate with a goal of delivering effective services at reasonable costs to its member communities. Overall, the 2020 budget total includes an increase of \$581,493 to \$10,149,276. This is a 6.1% increase from the 2019 budget.

Salaries/Wages: Overall budgeted staffing have remained consistent. Maintenance support for all treatment plants continues to come from the central treatment maintenance group at the East End treatment plant with these efforts coordinated through our Maintenance Manager. Overall, this category has increased by \$91,063 or 3.8%.

Biosolids Disposal: The total budget for the hauling and management of biosolids generated from the treatment of wastewater has increased by \$47,204 in 2020 or 2.8%. The budgeted % Total Solids from the East End WWTF has been lowered slightly to 21.5%, with current performance approaching this budget goal. The Westbrook/Gorham/Windham Regional WWTF dewatering project has increased performance of the system, which has contributed to lower costs. Overall, biosolids management costs are projected to increase to \$1,722,166. An increase of approximately \$50,000 is related to an increased fee from our vendor related to statewide management of biosolids impacted by PFAS concerns.

Chemicals: Generally, chemicals are used at each of our facilities to treat and disinfect the treated wastewater before being discharged to the environment, to aid in dewatering biosolids, and for odor control. Overall, the total budget for chemicals has increased by \$98,452 or 14.8% from the 2019 budget. Operators and our plant control systems closely monitor chemical use at all facilities.

Contracted Services: Contracted services include the costs of the Falmouth and South Portland treatment plants to treat flows conveyed by PWD from Cumberland and Northern Cape Elizabeth. Contracted Services also includes a maintenance agreement related to the CSO monitoring services. The budget amount decreased by \$119,220 or 9.9% from the 2019 budget.

Heat/Fuel Oil: The East End treatment plant converted from fuel oil to natural gas in 2012. Natural gas use is continually monitored and recorded by the SCADA control system. For 2019, the budget has increased 24.1% or \$39,554. The total budget is \$1,326,458.

Purchased Power: The power budget has been increased by \$127,232 or 9.5% in the 2020 budget.

Transportation: The transportation budget has decreased by \$5,389 from the 2019 budget. This 2.1% decrease results in a budget amount of \$245,315.

Wastewater Services: Total

Financial Summary:

Column 1	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Sub-Group:						
B1 - Wastewater Administration	\$276,256	\$163,527	\$377,948	\$378,779	\$831	0.2%
B3 - Wastewater Treatment	6,695,012	3,359,840	6,543,258	6,974,559	431,301	6.6%
L9 - Wastewater Systems	2,641,473	1,206,839	2,646,577	2,795,938	149,361	5.6%
Grand Total	9,612,741	4,730,206	9,567,783	10,149,276	581,493	6.1%
Expense Type:						
Salaries & Wages	\$2,224,649	\$1,069,881	\$2,413,257	\$2,504,320	\$91,063	3.8%
Employee Benefits	1,074,541	501,430	1,149,362	1,140,749	-8,613	-0.7%
Biosolids Disposal	1,790,923	923,853	1,674,962	1,722,166	47,204	2.8%
Chemicals	599,274	401,477	666,360	764,812	98,452	14.8%
Contracted Services	1,277,104	498,753	1,207,238	1,326,458	119,220	9.9%
Heat/Fuel Oil	165,093	109,962	164,393	203,947	39,554	24.1%
Insurance	41,654	22,004	38,771	44,729	5,958	15.4%
Materials & Supplies	421,994	160,129	434,036	448,610	14,574	3.4%
Other Expense	100,831	47,868	78,210	104,610	26,400	33.8%
Purchased Power	1,489,076	771,006	1,336,897	1,464,129	127,232	9.5%
Tele/Other Utilities	180,730	105,346	153,593	179,431	25,838	16.8%
Transportation	246,872	118,498	250,704	245,315	-5,389	-2.1%
Grand Total	9,612,741	4,730,206	9,567,783	10,149,276	581,493	6.1%
Headcount:						
Full Time	38	39	39	39	0	0.0%
Part Time	0	0	0	0	0	n/a
Total	38	39	39	39	0	0.0%

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
660111 - SALARIES/WAGES NON-UNION	\$330,302	\$181,492	\$399,599	\$405,830	\$6,231	1.6%
660121 - WAGES/REGULAR UNION	1,694,882	802,010	1,814,726	1,884,342	69,616	3.8%
660122 - WAGES/OVERTIME UNION	130,125	60,558	140,469	144,441	3,972	2.8%
660123 - WAGES/DOUBLETIME UNION	13,733	5,290	18,019	19,217	1,198	6.6%
660124 - WAGES/STANDBY TIME UNION	36,723	17,506	32,044	40,410	8,366	26.1%
660131 - WAGES - REGULAR - TEMPS	2,128	3,024	8,400	10,080	1,680	20.0%
66014 - VACATION ACCRUAL	9,962	-	-	-	-	-
66015 - SICKTIME ACCRUAL	6,793	-	-	-	-	-
Salaries & Wages Total	2,224,649	1,069,881	2,413,257	2,504,320	91,063	3.8%
Employee Benefits						
660401 - FICA - EMPLOYERS' SHARE	169,633	81,422	184,621	191,583	6,962	3.8%
660405 - SAFETY/WHY PROGRAM ITEMS	6,611	1,558	6,200	7,800	1,600	25.8%
660411 - MEALS ALLOWANCE	100	90	450	450	-	0.0%
660413 - PWD TRAINING PROGRAM	58	-	-	-	-	-
6604151 - FIELD UNIFORMS	-	-	90	90	-	0.0%
660418 - STIPENDS	4,000	2,800	4,600	4,600	-	0.0%
660419 - EMPLOYEE BENEFITS-MISC OTH	7,334	200	4,343	3,200	(1,143)	-26.3%
660491 - FRINGE BENEFITS-REG/SAL	886,805	415,359	949,058	933,026	(16,032)	-1.7%
Employee Benefits Total	1,074,541	501,430	1,149,362	1,140,749	(8,613)	-0.7%
Biosolids Disposal						
663571 - BIOSOLIDS DISPOSAL	1,790,923	923,853	1,674,962	1,722,166	47,204	2.8%
Biosolids Disposal Total	1,790,923	923,853	1,674,962	1,722,166	47,204	2.8%
Chemicals						
661811 - SODIUM BICARBONATE	15,386	8,530	14,620	13,800	(820)	-5.6%
661812 - SODIUM BISULFITE	116,799	82,694	172,100	217,846	45,746	26.6%
6618121 - SODIUM BISULFITE-ACCRUAL	4,189	(4,934)	-	-	-	-
66182 - CAUSTIC SODA	278	4,729	5,270	7,250	1,980	37.6%
661821 - CAUSTIC SODA - ACCRUAL	-	(502)	-	-	-	-
66185 - SODIUM HYPOCHLORITE	225,648	121,990	277,100	255,013	(22,087)	-8.0%
661851 - SODIUM HYPO - ACCURAL	14,160	(14,726)	-	-	-	-
66189 - POLYMER	222,814	198,721	195,270	256,765	61,495	31.5%
661899 - OTHER CHEMICALS	-	4,976	2,000	14,138	12,138	606.9%
Chemicals Total	599,274	401,477	666,360	764,812	98,452	14.8%
Contracted Services						
6631 - ENGINEERING SERVICES	26,698	18,483	82,500	100,000	17,500	21.2%
663521 - TRAFFIC CONTROL	693	1,340	550	800	250	45.5%
6635221 - PAVING - MINOR REPAIR	484	-	-	-	-	-
663525 - CONTRACTOR CONSTRUCTION	71,086	21,989	25,500	45,500	20,000	78.4%
66353 - REPAIR SERVICES	9,229	3,231	13,000	13,000	-	0.0%
66354 - MAINTENANCE SERVICES	271,983	147,822	232,196	291,796	59,600	25.7%
663543 - CSO FLOW MONITORING	102,880	-	156,375	156,375	-	0.0%
663544 - MAINT SERVICES - CCTV	76,300	-	65,350	61,250	(4,100)	-6.3%
663546 - MAINTENANCE - SNOW REMOVL	49,885	25,244	52,300	55,700	3,400	6.5%
663547 - WASTE SLUDGE TRANSPORT	39,859	12,950	32,000	33,800	1,800	5.6%
663551 - LAB ANALYSIS	804	1,510	1,600	1,600	-	0.0%
663561 - COMPUTER LICENSES	34,882	27,642	35,324	38,397	3,073	8.7%
663562 - COMPUTER MAINTENANCE	-	356	-	-	-	-
663572 - GRIT & SCREENS DISPOSAL	41,327	17,235	74,450	74,450	-	0.0%
663573 - GREASE DISPOSAL	25,549	9,824	30,200	30,700	500	1.7%
663574 - DISPOSAL SERVICES	10,070	5,650	6,170	7,800	1,630	26.4%
663585 - TREATMENT CONTRACT SERVIC	510,730	198,967	395,483	410,470	14,987	3.8%
6635851 - WW DEWATERING SERVICES	3,998	1,674	5,100	5,020	(80)	-1.6%
6635852 - WW DEWATERING SRVS CREDIT	(3,998)	(1,674)	(5,500)	(5,000)	500	-9.1%
663587 - COURIER SERVICES	4,447	2,283	4,640	4,800	160	3.4%
663599 - MISC OTHER SERVICES	199	3,981	-	-	-	-
6640 - RENTAL-PROPERTY/EQUIPMENT	-	248	-	-	-	-
Contracted Services Total	1,277,104	498,753	1,207,238	1,326,458	119,220	9.9%

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Heat/Fuel Oil						
66161 - HEATING OIL	\$29,378	\$21,854	\$27,884	\$27,635	(\$249)	-0.9%
661621 - PIPELINE DELIVERED PROPAN	85,581	49,065	106,196	109,022	2,826	2.7%
661622 - CONTAINER DELIVERED	49,617	38,911	29,763	66,740	36,977	124.2%
66166 - UNLEADED GAS	516	132	550	550	-	0.0%
Heat/Fuel Oil Total	165,093	109,962	164,393	203,947	39,554	24.1%
Insurance						
66599 - PROPERTY & BOILER INSUR	41,654	22,004	38,771	44,729	5,958	15.4%
Insurance Total	41,654	22,004	38,771	44,729	5,958	15.4%
Materials & Supplies						
6619 - ASSET PURCHASES	94,881	46,952	102,000	153,000	51,000	50.0%
66202 - TOOLS	13,352	6,288	7,000	7,300	300	4.3%
66203 - VENDOR PURCHASED SUPPLIES	184,797	36,786	217,288	184,150	(33,138)	-15.3%
662041 - MATERIALS INVENTORY	65,933	36,435	46,925	47,925	1,000	2.1%
662042 - SUPPLIES INVENTORY	33,423	19,496	28,635	29,035	400	1.4%
66204201 - INVENTORY - QPR	-	145	-	-	-	
66204206 - INVENTORY - TYPE A GRAVEL	87	196	-	-	-	
662043 - TOOL INVENTORY	21,681	10,525	13,575	15,075	1,500	11.0%
66204301 - INVENTORY - TONER	90	74	-	-	-	
66204303 - INVENTORY-COMPUTER EQUIP	1,362	666	6,088	5,300	(788)	-12.9%
662047 - GARAGE INVENTORY	1,684	821	2,175	2,175	-	0.0%
66205 - CONSUMABLE SUPPLIES	2,457	39	650	650	-	0.0%
66206 - COMPUTER RELATED EQUIP	2,247	1,706	9,700	4,000	(5,700)	-58.8%
Materials & Supplies Total	421,994	160,129	434,036	448,610	14,574	3.4%
Other Expense						
6642 - EQUIPMENT RENT	24,489	27,757	500	1,250	750	150.0%
66609 - OTHER ADVERTISING	225	-	350	350	-	0.0%
6675111 - INSTATE TRAINING/CONF	12,326	13,477	18,750	23,800	5,050	26.9%
6675112 - OUT OF STATE TRAINING/CON	2,518	3,974	8,750	10,950	2,200	25.1%
667513 - DUES	12,535	3,230	12,800	12,800	-	0.0%
667514 - PROFESSIONAL LICENSES	3,341	1,100	2,480	2,480	-	0.0%
667515 - PERIODICAL SUBSCRIPTIONS	520	274	250	250	-	0.0%
667516 - PERMITS	27,409	5,677	26,500	26,500	-	0.0%
667517 - PLANT OPER LICENSE FEES	-	-	-	75	75	n/a
667518 - REGULATORY REQUIRED FEES	10,049	-	14,000	14,000	-	0.0%
667519 - REGULATORY FINES	16,500	-	-	-	-	0.0%
667521 - POSTAGE - THIRD PARTY	43	281	75	75	-	0.0%
667522 - POSTAGE - INTERNAL	28	16	100	100	-	0.0%
667523 - POSTAGE - EXPRESS DELIVER	412	407	500	500	-	0.0%
667531 - PRINTING COSTS	105	770	-	-	-	
667533 - FORMS STOCK	-	-	400	400	-	0.0%
667552 - SAFETY TRAINING	1,891	382	1,500	1,500	-	0.0%
667555 - SAFETY EXPENSES	7,273	16,500	12,825	33,650	20,825	162.4%
667581 - ANNUAL LAND CONTRIB CAPE	2,500	2,500	2,500	-	(2,500)	-100.0%
667592 - FOOD SUPPLIES	1,683	256	500	500	-	0.0%
667599 - OTHER MISCELLANEOUS	383	52	-	-	-	
6676 - EXPENSE OFFSET	(23,400)	(12,285)	(24,570)	(24,570)	-	0.0%
Other Expense Total	100,831	47,868	78,210	104,610	26,400	33.8%

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Purchased Power						
66151 - POWER - LARGE ENERGY	\$329,382	\$191,192	\$347,986	\$362,745	\$14,759	4.2%
66152 - POWER - LARGE T&D	403,979	183,461	346,798	413,518	66,720	19.2%
66153 - POWER - MEDIUM ENERGY	290,448	149,120	238,458	252,897	14,439	6.1%
66154 - POWER - MEDIUM T&D	171,344	94,707	142,490	182,059	39,569	27.8%
66155 - POWER - SMALL ENERGY	43,868	25,604	34,132	45,246	11,114	32.6%
66156 - POWER - SMALL T&D	47,826	28,568	43,173	53,150	9,977	23.1%
66157 - POWER - OTHER CHARGES	74,245	29,929	69,425	66,874	(2,551)	-3.7%
66158 - LOAD RESPONSE	(4,540)	84	(6,300)	(1,300)	5,000	-79.4%
66159 - POWER - CAPACITY	132,525	68,341	120,735	88,940	(31,795)	-26.3%
Purchased Power Total	1,489,076	771,006	1,336,897	1,464,129	127,232	9.5%
Tele/Other Utilities						
66101 - WATER	88,765	45,209	75,732	86,324	10,592	14.0%
66102 - WASTEWATER	51,032	30,728	37,202	52,938	15,736	42.3%
66103 - STORMWATER CHARGES	17,564	10,666	18,217	18,393	176	1.0%
66112 - DATA LINES	16,904	13,151	16,120	14,376	(1,744)	-10.8%
66113 - CELLULAR PHONES	6,284	5,592	6,024	7,200	1,176	19.5%
66114 - PAGERS	180	-	298	200	(98)	-32.9%
Tele/Other Utilities Total	180,730	105,346	153,593	179,431	25,838	16.8%
Transportation						
66501 - TRANSPORTATION - INTERNAL	134,599	69,358	163,271	161,955	(1,316)	-0.8%
665019 - TRANS INTERNAL INACTIVE	91,976	39,346	71,139	66,185	(4,954)	-7.0%
66502 - TRANSPORTATION - EXTERNAL	18,851	7,790	14,800	15,300	500	3.4%
66503 - MILEAGE REIMBURSEMENT	1,446	2,003	1,494	1,875	381	25.5%
Transportation Total	246,872	118,498	250,704	245,315	(5,389)	-2.1%
Grand Total	9,612,741	4,730,206	9,567,783	10,149,276	581,493	6.1%

Wastewater Services: Wastewater Administration (B1)

Financial Summary:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$167,746	\$101,532	\$238,939	\$240,385	\$1,446	0.6%
Employee Benefits	90,099	51,780	121,960	117,423	(4,537)	-3.7%
Contracted Services	-	22	500	500	-	0.0%
Materials & Supplies	527	416	150	150	-	0.0%
Other Expense	14,909	7,458	15,030	18,355	3,325	22.1%
Tele/Other Utilities	1,745	989	1,200	1,416	216	18.0%
Transportation	1,231	1,331	169	550	381	225.4%
Grand Total	276,256	163,527	377,948	378,779	831	0.2%
Programs:						
41 - Pretreatment	-	209	-	-	-	
98 - Training	10,656	17,143	14,333	20,218	5,885	41.1%
99 - Administration	265,600	146,176	363,615	358,561	(5,054)	-1.4%
Grand Total	276,256	163,527	377,948	378,779	831	0.2%
Funds:						
10 - General	57	197	-	-	-	
50 - Wastewater General	276,199	163,122	377,948	378,779	831	0.2%
62 - WW Westbrook	-	209	-	-	-	
Grand Total	276,256	163,527	377,948	378,779	831	0.2%
Headcount:						
Full-Time	2	3	3	3	0	0.0%
Part-Time	0	0	0	0	0	n/a
Total	2	3	3	3	0	0.0%

Wastewater Services: Wastewater Treatment Plants (B3)

Financial Summary:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$1,330,940	\$616,993	\$1,380,616	\$1,442,886	\$62,270	4.5%
Employee Benefits	619,549	279,340	645,428	645,702	274	0.0%
Biosolids Disposal	1,790,923	923,853	1,674,962	1,722,166	47,204	2.8%
Chemicals	599,274	396,501	666,360	752,674	86,314	13.0%
Contracted Services	725,435	311,516	605,158	688,392	83,234	13.8%
Heat/Fuel Oil	152,431	96,764	146,284	183,409	37,125	25.4%
Insurance	22,961	11,601	22,664	24,827	2,163	9.5%
Materials & Supplies	251,017	112,119	298,848	330,260	31,412	10.5%
Other Expense	68,905	27,113	40,930	64,005	23,075	56.4%
Purchased Power	939,571	479,330	899,140	934,010	34,870	3.9%
Tele/Other Utilities	118,254	68,292	92,522	116,576	24,054	26.0%
Transportation	75,752	36,418	70,346	69,652	(694)	-1.0%
Grand Total	6,695,012	3,359,840	6,543,258	6,974,559	431,301	6.6%
Programs:						
44 - WW Pumping	26,079	19,698	27,763	16,827	(10,936)	-39.4%
45 - WW Treatment	6,173,728	3,130,229	6,101,314	6,480,859	379,545	6.2%
47 - Septage Pumping	4	17	-	-	-	
63 - Sample Analysis	-	-	-	6,708	6,708	n/a
98 - Training	84,093	31,289	101,781	105,688	3,907	3.8%
99 - Administration	411,108	178,333	312,400	363,199	50,799	16.3%
97 - Internal Admin	-	273	-	1,278	1,278	n/a
Grand Total	6,695,012	3,359,840	6,543,258	6,974,559	431,301	6.6%
Funds:						
10 - General	-	-	-	319	319	n/a
50 - Wastewater General	495,202	209,896	414,181	476,554	62,373	15.1%
51 - WW Cape Elizabeth	426,849	198,371	430,098	460,778	30,680	7.1%
53 - WW Cumberland	358	-	1,678	2,051	373	22.2%
57 - WW Portland	4,593,400	2,400,279	4,588,321	4,831,664	243,343	5.3%
61 - WW Gorham	98	-	4,195	2,051	(2,144)	-51.1%
62 - WW Westbrook	1,743	704	4,694	3,007	(1,687)	-35.9%
64 - WW Joint Westbrook	1,013,775	481,159	894,083	997,462	103,379	11.6%
65 - WW Joint LF	327	82	-	-	-	
66 - WW Peaks Island	163,259	69,350	206,008	200,673	(5,335)	-2.6%
Grand Total	6,695,012	3,359,840	6,543,258	6,974,559	431,301	6.6%
Headcount:						
Full-Time	23	23	23	23	0	0.0%
Part-Time	0	0	0	0	0	n/a
Total	23	23	23	23	0	0.0%

Wastewater Services: Wastewater Systems (L9)

Financial Summary:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$725,963	\$351,356	\$793,702	\$821,049	\$27,347	3.4%
Employee Benefits	364,894	170,310	381,974	377,624	(4,350)	-1.1%
Chemicals	-	4,976	-	12,138	12,138	n/a
Contracted Services	551,670	187,215	601,580	637,566	35,986	6.0%
Heat/Fuel Oil	12,662	13,198	18,109	20,538	2,429	13.4%
Insurance	18,693	10,403	16,107	19,902	3,795	23.6%
Materials & Supplies	170,450	47,594	135,038	118,200	(16,838)	-12.5%
Other Expense	17,016	13,297	22,250	22,250	-	0.0%
Purchased Power	549,505	291,676	437,757	530,119	92,362	21.1%
Tele/Other Utilities	60,731	36,065	59,871	61,439	1,568	2.6%
Transportation	169,890	80,749	180,189	175,113	(5,076)	-2.8%
Grand Total	2,641,473	1,206,839	2,646,577	2,795,938	149,361	5.6%
Programs:						
30 - Maintenance	24	-	-	-	-	
39 - Compost Site	1,082	82	-	-	-	
41 - Pretreatment	2,621	6,301	25,173	45,396	20,223	80.3%
44 - WW Pumping	1,873,531	849,129	1,872,073	2,029,089	157,016	8.4%
45 - WW Treatment	184,408	99,155	237,727	225,606	(12,121)	-5.1%
90 - Vehicles	26,996	13,321	25,991	23,171	(2,820)	-10.8%
95 - Douglass Street	20,777	10,933	15,727	21,428	5,701	36.2%
98 - Training	77,239	31,343	63,746	64,229	483	0.8%
99 - Administration	454,795	196,574	406,140	387,019	(19,121)	-4.7%
Grand Total	2,641,473	1,206,839	2,646,577	2,795,938	149,361	5.6%
Funds:						
10 - General	29,279	13,361	22,424	29,225	6,801	30.3%
20 - Water General	2,770	-	7,864	4,323	(3,541)	-45.0%
50 - Wastewater General	593,053	272,052	532,356	505,972	(26,384)	-5.0%
51 - WW Cape Elizabeth	293,138	140,754	310,378	331,264	20,886	6.7%
53 - WW Cumberland	389,357	198,965	350,275	389,139	38,864	11.1%
55 - WW Windham LF	37,157	14,462	41,249	40,238	(1,011)	-2.5%
57 - WW Portland	678,628	298,025	793,474	836,724	43,250	5.5%
61 - WW Gorham	189,853	74,522	165,185	185,895	20,710	12.5%
62 - WW Westbrook	134,368	74,951	152,461	175,049	22,588	14.8%
64 - WW Joint Westbrook	119,572	64,796	122,989	143,711	20,722	16.8%
65 - WW Joint LF	95,075	43,290	66,170	75,856	9,686	14.6%
66 - WW Peaks Island	79,223	11,661	81,752	78,542	(3,210)	-3.9%
Grand Total	2,641,473	1,206,839	2,646,577	2,795,938	149,361	5.6%
Headcount:						
Full-Time	13	13	13	13	0	0.0%
Part-Time	0	0	0	0	0	n/a
Total	13	13	13	13	0	0.0%

Environmental Services



Employee Shelter at the Standish Boat Launch

The District collaborated with the Town of Standish to construct this shelter for boat launch employees at the Standish Boat launch. It includes storage for handouts and other materials, an air conditioner and refrigerator so employees can take a break from the hot sun and drink something cold periodically during a shift, and safety equipment. From the porch of the structure, a District or town attendant can be out of the direct sun and see the boat launch and shorefront.

Environmental Services – Purpose Statement

Environmental Services is organized to monitor and protect water quality from watershed to tap and wastewater from collection to discharge.

Core Services

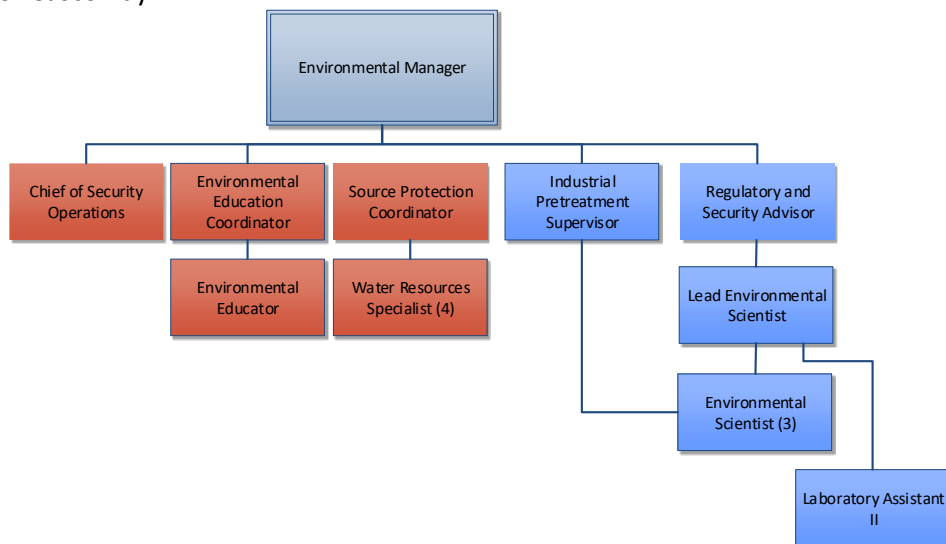
Environmental Services has five core areas of focus:

Water Resources Group (A5; red in the organization chart)

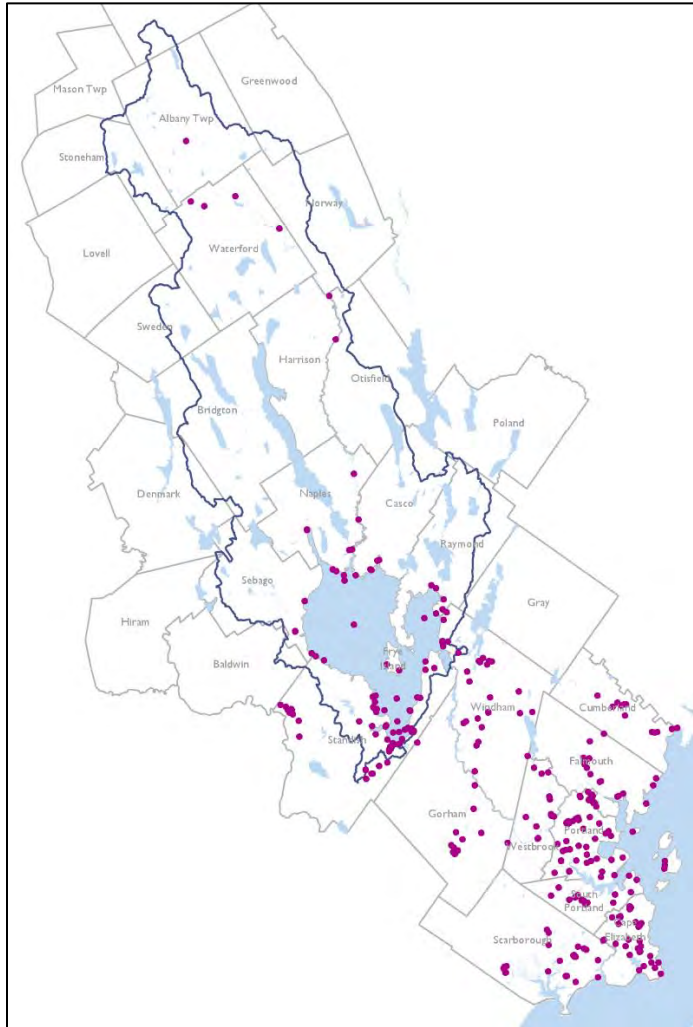
1. The Source Protection section monitors Sebago Lake and the watershed, inspects development projects in the watershed to minimize their impact, works with watershed partners to install pollution prevention and mitigation projects, and works with watershed land trusts to help landowners seeking to conserve their land in perpetuity.
2. The Environmental Education section communicates water quality and environmental principles to children and adults throughout the watershed and service area with the goal of encouraging public stewardship of our water resources.
3. The Security section provides for the daily protection of Sebago Lake by patrolling Lower Bay and enforcing the rules of access to the Sebago Lake Land Reserve and also coordinates the District's Preparedness and Emergency Response activities.

Laboratory Services Group (L6; blue in organization chart)

4. The Environmental Laboratories ensure the proper collection, analysis and reporting of water, wastewater and biosolids samples both for compliance purposes and to support the proper functioning of water and wastewater operations. The group ensures the proper maintenance and calibration of laboratory sampling and monitoring equipment at all five of the District's laboratories.
5. The Industrial Pretreatment Program (IPT) staff are responsible for permitting, monitoring and initiating enforcement actions for sewer customers who discharge significant quantities of non-domestic wastewater to the sewer collection system. The IPT programs are designed to ensure discharges from industrial users do not impact District operations or pollute the Presumpscot River or Casco Bay.



Key Statistics



A map illustrating all of the District's drinking water quality sampling locations from watershed to tap.

Watershed Monitoring Programs: 12

Annual Watershed Inspections: 400

Individuals reached through Education and Outreach programs:
More than 10,000 annually

Annual Land Reserve Day-use Visits:
21,000

Land Reserve Violations Issued: 300

Annual Lower Bay Patrol Hours: 2100

Annual Lower Bay Violators Cited: 90

Accredited Laboratory Analytes: 74

Average Annual Customer Water Quality
Inquiries: 270

IPT Industries Regulated: 41

Performance Benchmarks

Annual Program Metrics – Environmental Services	2019 Actual	2020 Projected
% Verified - Water Quality Inquiries	26	26
Shore Land Zone Inspections	375	375
Watershed Properties Improved or Recommendations Made	25	25
Lower Bay Water Violations	42	60
Land Reserve Visitors	28,424	30,000
Land Reserve Violations	370	400
Visitors per Land Reserve Violation	77	75
Accredited Laboratory Analytes	74	74
Students Served by WaterWays In-School Program	1,013	1,000
Outreach Events and Presentations Organized by PWD	43	40
Industrial Pretreatment Notices of Violation Issued	28	28

Past Accomplishments:

Source Protection since 2000:

- Completed nearly 9,800 watershed inspections.
- Provided Lakescaping Reports to 494 watershed properties.
- Financially supported water quality-related improvements to 195 properties.
- Awarded more than \$226,000 in Lake Stewards Grants which, when combined with matching funds, resulted in more than \$871,000 in improvements to the shore land zone of Sebago Lake
- Maintained 12 ongoing lake and watershed monitoring programs.
- Reviewed plans for more than 166 large developments and, when necessary, provided planning board feedback in an effort to minimize the impact of these projects.
- Responded to 476 complaints, 169 of which prevented or mitigated environmental violations and/or pollution.
- Contributed more than \$900,000 to assist in the conservation by area land trusts of 5,800 acres of land in the watershed.

Education and Outreach since 2000:

- Produced 30 Watershed News newsletters and 5 State of the Lake reports.
- Distributed more than 62,000 Sebago Lake maps and 15,100 “Images of Sebago Lake” calendars to watershed residents and visitors.
- Distributed more than 56,700 other types of brochures and fact sheets to watershed residents and visitors.
- Posted over 380 lake protection related messages on Facebook to an audience that began at 490 in 2013 and has increased to over 2,300 followers.
- Sent 43 mass emails about source protection events, publications, and information to a recipient list that started in 2015 with 1,100 email addresses and has increased to over 3,200.
- Taught source protection principles to approximately 18,000 middle school-aged students through our HydroLogics and WaterWays in-school education programs.
- Provided environmental education to approximately 37,000 additional children, teachers, and adults through tours, events, workshops, field trips, lessons, providing resources, and programs.

Water Resources Security since 2005:

- Patrolled Lower Bay by boat and attended the Standish Boat Launch for approximately 24,360 hours combined.
- Patrolled the Sebago Lake Land Reserve by using an all-terrain vehicle (Extended Security patrol) for approximately 1,490 hours combined.
- Issued more than 1823 warnings for violation of water contact regulations
- Recorded 187,177 day-use visits to the Sebago Lake Land Reserve.
- Issued more than 3,235 warnings for violation of Land Reserve Rules.
- Suspended privileges to visit Land Reserve of 42 individuals for aggravated or multiple Land Reserve Rule violations.

Past Accomplishments (continued)

Environmental Laboratories since 2000:

- Combined the water and wastewater laboratories into one functioning unit with shared resources, staff, and expertise.
- Consolidated to East End laboratory the daily wastewater analyses for the four wastewater treatment facilities in order to improve consistency and reduce duplication of quality control requirements.
- Modified laboratory procedures as needed to meet evolving EPA and state standards to maintain accreditation for water and wastewater analyses.
- Consistently analyzed performance testing samples properly to maintain accreditation.
- Managed the customer water quality inquiry process to ensure prompt and consistent response by appropriate staff; responded to approximately 250 calls per year.
- Contributed to the protection of public health by participating in the Maine Healthy Beaches program.
- Supported water and wastewater operations by providing accurate and timely water and wastewater quality data.
- Provided training in water quality and environmental regulation to District staff in all departments.

Industrial Pretreatment since 2010:

- Accomplished the adoption of local limits on Portland and Westbrook industrial dischargers each time facility permits were renewed.
- Created and implemented Industrial Waste Surveys of the Westbrook-Gorham-Windham and Cape Elizabeth systems to identify IPT industries.
- Assumed all aspects of the Portland IPT program from the City of Portland.
- Received 2015 Regional EPA Industrial Pretreatment Program Excellence Award.

Budget Year 2019 Highlights:

- Maintained the real-time lake monitoring buoy in the Lower Bay of Sebago Lake to provide water quality data from multiple depths and feed the data continuously to the PWD website.
- Continued development of a water quality data interface (WQDI) that utilizes and integrates the District's existing databases to display water quality data from the watershed to the distribution system and developed the ability to generate informative fact sheets for more than 300 sample sites.
- Partnered with St. Joseph's College to host the 2019 Sebago Lake Symposium to highlight the new monitoring buoy and perform lake protection outreach to Sebago Lake constituents.
- Worked with Sebago Clean Waters partners to further the goals of increasing land trust capacity and development of a new funding source for financing land conservation in the Sebago Watershed.
- Board of Trustees approved \$345,000 towards conservation of Tiger Hill Community Forest in Sebago. District staff secured a low-interest loan with \$50,000 principal forgiveness to finance the contribution.
- Applied for and received a \$5,000 Source Water Protection Grant from the Maine Drinking Water Program to correct erosion sites at Sebago Lake State Park.
- Began a AWIA Risk and Resilience Assessment on the Greater Portland water system
- Revised the Source Protection section of the District's website to improve navigation and readability.
- Initiated updates to the Sebago Lake Treatment Facility's Integrated Contingency Plan (ICP).
- Represented the District on the Cumberland District Public Health Council.
- Initiated haloacetic acid (HAA9), metals, pesticides, alcohols and SVOC monitoring for the Greater Portland system per the EPA UCMR4 regulation.
- Provided laboratory support to the Maine Healthy Beach Program by testing East End beach for bacteria.
- Maintained good standing with DHHS lab accreditation program following on-site assessments.
- Expanded the WaterWays Program to two additional schools, serving an additional 263 students, through collaboration with partners.
- Increased capacity of our TroutKids Program through a revised, online *TroutKids Guide* and teacher consultations, serving an additional 350 students.
- Coordinated a Brewery Collaborative event as part of Drinking Water Week that highlighted the connection between forests, water, and beer and publically launched Sebago Clean Waters.
- Organized and participated in a hurricane after-effects exercise with the all operations groups.
- Completed the annual update to the PWD Incident Management Plan
- Installed a personnel shelter for District and Town of Standish Boat Launch staff to use as an information center, milfoil inspection check point, and Lower Bay observation platform.
- Revitalized the Pond Road grave site of Revolutionary War hero and Standish resident, Jebediah Lumbard.
- Hosted Portland industrial pretreatment customers at the EEWTF for a tour and educational event.
- Created an Industrial Pretreatment website which is now hosted on www.pwd.org.
- Created and posted a short video about IPT to highlight benefits of the program.
- Established sampling protocol and procedures for WW Systems Operators and Environmental Service lab staff for both Westbrook-Gorham and Portland IPT programs.
- Supported promulgation into municipal ordinances of updated IPT local industrial discharge limits in Westbrook and Portland.

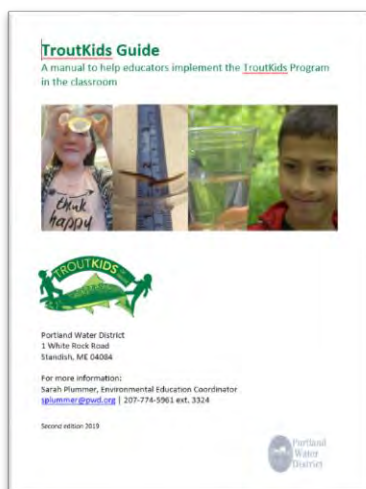
2019 Highlights



Coordinated a Brewery Collaborative event that highlighted the connection between forests, water, and beer and publically launched Sebago Clean Waters.



Expanded the WaterWays Program to two additional schools through collaboration with partners.



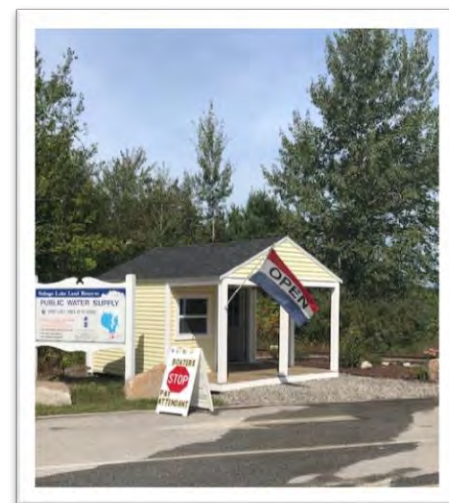
Increased capacity of our TroutKids Program through revised *TroutKids Guide* and teacher consultations.



Initiated haloacetic acid (HAA9), metals, pesticides, alcohols and SVOC monitoring for the Greater Portland system per the EPA UCMR4 regulation.



Began AWIA Risk and Resilience Assessment on the Greater Portland water system.



Installed a District Security and town boat launch attendant home base at the Standish Boat Launch.

2019 Highlights (continued)



District security staff revitalized the Pond Road grave site of Revolutionary War hero and Standish resident, Jedediah Lumbard.

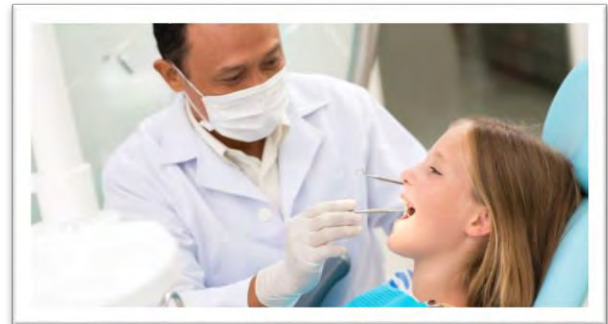


Maintained the real-time lake monitoring buoy in the Lower Bay of Sebago Lake.

Continued development of the water quality data interface (WQDI) that is used to display water quality data from the watershed to the distribution system.



Hosted a tour/event for customers permitted in our Portland pretreatment program at the East End Wastewater Facility.



Initiated implementation of the new federal Dental Amalgam rule to protect receiving waters from potential mercury contamination from dental office wastewater.

2020 Projects and Initiatives

Source Protection

- Work with Trickey Pond Environmental Protection Association, the Town of Naples, Lakes Environmental Association, and FB Environmental to develop a Watershed Based Protection Plan for Trickey Pond
- Work with Sebago Clean Waters to continue development of a water fund to be used to support forest conservation easements in the watershed.
- Continue supporting the land conservation efforts of Sebago Clean Waters.
- Continue collaboration with the Town of Standish to influence management of the Rich Memorial Beach, the new Route 35 overlook facility, and operations at the Standish Boat Launch.
- Perform inspections of all property development in the shoreland zone of Sebago Lake.
- Provide technical assistance and grant funding for shoreland zone property owners, road associations and camps to improve storm water quality and mitigate soil erosion issues.
- Complete scheduled sampling and testing for all 12 lake and watershed water quality monitoring programs, analyze the data, and produce and post useful water reports.
- Monitor planning board agendas, provide technical assistance, and track large-scale projects such as subdivision and commercial development within the Sebago Lake watershed.
- Continue collaboration with the Presumpscot Regional Land Trust to ensure that Sebago to the Sea trail stewardship remains in accordance with District security/land use policies.
- Maintain communication with Portland Pipeline Corporation and continue monitoring the status of their operations and potential plans.

Environmental Laboratories

- Re-accredit testing methods at East End and Sebago Lake laboratories for all reportable analytes.
- Report on water quality inquiries including those at dead end locations.
- Complete monitoring for HAA9, metals, alcohols, pesticide and SVOC's per the EPA's fourth Unregulated Contaminant Monitoring Rule.
- Continue safety awareness and improvements through hazard analysis, Global Harmonized System secondary container labeling, chemical inventory procedures and coordinating District hazardous waste removal.
- Provide training to District staff to improve data quality and understanding.
- Provide nitrogen and phosphorus monitoring support at wastewater facilities to support nutrient testing program.
- Represent the District on the Cumberland District Public Health Council.

Industrial Pretreatment

- Collect dental amalgam rule one-time compliance reports from all area dental offices.
- Continue managing all aspects of the Westbrook-Gorham and Portland pretreatment programs.
- Renew all expiring Industrial Pretreatment permits (in 2020, 44% of all permits will expire).
- Collaborate with the City of Portland on a general permit program for breweries and other alcoholic beverage producers.

2020 Projects and Initiatives (continued)

District Security & Preparedness

- Lead meetings of the District's Security Committee.
- Exercise District's emergency preparedness with either a full-scale or tabletop exercise.
- Patrol Lower Bay by boat during summer, ensuring compliance with body contact and trespassing restrictions.
- Patrol Sebago Lake Land Reserve year-round to ensure compliance with District land use policy.
- Maintain enhanced patrol of the Otter Pond Parcel of the Sebago Lake Land Reserve to address the growing number of visitors.
- Provide field oversight of District logging operations and track documentation.
- Conduct training for Operations staff in security patrol procedures of District's water storage facilities.
- Support local first responders as requested in response to Sebago Lake rescue incidents.
- Patrol Lower Bay during ice fishing season to minimize impact of activity on water quality.
- Improve parking conditions at the Route 237 and Smith Mill Road kiosks.
- Support Water and Wastewater operations in their updates to emergency Integrated Contingency Plans.
- Perform audits of Facility Security Operating Plans (FSOPs) for all managed District facilities.
- Strengthen relationship and communication between PWD and local public health agencies.
- Certify AWIA Risk and Resilience Assessment completion to EPA
- Complete and certify to EPA the update to the Emergency Response Plan.

Environmental Education and Outreach

- Implement the fourth year of WaterWays in watershed and service area schools, serving approximately 1000 middle school students.
- Collaborate with two partner organizations to deliver the WaterWays Program at two additional middle schools, reaching an anticipated 220 additional students.
- Continue to increase educational capacity through teacher consultations, grants, and the creation and loaning of educational resources.
- Begin utilization of a software program to manage our loanable educational resources.
- With Lakes Environmental Association, create a middle school forestry curriculum that focuses on the connection between forests and water quality.
- Coordinate outreach efforts in upper Sebago Lake watershed towns to increase forest conservation and awareness of Sebago Clean Waters.
- Collaborate with partners, coordinate events, and serve as a resource for watershed and service area schools and groups to teach source protection and water stewardship principles.
- Coordinate outreach initiatives with District public relations efforts.
- Utilize technology and a variety of media to connect the public with PWD events and environmental stewardship messages.
- Recognize Drinking Water Week with District-sponsored initiatives for the public.
- Provide outreach materials to the public including maps, calendars, and brochures.
- Provide support to the Southern Maine Children's Water Festival.

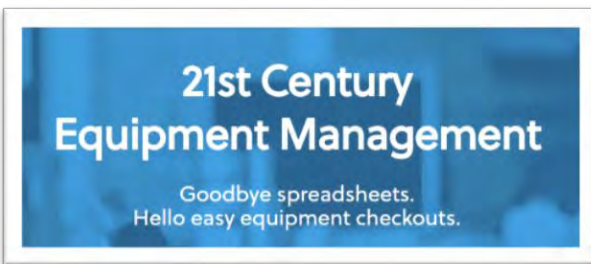
Budget Year 2019 Staffing Changes:

- There are no changes in the number of staff proposed in the 2020 budget.

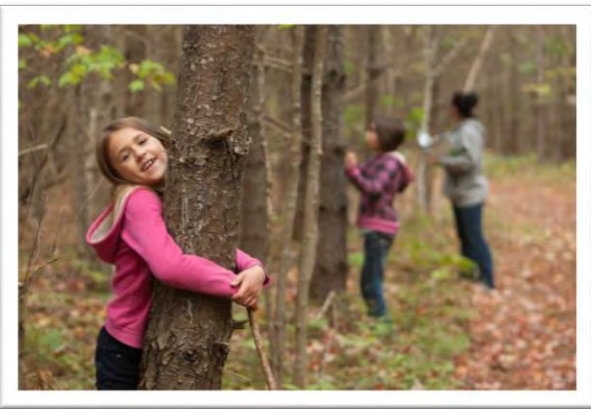
2020 Projects and Initiatives



Coordinate outreach efforts in Upper Sebago Lake watershed towns to increase forest conservation and awareness of Sebago Clean Waters.



Begin to utilize software to manage our loanable educational resources.



Co-design middle school forestry curriculum with Lakes Environmental Association.

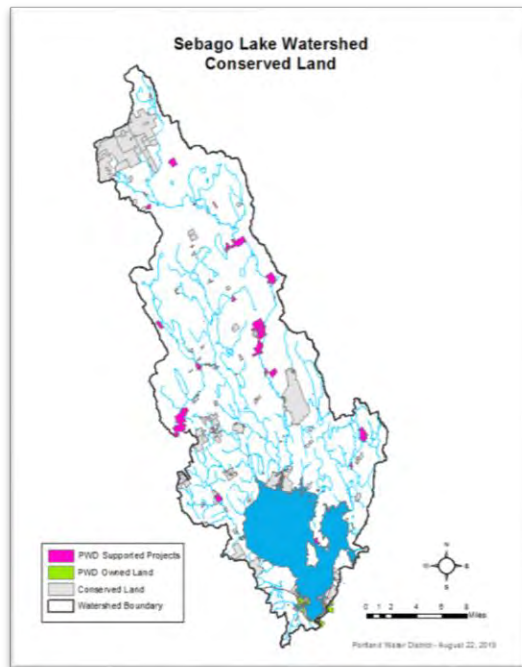


Support Water and Wastewater operations to initiate updates to emergency Integrated Contingency Plans.



Maintain real-time water quality monitoring buoy in Lower Bay and continue refinement of data interface and data transmission.

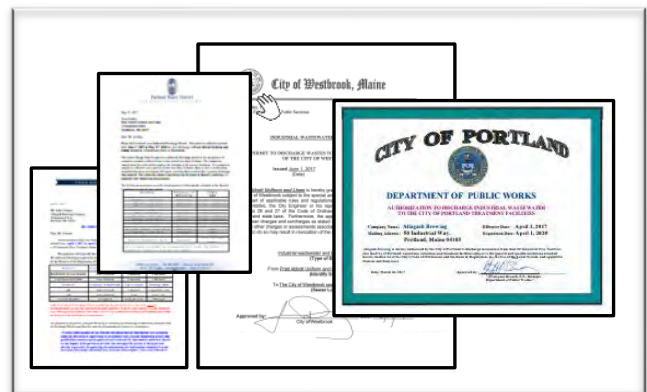
2020 Projects and Initiatives



Continue development of a fund to be used to support forest conservation and accelerate the pace of land conservation in the watershed.



Monitor for HAA9, metals, alcohols, pesticide and SVOC's per the EPA Unregulated Contaminant Monitoring Rule.



Renew all expiring IPT permits (44% of total).



Issue Industrial Pretreatment General Permits to breweries that discharge to the Portland or Westbrook-Gorham sewer systems.

2020 Proposed Grants to Watershed Partners

2020 Proposed	Type	Recipient	Purpose
\$2,500	Water Education Grants	Educators in the service area and watershed	Education
<i>Provides teaching resources to local teachers to support water education.</i>			
\$16,000	Lakescaping Grants	Watershed property owners, businesses	Source Protection
<i>Grants of up to \$1,000 are made to individual property owners and up to \$2,000 to businesses, associations, or municipalities for implementing erosion and sedimentation control BMPs based on our recommendations. A 50-50 match is required.</i>			
\$1,250	Lake Protection Support	Maine Lakes Society	Advocacy
<i>A contribution of \$1,000 to Maine Lakes Society to support their operations and \$250 to support their annual conference. Their advocacy benefits all surface supplies including PWD.</i>			
\$1,250	Lake Protection Support	Lake Stewards of Maine	Advocacy, Monitoring
<i>A contribution of \$1,000 to Lake Stewards of Maine to support their operations and \$250 to support their annual conference. Their outreach raises awareness statewide to issues of lake protection, particularly invasive aquatic plants. They conduct training at PWD and for PWD employees on request.</i>			
\$15,000	Watershed Organization Support	Lakes Environmental Association	Advocacy, Education, Source Protection
<i>LEA provides support for our upper watershed protection efforts. All lakes they work on ultimately lead to Sebago Lake. LEA monitors lake water quality and participates in the planning process in upper watershed towns to minimize development impact. Staff provides technical assistance to lakefront landowners on BMPs for lake protection and compliance with Shoreland zoning and the Natural Resources Protection Act. LEA also provides water-related education to area schools and operates the Lakes Science Center.</i>			
\$1,000	Watershed Organization Support	Raymond Waterways Protective Association	Outreach, Source Protection
<i>RWPA works on invasive plant control, BMP installation, and does outreach via a newsletter. They work on 319 (erosion control) projects in the indirect watershed of Sebago Lake. They also receive financial support from the town, grants, and individuals.</i>			
\$1,500	Land Trust Support	Loon Echo Land Trust	Source Protection
<i>Loon Echo's mission is to conserve land in the towns of Denmark, Bridgton, Harrison, Naples, Casco, Sebago, and Raymond. The trust's service area encompasses 126,000 acres – nearly half - of the Sebago Lake watershed. As they make progress in pursuit of their mission, our water supply is better protected.</i>			

2020 Proposed Grants to Watershed Partners (Continued)

2020 Proposed	Type	Recipient	Purpose
\$1,500	Land Trust Support	Western Maine Foothills Land Trust	Source Protection
<i>The Western Foothills Land Trust is organized to conserve land in the towns of Otisfield, Norway, Bethel and Waterford, among others. The trust's service area encompasses 54,000 acres – about 20% - of the Sebago Lake watershed. As they make progress in pursuit of their mission, our water supply is better protected.</i>			
\$500	Land Trust Support	Presumpscot Regional Land Trust	Source Protection
<i>The Presumpscot Regional Land Trust is organized to conserve land in the towns of Gorham, Gray, Standish, Westbrook, and Windham. As they work to conserve land in parts of the watershed towns of Windham and Standish, our water supply is better protected. They are also the stewards of the Sebago to the Sea Trail that passes through District property.</i>			
\$500	Maine Water Conference Support	U Maine Mitchell Center	Public Relations
<i>Our support mostly serves a public relations function, ensuring the District's name on promotional materials. The conference also provides an opportunity to attract Maine colleges and Universities to research Sebago Lake.</i>			
\$800	Children's Water Festival	Southern Maine CWF Committee	Education, Public Relations
<i>Our support serves a PR purpose and contributes to the educational goal of the event, which is raising student awareness of water issues.</i>			
\$41,800	Total Grant Support to Watershed Partners		

Conservation Land Acquired by Land Trusts with District Support

Year	Transactions	Acres	Amount of District Support	Total Value of Land Acquired in Fee or Easement
2008	1	350	\$5,000	\$100,000
2009	1	23	\$500	\$25,000
2010	1	60	\$10,000	\$1,500,000
2011	1	690	\$9,250	\$750,000
2012	2	116	\$6,900	\$297,000
2013	4	1005	\$68,990	\$718,500
2014	4	1301	\$346,443	\$2,410,000
2015	3	145	\$47,435	\$381,600
2016	0	0	\$0	\$0
2017	2	124	\$19,220	\$175,000
2018	3	1646	\$370,994	\$1,781,000
2019	0	0	\$0	\$0
Totals	22	5460	\$884,732	\$8,138,100

Financial Overview

The overall Environmental Services budget is up 2.7% from the 2019 budget. Much of this change is due to increased costs of labor and benefits.

A5: Water Resources

- We continue to seek partners (Lake Environmental Association and Cumberland County Soil and Water Conservation District, for example) who can deliver our environmental education messages to wider audiences without adding additional staff. There is an additional \$1800 budgeted in 2020 for this purpose.
- We are continuing our efforts to be more involved with Upper Watershed municipal and other partners. There is an additional \$6300 budgeted for this purpose in 2020. A part of this effort will involve presentations to watershed town managers and boards.

L6: Laboratory Services

- This is the second budget that fully funds both the Westbrook-Gorham and Portland Industrial Pretreatment Programs. Prior to 2019, many of the activities of the Portland program were the responsibility of the City of Portland.
- Wastewater MePDES permits cover a 5 year period; three facilities are in year 4 which is a screening year during which more intensive effluent testing is required. The 2020 L6 budget includes \$10,570 for Whole Effluent toxicity testing at EEWWTF, W-GWWTF and CEWWTF.

Environmental Services: Total

Financial Summary:

Column 1	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Sub-Group:						
A5 - Water Resources	\$1,100,814	\$528,726	\$1,166,078	\$1,208,810	\$42,732	3.7%
L6 - Water/WW Laboratory	863,462	446,329	902,882	916,027	13,145	1.5%
Grand Total	1,964,276	975,055	2,068,960	2,124,837	55,877	2.7%
Expense Type:						
Salaries & Wages	\$1,018,173	\$503,925	\$1,051,655	\$1,079,531	\$27,876	2.7%
Employee Benefits	513,093	245,807	506,364	499,074	-7,290	-1.4%
Chemicals	5,090	3,750	4,900	5,200	300	6.1%
Contracted Services	94,324	59,016	127,370	162,931	35,561	27.9%
Heat/Fuel Oil	11,910	3,157	12,000	12,000	0	0.0%
Insurance	2,294	1,171	2,274	2,505	231	10.2%
Materials & Supplies	109,732	58,779	122,275	117,901	-4,374	-3.6%
Other Expense	156,545	71,336	189,754	189,043	-711	-0.4%
Purchased Power	3,944	3,267	3,207	5,253	2,046	63.8%
Tele/Other Utilities	4,496	2,609	4,765	5,555	790	16.6%
Transportation	44,675	22,240	44,396	45,844	1,448	3.3%
Grand Total	1,964,276	975,055	2,068,960	2,124,837	55,877	2.7%
Headcount:						
Full Time	16	15	15	15	0	0.0%
Part Time	1	1	1	1	0	0.0%
Total	17	16	16	16	0	0.0%

Environmental Services: Total

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Salaries & Wages						
660111 - SALARIES/WAGES NON-UNION	\$395,462	\$212,637	\$430,394	\$443,917	\$13,523	3.1%
660121 - WAGES/REGULAR UNION	536,035	259,827	539,520	552,898	13,378	2.5%
660122 - WAGES/OVERTIME UNION	21,721	13,083	26,168	27,480	1,312	5.0%
660123 - WAGES/DOUBLETIME UNION	2,165	607	2,583	2,386	(197)	-7.6%
660131 - WAGES - REGULAR - TEMPS	48,360	17,771	52,990	52,850	(140)	-0.3%
660132 - WAGES - OVERTIME- TEMPS	84	-	-	-	-	
66014 - VACATION ACCRUAL	11,614	-	-	-	-	
66015 - SICKTIME ACCRUAL	2,734	-	-	-	-	
Salaries & Wages Total	1,018,173	503,925	1,051,655	1,079,531	27,876	2.7%
Employee Benefits						
660401 - FICA - EMPLOYERS' SHARE	75,420	37,806	80,450	82,583	2,133	2.7%
660405 - SAFETY/WHY PROGRAM ITEMS	3,133	648	3,650	4,040	390	10.7%
6604151 - FIELD UNIFORMS	1,584	1,457	1,200	1,200	-	0.0%
660418 - STIPENDS	1,700	1,800	1,900	1,800	(100)	-5.3%
660419 - EMPLOYEE BENEFITS-MISC OTH	3,273	-	3,460	3,340	(120)	-3.5%
660491 - FRINGE BENEFITS-REG/SAL	427,983	204,096	415,704	406,111	(9,593)	-2.3%
Employee Benefits Total	513,093	245,807	506,364	499,074	(7,290)	-1.4%
Chemicals						
661899 - OTHER CHEMICALS	5,090	3,750	4,900	5,200	300	6.1%
Chemicals Total	5,090	3,750	4,900	5,200	300	6.1%
Contracted Services						
66353 - REPAIR SERVICES	145	477	2,000	2,000	-	0.0%
66354 - MAINTENANCE SERVICES	43,098	25,236	53,740	52,336	(1,404)	-2.6%
663546 - MAINTENANCE - SNOW REMOVL	8,019	3,535	1,600	8,100	6,500	406.3%
663551 - LAB ANALYSIS	31,086	16,618	43,460	49,845	6,385	14.7%
663553 - PHOTOGRAPHY SERVICES	275	-	850	850	-	0.0%
663561 - COMPUTER LICENSES	105	-	-	-	-	
663574 - DISPOSAL SERVICES	3,504	3,529	3,600	6,150	2,550	70.8%
663587 - COURIER SERVICES	2,223	1,141	2,320	2,400	80	3.4%
6636 - TECHNICAL SERVICES	5,868	8,479	19,800	41,250	21,450	108.3%
Contracted Services Total	94,324	59,016	127,370	162,931	35,561	27.9%
Heat/Fuel Oil						
661622 - CONTAINER DELIVERED	4,439	1,539	5,000	5,000	-	0.0%
66166 - UNLEADED GAS	7,471	1,618	7,000	7,000	-	0.0%
Heat/Fuel Oil Total	11,910	3,157	12,000	12,000	-	0.0%
Insurance						
66599 - PROPERTY & BOILER INSUR	2,294	1,171	2,274	2,505	231	10.2%
Insurance Total	2,294	1,171	2,274	2,505	231	10.2%

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Materials & Supplies						
6619 - ASSET PURCHASES	\$20,728	\$8,477	\$20,250	\$14,000	(\$6,250)	-30.9%
66202 - TOOLS	796	1,250	1,600	1,800	200	12.5%
66203 - VENDOR PURCHASED SUPPLIES	8,588	6,436	14,100	14,700	600	4.3%
662042 - SUPPLIES INVENTORY	748	336	1,725	1,700	(25)	-1.4%
662043 - TOOL INVENTORY	1,231	1,028	1,650	1,650	-	0.0%
66204302 - INVENTORY - PAPER	60	-	300	300	-	0.0%
66204303 - INVENTORY-COMPUTER EQUIP	1,717	1,436	1,650	1,313	(337)	-20.4%
662047 - GARAGE INVENTORY	4	-	100	100	-	0.0%
66205 - CONSUMABLE SUPPLIES	73,350	38,696	76,600	75,850	(750)	-1.0%
66206 - COMPUTER RELATED EQUIP	2,510	1,120	4,300	6,488	2,188	50.9%
Materials & Supplies Total	109,732	58,779	122,275	117,901	(4,374)	-3.6%
Other Expense						
66411 - INTERNAL RENTAL CHARGES	48,600	25,515	51,030	51,030	-	0.0%
6642 - EQUIPMENT RENT	58	-	300	300	-	0.0%
66601 - PUBLIC RELATIONS	5,076	72	10,050	13,800	3,750	37.3%
66609 - OTHER ADVERTISING	1,707	945	2,500	3,300	800	32.0%
6675111 - INSTATE TRAINING/CONF	5,065	2,996	6,900	5,400	(1,500)	-21.7%
6675112 - OUT OF STATE TRAINING/CON	4,188	2,136	6,300	6,600	300	4.8%
667513 - DUES	17,581	1,403	20,254	22,263	2,009	9.9%
667514 - PROFESSIONAL LICENSES	650	4,345	925	845	(80)	-8.6%
667515 - PERIODICAL SUBSCRIPTIONS	184	213	670	680	10	1.5%
667521 - POSTAGE - THIRD PARTY	1,686	360	3,300	3,800	500	15.2%
667522 - POSTAGE - INTERNAL	529	206	975	825	(150)	-15.4%
667523 - POSTAGE - EXPRESS DELIVER	237	70	200	150	(50)	-25.0%
667531 - PRINTING COSTS	18,858	6,109	25,750	30,000	4,250	16.5%
667555 - SAFETY EXPENSES	107	47	100	100	-	0.0%
667561 - WATERSHED GRANTS/SUPPORT	40,637	22,203	54,100	43,300	(10,800)	-20.0%
667591 - UNIFORMS	1,691	2,766	2,150	2,300	150	7.0%
667592 - FOOD SUPPLIES	1,547	668	4,200	4,350	150	3.6%
667599 - OTHER MISCELLANEOUS	8,143	1,283	50	-	(50)	-100.0%
Other Expense Total	156,545	71,336	189,754	189,043	(711)	-0.4%
Purchased Power						
66155 - POWER - SMALL ENERGY	2,027	1,692	1,591	2,676	1,085	68.2%
66156 - POWER - SMALL T&D	1,917	1,575	1,616	2,577	961	59.5%
Purchased Power Total	3,944	3,267	3,207	5,253	2,046	63.8%
Tele/Other Utilities						
66101 - WATER	196	79	335	335	-	0.0%
66111 - TELEPHONE LINES	261	-	350	-	(350)	-100.0%
66112 - DATA LINES	239	87	540	540	-	0.0%
66113 - CELLULAR PHONES	3,800	2,443	3,540	4,680	1,140	32.2%
Tele/Other Utilities Total	4,496	2,609	4,765	5,555	790	16.6%
Transportation						
66501 - TRANSPORTATION - INTERNAL	16,103	7,892	16,169	15,821	(348)	-2.2%
665019 - TRANS INTERNAL INACTIVE	19,888	9,654	19,077	18,673	(404)	-2.1%
66503 - MILEAGE REIMBURSEMENT	8,685	4,693	9,150	11,350	2,200	24.0%
Transportation Total	44,675	22,240	44,396	45,844	1,448	3.3%
Grand Total	1,964,276	975,055	2,068,960	2,124,837	55,877	2.7%

Environmental Services: Water Resources (A5)

Financial Summary:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	592,333	288,245	609,550	626,415	16,865	2.8%
Employee Benefits	293,667	140,430	289,414	286,673	(2,741)	-0.9%
Contracted Services	49,770	24,514	67,156	91,986	24,830	37.0%
Heat/Fuel Oil	11,910	3,157	12,000	12,000	-	0.0%
Insurance	2,294	1,171	2,274	2,505	231	10.2%
Materials & Supplies	21,781	9,889	34,075	36,088	2,013	5.9%
Other Expense	84,002	37,507	105,875	104,975	(900)	-0.9%
Purchased Power	3,944	3,267	3,207	5,253	2,046	63.8%
Tele/Other Utilities	4,428	2,414	4,765	4,775	10	0.2%
Transportation	36,686	18,131	37,762	38,140	378	1.0%
Grand Total	1,100,814	528,726	1,166,078	1,208,810	42,732	3.7%
Programs:						
28 - Monitoring	191,757	92,480	153,203	148,424	(4,779)	-3.1%
41 - Pretreatment	5,708	2,472	20,109	17,014	(3,095)	-15.4%
56 - Tech Ops Support	67,593	31,165	69,397	67,018	(2,379)	-3.4%
78 - Education	124,248	67,958	142,576	155,422	12,846	9.0%
82 - Lake Security - Land	153,124	75,833	147,597	143,553	(4,044)	-2.7%
83 - Customer Outreach	140,884	77,310	168,461	212,995	44,534	26.4%
84 - Lake Security - Water	31,428	11,469	46,310	50,682	4,372	9.4%
98 - Training	30,671	19,363	38,517	38,398	(119)	-0.3%
99 - Administration	355,402	150,677	379,908	375,304	(4,604)	-1.2%
Grand Total	1,100,814	528,726	1,166,078	1,208,810	42,732	3.7%
Funds:						
10 - General	280,460	129,960	249,504	238,445	(11,059)	-4.4%
20 - Water General	814,646	396,294	896,465	953,351	56,886	6.3%
50 - Wastewater General	2,043	1,160	66	64	(2)	-3.0%
57 - WW Portland	2,566	963	13,588	10,377	(3,211)	-23.6%
61 - WW Gorham	10	-	1,359	1,383	24	1.8%
62 - WW Westbrook	1,090	348	5,096	5,190	94	1.8%
Grand Total	1,100,814	528,726	1,166,078	1,208,810	42,732	3.7%
Headcount:						
Full-Time	8	8	8	8	0	0.0%
Part-Time	1	1	1	1	0	0
Total	9	9	9	9	0	0.0%

Environmental Services: Laboratory Service (L6)

Financial Summary:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	425,841	215,680	442,105	453,116	11,011	2.5%
Employee Benefits	219,426	105,376	216,950	212,401	(4,549)	-2.1%
Chemicals	5,090	3,750	4,900	5,200	300	6.1%
Contracted Services	44,554	34,501	60,214	70,945	10,731	17.8%
Materials & Supplies	87,951	48,889	88,200	81,813	(6,387)	-7.2%
Other Expense	72,542	33,829	83,879	84,068	189	0.2%
Tele/Other Utilities	68	195	-	780	780	n/a
Transportation	7,989	4,108	6,634	7,704	1,070	16.1%
Grand Total	863,462	446,329	902,882	916,027	13,145	1.5%
Programs:						
41 - Pretreatment	108,009	61,866	156,096	154,811	(1,285)	-0.8%
56 - Tech Ops Support	71,633	33,982	74,064	76,414	2,350	3.2%
63 - Sample Analysis	356,692	189,712	357,416	370,403	12,987	3.6%
78 - Education	-	-	1,529	1,561	32	2.1%
98 - Training	27,628	19,004	32,109	31,543	(566)	-1.8%
99 - Administration	299,500	141,765	281,668	281,295	(373)	-0.1%
Grand Total	863,462	446,329	902,882	916,027	13,145	1.5%
Funds:						
10 - General	270,870	133,221	218,269	226,689	8,420	3.9%
20 - Water General	255,654	109,455	242,410	249,139	6,729	2.8%
50 - Wastewater General	207,802	139,334	316,903	293,599	(23,304)	-7.4%
51 - WW Cape Elizabeth	2,694	2,933	4,770	6,770	2,000	41.9%
55 - WW Windham LF	35	649	594	175	(419)	-70.5%
57 - WW Portland	80,775	35,781	74,205	83,933	9,728	13.1%
61 - WW Gorham	8,338	3,923	6,333	8,835	2,502	39.5%
62 - WW Westbrook	24,501	11,231	25,183	33,124	7,941	31.5%
64 - WW Joint Westbrook	8,984	9,109	10,975	12,064	1,089	9.9%
66 - WW Peaks Island	3,808	693	3,240	1,699	(1,541)	-47.6%
Grand Total	863,462	446,329	902,882	916,027	13,145	1.5%
Headcount:						
Full-Time	8	7	7	7	0	0.0%
Part-Time	0	0	0	0	0	n/a
Total	8	7	7	7	0	0.0%

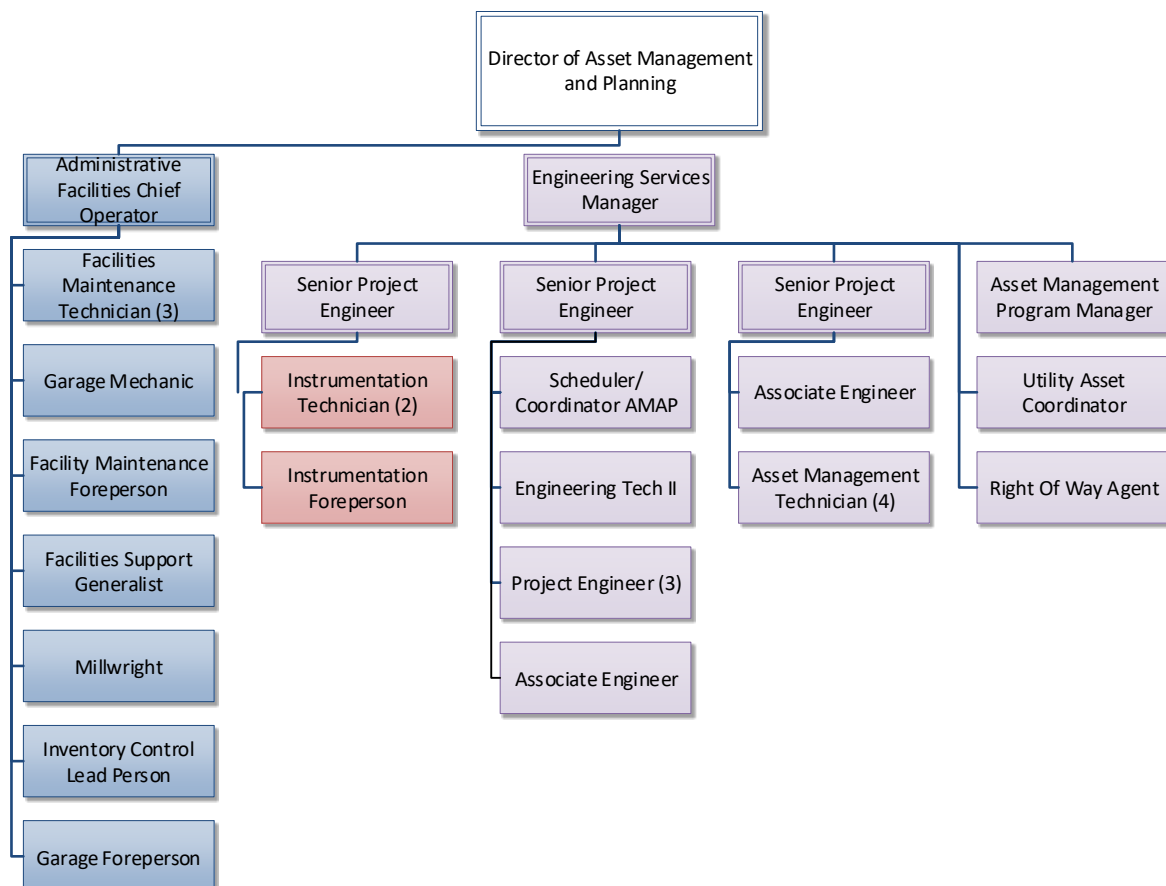
Engineering Services - Purpose Statement

To provide direct and supported design and construction of water, wastewater and administrative infrastructure and support an asset management approach to infrastructure acquisition and maintenance.

Core Services

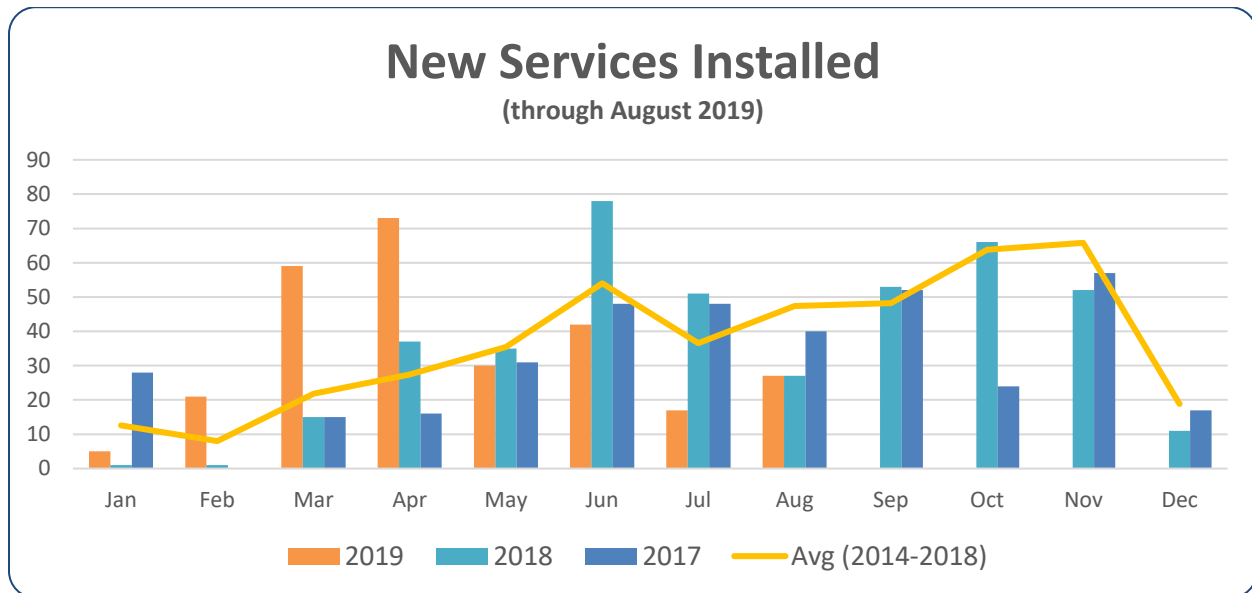
Engineering Services is responsible for providing engineering and maintenance services to internal and external customers. They are responsible for the following services:

- Manages planning and design of developer installed water and sewer infrastructure and coordination of existing District field and facilities assets. Supports long range planning, alternatives evaluation, and detailed design development of water main renewal programs as well as treatment and pumping facility projects. Provides construction oversight/recordkeeping for all infrastructure projects. (Asset Engineering Services Group, E2; purple in organization chart).
- Responsible for operation and maintenance of administrative facilities. Provides facility support services including garage, structural maintenance and stock room services (Facility Services Group-C1; blue in organization chart).
- Provides design, installation, maintenance and technical support of the Supervisory Control and Data Acquisition (SCADA) systems (Instrumentation Group-E7; red in organization chart).



Key Statistics

New Water Services



Assets in the Asset Information Management System (AIM)

Facilities	141
Facility Processes & Systems	1,324
Equipment/Components	11,028
Vehicles/Heavy Equipment	113
Water Service Association Assets (meters, backflows, etc.)	221,161
Water Field Assets	48,246
Sewer Field Assets	6,985
Total Assets	288,998

Performance Benchmarks

Corporate Goal – Reliability

Leaks per 100 miles of main

2018 Actual

10

2019 Budget

<10

2020 Budget

<10

Main Renewals, feet

28,500

22,700

24,000

Main Extensions, feet

20,000

24,000

24,000

Corporate Goal - Affordability

New Water Services

427

500

450

Corporate Goal – Employees and Work Environment

Employee Training Hours

82

80

80

Past Accomplishments

- Managed design/installation of 4 miles of water main renewals and 4 miles of extensions.
- Oversaw design and construction of projects at East End WWTF (Grit Removal, Odor Control) Cape Elizabeth WWTF (UV Disinfection), Peaks island WWTF (Influent Screens), Fore River Pump Station upgrade, Dana Court Pump Station upgrade, Family Field Pump Station and Baxter Boulevard Pump Stations and Wards Hill (Water Booster Pump Station).
- Completed preliminary design of EEWTF medium voltage power distribution system to address resiliency and reliability issues.
- Completed detailed design of HVAC upgrades for EEWTF and CEWWTF.
- Completed preliminary design for Westbrook Gorham Windham Regional WWTF aeration, clarifier and power upgrades.
- Added online nitrogen monitoring to EEWTF to facilitate better process control by Operations
- Managed design and construction of water main replacement program including several unanticipated partnering projects with the Turnpike Authority and various municipalities.
- Managed selection and began implementation of CMMS software as part of Project ABC.
- Worked with water and wastewater operations and environmental services staff to improve asset data and AIM understanding and prepare for CMMS transition.
- Managed facilities projects across District including: Douglass St Phase II roof replacement, breakroom ductless heat pump installation and fall protection improvements, EEWTF Boiler replacement, Northeast Pump Station roof replacement and the Westbrook Gate upgrade.
- Continued annual roof inspections on facilities across the District to ensure well planned asset replacements.

2020 Projects and Initiatives

Corporate Goals – Reliability and Affordability

- Manage and support vertical asset upgrade projects (WGWRWWTF aeration, clarifier and power upgrades, Windham Water Storage Tank, EEWTF (Flow Split/Flow Metering, Backup Power), CEWWTF UV Treatment headwork & HVAC, Baxter Boulevard PS, Fore River PS PhII, Little John PS upgrade, etc.).
- Improve water main replacement programs and manage design and delivery of projects.
- Manage and support design and construction associated with 10 Maine Turnpike infrastructure crossing upgrades.
- Lead and support implementation of Lucity CMMS software.
- Work with Wastewater and Water Ops, and Environmental Services to improve AIM data and configure CMMS.
- Manage facilities projects around District including replacement of Douglass St Generator
- Provide core support of asset management and CMMS implementation of ABC project.

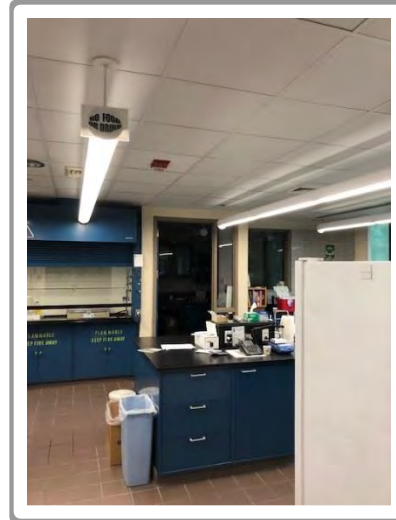
Corporate Goal – Employees and Work Environment

- Reach an average of 80 hours of training per employee.
- Continue to support ongoing workplace safety management and training.

2019 Highlights



Completed EEWTF Odor Control rehabilitation including 45,000 cfm fan.



Completed ceiling replacement to SLWTF lab.



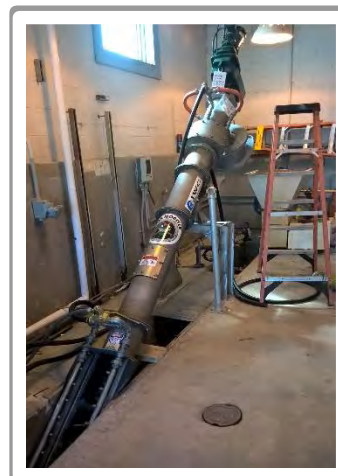
Oversaw bidding and construction of Douglass St Phase II Slate Roof replacement project.



Security gate upgrade at WGWRWWTF

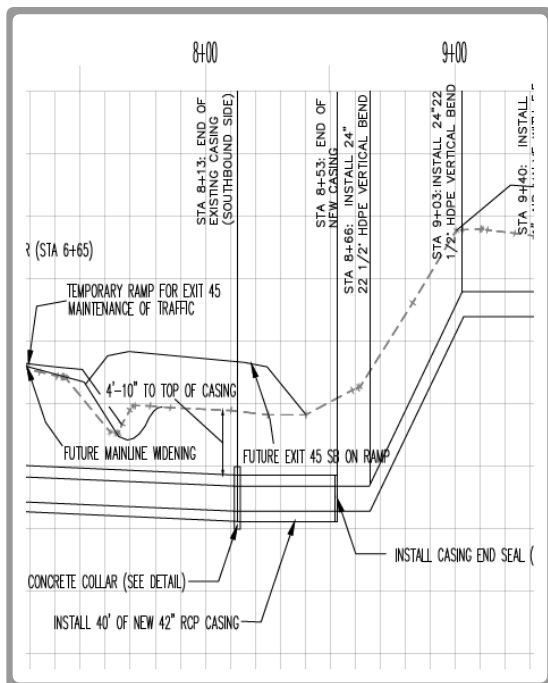


Downsized EEWTF boilers from 160 HP to 80 HP per HVAC master plan and local design assistance.

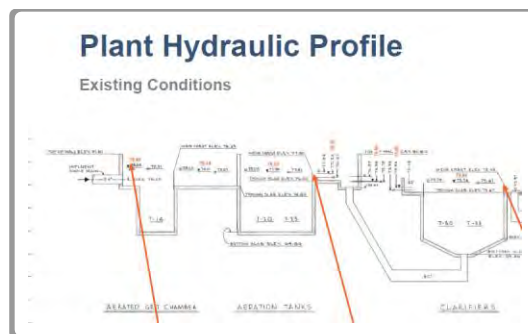


Enhanced influent screening at Peaks Island WWTF.

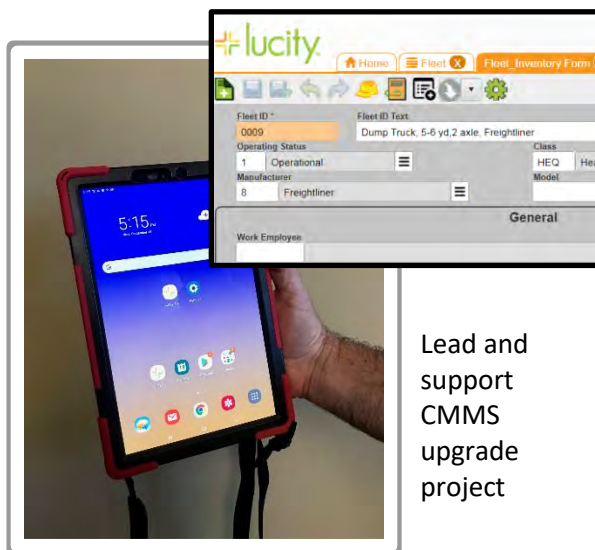
2020 Projects and Initiatives



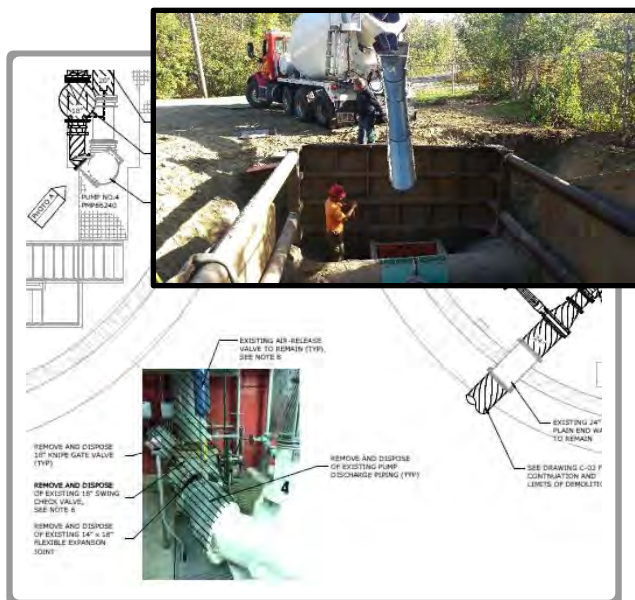
Design and construction support of Maine Turnpike infrastructure crossings



Manage final design and construction of WGWRWWTF Aeration upgrade project.



Lead and support CMMS upgrade project



Manage design and construction of Sewage Pump Station Projects – Fore River Ph II, Baxter Boulevard, Stroudwater, and Little John.



Lead program to prioritize, design and construct water main replacement program.

Financial Overview

The Engineering Services 2020 budget request is \$4,259,770, which is \$97,187 or 2.2% lower than last year's budget. The group consists of 3 subgroups – Facility Services (C1), Asset Engineering (E2) and Instrumentation (E7).

Facility Services' budget decreases by \$42,075 or 2.0% primarily reflecting an anticipated move to having the Douglass Street facility unattended after hours.

Asset Engineering's budget decreases by \$56,773 or 2.9%, reflecting an adjustment in CMMS software licensing and a reduction in computer hardware.

Instrumentation budget increase is \$1,661 or 0.5%.

Significant Expense Type changes in 2020 are listed below:

Salaries, Wages and Employee Benefits

Salary and Wage line reflects the average increase of 3%.

Contracted Services

The line item includes a decrease of \$93,272 primarily to reflect anticipated unattended operations at the Douglass St. facility. Computer Maintenance is lower due to the delay in the CMMS implementation to fourth quarter of the year.

Deferred Cost Writeoff

This category was zeroed out to reflect the final charge-off of the Westbrook CSO master plan.

Materials and Supplies

The line item includes a decrease of \$43,504 (8.0%) to reflect anticipated decrease in costs associated with gasoline and diesel.

Telephone/Other Utilities

Additional data lines included in the budget to support the implementation of the CMMS implementation.

Engineering Services – Total

Financial Summary

Column d	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Sub-Group:						
C1 - Facilities Services	\$2,022,011	\$894,623	\$2,068,176	\$2,026,101	-\$42,075	-2.0%
E2 - Asset Engineering	\$1,728,405	\$905,573	\$1,932,223	\$1,875,450	-\$56,773	-2.9%
E7 - Instrumentation	\$319,410	\$179,190	\$356,558	\$358,219	\$1,661	0.5%
Grand Total	4,069,826	1,979,386	4,356,957	4,259,770	-97,187	-2.2%
Expense Type:						
Salaries & Wages	\$1,809,070	\$950,213	\$1,992,643	\$2,052,805	\$60,162	3.0%
Employee Benefits	955,409	472,024	1,003,489	987,158	-16,331	-1.6%
Contracted Services	482,255	212,838	556,783	463,511	-93,272	-16.8%
Deferred Cost W/O	52,428	5,050	10,100	0	-10,100	-100.0%
Heat/Fuel Oil	70,485	35,122	65,500	67,494	1,994	3.0%
Insurance	37,922	20,221	43,673	43,273	-400	-0.9%
Materials & Supplies	530,849	205,273	547,220	503,716	-43,504	-8.0%
Other Expense	-133,714	-55,100	-110,270	-112,370	-2,100	1.9%
Purchased Power	82,829	36,677	68,750	77,276	8,526	12.4%
Tele/Other Utilities	75,771	45,882	78,700	81,548	2,848	3.6%
Transportation	106,522	51,187	100,369	95,359	-5,010	-5.0%
Grand Total	4,069,826	1,979,386	4,356,957	4,259,770	-97,187	-2.2%
Headcount:						
Full Time	31	31	31	31	0	0.0%
Part Time	0	0	0	0	0	n/a
Total	31	31	31	31	0	0.0%

	2018	Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Salaries & Wages							
660111 - SALARIES/WAGES NON-UNION		\$957,377	\$528,834	\$1,078,608	\$1,102,797	\$24,189	2.2%
660121 - WAGES/REGULAR UNION		804,987	404,171	856,839	894,954	38,115	4.4%
660122 - WAGES/OVERTIME UNION		7,064	2,970	11,916	11,958	42	0.4%
660123 - WAGES/DOUBLETIME UNION		604	-	500	517	17	3.4%
660124 - WAGES/STANDBY TIME UNION		460	-	1,100	1,139	39	3.5%
660131 - WAGES - REGULAR - TEMPS		19,105	14,238	43,680	41,440	(2,240)	-5.1%
66014 - VACATION ACCRUAL		14,250	-	-	-	-	
66015 - SICKTIME ACCRUAL		5,223	-	-	-	-	
Salaries & Wages Total		1,809,070	950,213	1,992,643	2,052,805	60,162	3.0%
Employee Benefits							
660401 - FICA - EMPLOYERS' SHARE		136,670	71,920	152,434	157,039	4,605	3.0%
660405 - SAFETY/WHY PROGRAM ITEMS		6,090	1,167	8,300	7,825	(475)	-5.7%
660411 - MEALS ALLOWANCE		20	30	100	100	-	0.0%
660413 - PWD TRAINING PROGRAM		120	-	-	-	-	
660418 - STIPENDS		2,200	1,800	2,400	2,500	100	4.2%
660419 - EMPLOYEE BENEFITS-MISC OTH		11,037	6,008	10,722	5,800	(4,922)	-45.9%
660491 - FRINGE BENEFITS-REG/SAL		799,272	391,099	829,533	813,894	(15,639)	-1.9%
Employee Benefits Total		955,409	472,024	1,003,489	987,158	(16,331)	-1.6%
Contracted Services							
6631 - ENGINEERING SERVICES		18,392	(412)	5,000	5,000	-	0.0%
663521 - TRAFFIC CONTROL		1,479	-	-	-	-	
663524 - STREET OPENING		51	-	-	-	-	
663525 - CONTRACTOR CONSTRUCTION		8,600	300	-	-	-	
663526 - INSPECTION SERVICES		135	128	-	-	-	
66353 - REPAIR SERVICES		13,406	6,237	17,000	17,500	500	2.9%
66354 - MAINTENANCE SERVICES		252,089	100,067	267,200	270,200	3,000	1.1%
663546 - MAINTENANCE - SNOW REMOVL		17,028	11,417	22,000	25,000	3,000	13.6%
663561 - COMPUTER LICENSES		31,998	27,955	30,203	32,323	2,120	7.0%
663562 - COMPUTER MAINTENANCE		7,331	1,250	60,000	11,588	(48,412)	-80.7%
663563 - COMPUTER CONSULTING/OTHER		1,060	-	600	600	-	0.0%
663574 - DISPOSAL SERVICES		8,863	5,781	23,500	23,500	-	0.0%
663587 - COURIER SERVICES		8,902	4,571	9,280	9,800	520	5.6%
663588 - EQUIPMENT MAINTENANCE		4,041	1,730	5,500	5,500	-	0.0%
663589 - SECURITY SERVICES		85,836	42,594	84,000	30,000	(54,000)	-64.3%
6635985 - VEHICLE FLEET GPS SERVICE		21,560	10,780	25,000	25,000	-	0.0%
663599 - MISC OTHER SERVICES		1,485	441	2,500	2,500	-	0.0%
6636 - TECHNICAL SERVICES		-	-	5,000	5,000	-	0.0%
Contracted Services Total		482,255	212,838	556,783	463,511	(93,272)	-16.8%
Deferred Cost W/O							
66754 - DEFERRED COSTS WRITE OFF		52,428	5,050	10,100	-	(10,100)	-100.0%
Deferred Cost W/O Total		52,428	5,050	10,100	-	(10,100)	-100.0%
Heat/Fuel Oil							
661621 - PIPELINE DELIVERED PROPAN		55,464	28,158	49,000	50,994	1,994	4.1%
66166 - UNLEADED GAS		15,020	6,964	16,500	16,500	-	0.0%
Heat/Fuel Oil Total		70,485	35,122	65,500	67,494	1,994	3.0%

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Insurance						
6656 - VEHICAL INSURANCE	\$27,258	\$14,433	\$32,233	\$30,888	(\$1,345)	-4.2%
66561 - VEHICAL INSURANCE REIMBUR	(500)	-	-	-	-	
66593 - UMBRELLA INSURANCE COVER	5,898	3,128	6,244	6,693	449	7.2%
66599 - PROPERTY & BOILER INSUR	5,266	2,660	5,196	5,692	496	9.5%
Insurance Total	37,922	20,221	43,673	43,273	(400)	-0.9%
Materials & Supplies						
6619 - ASSET PURCHASES	13,960	3,293	44,950	45,250	300	0.7%
66202 - TOOLS	9,667	5,034	10,750	8,250	(2,500)	-23.3%
66203 - VENDOR PURCHASED SUPPLIES	215,527	79,975	204,700	206,450	1,750	0.9%
662041 - MATERIALS INVENTORY	(5,774)	2,790	8,850	7,800	(1,050)	-11.9%
662042 - SUPPLIES INVENTORY	20,521	6,304	19,650	18,800	(850)	-4.3%
66204201 - INVENTORY - QPR	-	391	-	-	-	
66204202 - INVENTORY - BNKRUN GRAVEL	326	319	-	-	-	
66204203 - INVENTORY - CRUSHD GRAVEL	197	2,957	-	-	-	
66204204 - INVENTORY - CRUSHED STONE	(15)	1,581	-	-	-	
66204205 - INVENTORY - LOAM	66	(6)	-	-	-	
66204206 - INVENTORY - TYPE A GRAVEL	10	(1,211)	-	-	-	
662043 - TOOL INVENTORY	16,256	4,242	11,300	10,550	(750)	-6.6%
66204301 - INVENTORY - TONER	142	16	-	-	-	
66204302 - INVENTORY - PAPER	141	326	-	-	-	
66204303 - INVENTORY-COMPUTER EQUIP	3,864	2,826	3,913	3,700	(213)	-5.4%
662044 - METER INVENTORY	69,429	3,997	-	-	-	
662046 - HYDRANT INVENTORY	3,764	(173)	-	-	-	
662047 - GARAGE INVENTORY	15,954	6,957	11,025	10,325	(700)	-6.3%
66204701 - INVENTORY - UNLEADED GAS	101,285	48,611	121,550	102,850	(18,700)	-15.4%
66204702 - INVENTORY - DIESEL	41,175	24,937	57,057	48,741	(8,316)	-14.6%
66204703 - INVENTORY - TIRES	9,766	8,561	15,000	15,000	-	0.0%
66205 - CONSUMABLE SUPPLIES	770	-	3,400	3,400	-	0.0%
66206 - COMPUTER RELATED EQUIP	13,818	3,548	35,075	22,600	(12,475)	-35.6%
Materials & Supplies Total	530,849	205,273	547,220	503,716	(43,504)	-8.0%
Other Expense						
6642 - EQUIPMENT RENT	2,780	631	3,000	3,500	500	16.7%
66609 - OTHER ADVERTISING	199	3,493	-	-	-	
6675111 - INSTATE TRAINING/CONF	10,944	6,781	20,500	20,000	(500)	-2.4%
6675112 - OUT OF STATE TRAINING/CON	3,603	9,850	9,100	9,600	500	5.5%
667513 - DUES	1,057	248	3,000	3,000	-	0.0%
667514 - PROFESSIONAL LICENSES	2,591	1,081	4,180	4,180	-	0.0%
667515 - PERIODICAL SUBSCRIPTIONS	500	-	800	800	-	0.0%
667516 - PERMITS	286	200	2,000	2,500	500	25.0%
667522 - POSTAGE - INTERNAL	138	29	400	400	-	0.0%
667523 - POSTAGE - EXPRESS DELIVER	1,416	689	1,500	1,300	(200)	-13.3%
667531 - PRINTING COSTS	-	53	-	-	-	
667552 - SAFETY TRAINING	1,577	-	750	750	-	0.0%
667555 - SAFETY EXPENSES	275	4,795	3,000	3,500	500	16.7%
667556 - FREIGHT CHARGES (STOCK)	38	-	8,000	5,000	(3,000)	-37.5%
667592 - FOOD SUPPLIES	-	-	50	50	-	0.0%
667599 - OTHER MISCELLANEOUS	2,936	1,339	550	550	-	0.0%
6676 - EXPENSE OFFSET	(162,053)	(84,288)	(167,100)	(167,500)	(400)	0.2%
Other Expense Total	(133,714)	(55,100)	(110,270)	(112,370)	(2,100)	1.9%

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Purchased Power						
66153 - POWER - MEDIUM ENERGY	\$53,271	\$23,537	\$44,836	\$46,562	\$1,726	3.8%
66154 - POWER - MEDIUM T&D	26,700	11,090	21,562	27,945	6,383	29.6%
66155 - POWER - SMALL ENERGY	1,435	1,044	1,141	1,365	224	19.6%
66156 - POWER - SMALL T&D	1,422	1,007	1,211	1,404	193	15.9%
Purchased Power Total	82,829	36,677	68,750	77,276	8,526	12.4%
Tele/Other Utilities						
66101 - WATER	10,299	4,615	12,000	5,000	(7,000)	-58.3%
66102 - WASTEWATER	-	-	-	7,500	7,500	n/a
66103 - STORMWATER CHARGES	13,358	7,982	13,866	13,890	24	0.2%
66111 - TELEPHONE LINES	20,567	12,161	20,792	20,792	-	0.0%
66112 - DATA LINES	23,109	14,943	24,410	27,476	3,066	12.6%
66113 - CELLULAR PHONES	8,138	6,181	7,380	6,840	(540)	-7.3%
66114 - PAGERS	300	-	252	50	(202)	-80.2%
Tele/Other Utilities Total	75,771	45,882	78,700	81,548	2,848	3.6%
Transportation						
66501 - TRANSPORTATION - INTERNAL	29,124	15,750	41,570	32,605	(8,965)	-21.6%
665019 - TRANS INTERNAL INACTIVE	67,500	33,870	52,149	56,004	3,855	7.4%
66502 - TRANSPORTATION - EXTERNAL	7,604	371	3,700	3,800	100	2.7%
66503 - MILEAGE REIMBURSEMENT	2,294	1,196	2,950	2,950	-	0.0%
Transportation Total	106,522	51,187	100,369	95,359	(5,010)	-5.0%
Grand Total	4,069,826	1,979,386	4,356,957	4,259,770	(97,187)	-2.2%

Engineering Services - Facilities Services (C1)

Financial Summary

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$525,030	\$252,733	\$537,524	\$563,972	\$26,448	4.9%
Employee Benefits	275,200	126,494	267,555	269,486	1,931	0.7%
Contracted Services	418,721	183,280	458,480	411,500	(46,980)	-10.2%
Heat/Fuel Oil	70,485	35,122	65,500	67,494	1,994	3.0%
Insurance	37,922	20,221	43,673	43,273	(400)	-0.9%
Materials & Supplies	500,264	178,293	495,245	468,216	(27,029)	-5.5%
Other Expense	(15,014)	(6,381)	3,750	1,650	(2,100)	-56.0%
Purchased Power	82,829	36,677	68,750	77,276	8,526	12.4%
Tele/Other Utilities	66,172	39,437	67,508	67,198	(310)	-0.5%
Transportation	60,403	28,749	60,191	56,036	(4,155)	-6.9%
Grand Total	2,022,011	894,623	2,068,176	2,026,101	(42,075)	-2.0%
Programs:						
23 - Stockroom Operations	143,287	54,914	131,816	126,122	(5,694)	-4.3%
24 - Distribution Operations	37,690	4,230	55,899	29,957	(25,942)	-46.4%
30 - Maintenance	221,435	108,236	239,526	222,970	(16,556)	-6.9%
55 - Prof Ops Support	87,485	43,815	80,965	91,700	10,735	13.3%
90 - Vehicles	575,531	264,220	656,670	653,499	(3,171)	-0.5%
93 - Stockroom Scrap	49,837	43	250	-	(250)	-100.0%
95 - Douglass Street	709,591	321,676	704,732	704,845	113	0.0%
98 - Training	52,841	23,659	41,481	47,139	5,658	13.6%
99 - Administration	144,314	73,830	156,837	149,869	(6,968)	-4.4%
Grand Total	2,022,011	894,623	2,068,176	2,026,101	(42,075)	-2.0%
Funds:						
10 - General	1,482,276	683,385	1,559,720	1,555,352	(4,368)	-0.3%
20 - Water General	450,759	164,655	369,626	349,655	(19,971)	-5.4%
30 - Water Standish	3,126	507	5,585	3,588	(1,997)	-35.8%
51 - WW Cape Elizabeth	17,985	7,273	25,860	26,207	347	1.3%
53 - WW Cumberland	6,800	2,355	8,904	9,235	331	3.7%
55 - WW Windham LF	838	275	721	838	117	16.2%
57 - WW Portland	31,241	21,869	67,076	48,379	(18,697)	-27.9%
61 - WW Gorham	6,781	2,520	7,245	7,591	346	4.8%
62 - WW Westbrook	4,848	2,144	4,095	4,237	142	3.5%
64 - WW Joint Westbrook	13,790	7,862	10,693	13,944	3,251	30.4%
65 - WW Joint LF	1,837	700	3,256	1,535	(1,721)	-52.9%
66 - WW Peaks Island	1,730	1,077	5,395	5,540	145	2.7%
Grand Total	2,022,011	894,623	2,068,176	2,026,101	(42,075)	-2.0%
Headcount:						
Full-Time	10	10	10	10	0	0.0%
Part-Time	0	0	0	0	0	n/a
Total	10	10	10	10	0	0.0%

Engineering Services - Asset Engineering Services (E2)

Financial Summary

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$1,117,770	\$612,934	\$1,275,981	\$1,303,344	\$27,363	2.1%
Employee Benefits	594,718	313,856	646,592	628,871	(17,721)	-2.7%
Contracted Services	27,816	2,691	71,850	23,438	(48,412)	-67.4%
Deferred Cost W/O	52,428	5,050	10,100	-	(10,100)	-100.0%
Materials & Supplies	25,715	14,309	26,900	14,425	(12,475)	-46.4%
Other Expense	(120,022)	(58,961)	(124,570)	(124,570)	-	0.0%
Tele/Other Utilities	6,788	4,114	6,900	11,972	5,072	73.5%
Transportation	23,193	11,581	18,470	17,970	(500)	-2.7%
Grand Total	1,728,405	905,573	1,932,223	1,875,450	(56,773)	-2.9%
Programs:						
57 - Means Coordination	405,423	219,719	391,011	396,833	5,822	1.5%
79 - Amap Services	392,117	220,717	546,719	518,268	(28,451)	-5.2%
94 - Technology Teams	191,589	107,551	313,001	327,020	14,019	4.5%
98 - Training	94,710	53,498	89,278	90,076	798	0.9%
99 - Administration	644,566	304,088	592,214	543,253	(48,961)	-8.3%
Grand Total	1,728,405	905,573	1,932,223	1,875,450	(56,773)	-2.9%
Funds:						
10 - General	798,383	418,720	904,844	874,032	(30,812)	-3.4%
20 - Water General	702,852	344,169	762,529	750,583	(11,946)	-1.6%
50 - Wastewater General	26,906	18,699	254,750	250,835	(3,915)	-1.5%
51 - WW Cape Elizabeth	29,009	16,844	-	-	-	
53 - WW Cumberland	629	-	-	-	-	
55 - WW Windham LF	1,392	1,487	-	-	-	
57 - WW Portland	73,165	68,658	-	-	-	
61 - WW Gorham	373	279	-	-	-	
62 - WW Westbrook	39,098	21,414	10,100	-	(10,100)	-100.0%
64 - WW Joint Westbrook	23,440	7,459	-	-	-	
66 - WW Peaks Island	33,158	7,844	-	-	-	
Grand Total	1,728,405	905,573	1,932,223	1,875,450	(56,773)	-2.9%
Headcount:						
Full-Time	18	18	18	18	0	0.0%
Part-Time	0	0	0	0	0	n/a
Total	18	18	18	18	0	0.0%

Engineering Services - Instrumentation Services (E7)

Financial Summary

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$166,270	\$84,546	\$179,138	\$185,489	\$6,351	3.5%
Employee Benefits	85,492	31,674	89,342	88,801	(541)	-0.6%
Contracted Services	35,719	26,867	26,453	28,573	2,120	8.0%
Materials & Supplies	4,870	12,672	25,075	21,075	(4,000)	-16.0%
Other Expense	1,322	10,242	10,550	10,550	-	0.0%
Tele/Other Utilities	2,811	2,331	4,292	2,378	(1,914)	-44.6%
Transportation	22,927	10,857	21,708	21,353	(355)	-1.6%
Grand Total	319,410	179,190	356,558	358,219	1,661	0.5%
Programs:						
81 - Instrumentation & Contr	183,784	84,541	223,281	218,065	(5,216)	-2.3%
94 - Technology Teams	93	-	1,885	3,847	1,962	104.1%
98 - Training	13,207	9,006	19,737	19,948	211	1.1%
99 - Administration	122,326	85,643	111,655	116,359	4,704	4.2%
Grand Total	319,410	179,190	356,558	358,219	1,661	0.5%
Funds:						
10 - General	135,626	94,649	133,277	140,154	6,877	5.2%
20 - Water General	81,514	28,694	82,993	88,840	5,847	7.0%
50 - Wastewater General	16,310	7,183	73,787	77,035	3,248	4.4%
51 - WW Cape Elizabeth	17,416	5,056	450	450	-	0.0%
53 - WW Cumberland	5,245	3,134	900	900	-	0.0%
57 - WW Portland	36,218	23,509	63,351	48,940	(14,411)	-22.7%
61 - WW Gorham	5,381	2,266	450	450	-	0.0%
62 - WW Westbrook	4,488	3,490	450	450	-	0.0%
64 - WW Joint Westbrook	10,183	3,341	500	500	-	0.0%
65 - WW Joint LF	1,131	4,268	-	-	-	-
66 - WW Peaks Island	5,898	3,601	400	500	100	25.0%
Grand Total	319,410	179,190	356,558	358,219	1,661	0.5%
Headcount:						
Full-Time	3	3	3	3	0	0.0%
Part-Time	0	0	0	0	0	n/a
Total	3	3	3	3	0	0.0%

Administrative Services - Purpose Statement

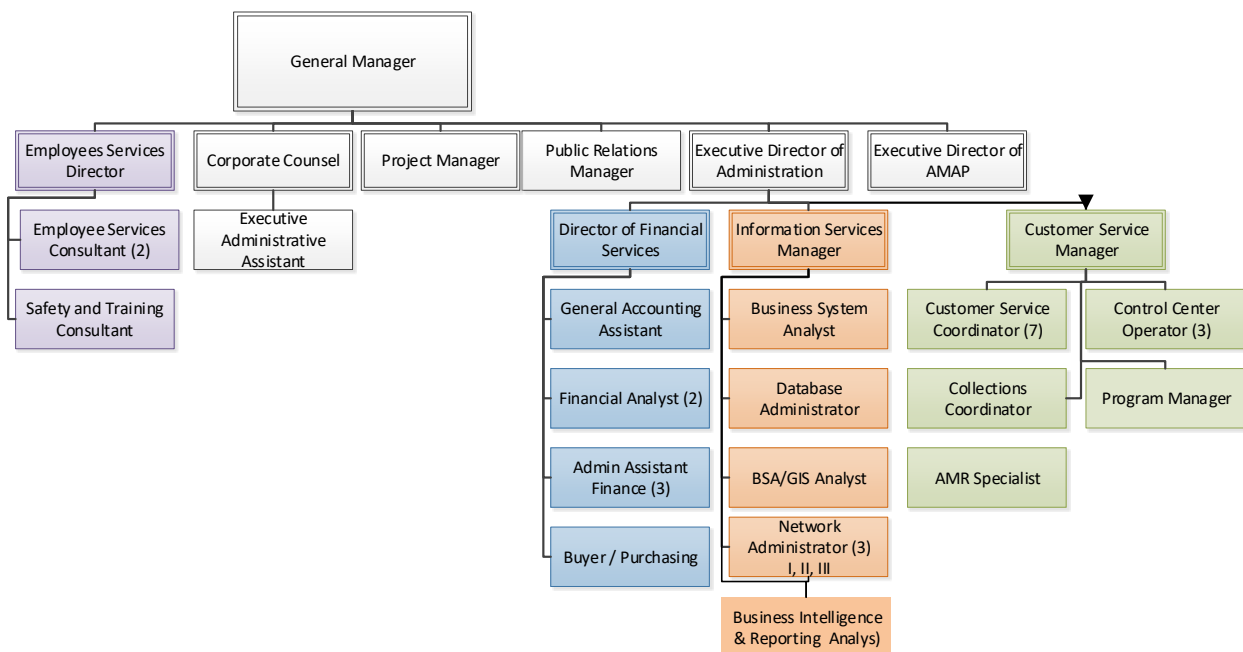
To provide support services to internal and external customers.

Core Services

Administrative Services provides support services to internal and external customers by providing the following services:

- External customer call center response and billing services (Customer Service Group- F1; green in the organization chart).
- Computer system and related technology support and maintenance services (Information Services Group – G1; orange in the organization chart). In 2020, a new Business Intelligence & Reporting Analyst position is budgeted.
- Financial transaction processing and information services (Financial Services Group – H1; blue in the organization chart).
- Employee development, benefits and management services (Employee Services Group – I1; purple in the organization chart). In 2020, an additional Employee Consultant position is budgeted.

The District has an eight-person group (Executive Group – J1; black in the organization chart) that directs, oversees and provides administrative support for the District.



Past Accomplishments and 2020 Projects and Initiatives

Customer Service

2019 Accomplishments:

- New Billing System: Customer Service personnel have been involved with implementing the system from the start. We have dedicated 4 employees to the project – one full-time and three part-time. Time and effort in supporting the project has been significant and will continue into next year.
- Rates: Changed and tested revised Portland Water District's water rates and sewer rates for Cape Elizabeth, Portland, South Portland, Falmouth and Cumberland.
- Large meter review: Continued collaboration and focus with Water Ops in reviewing and addressing any large meters with issues with monthly meetings. This has proven successful, as the number of outstanding large meters issues has significantly decreased since the start of this program.
- Ongoing monthly refresher training for our Collection Coordinator backup. This included both field and office training.
- Electronic report transition: All CS reports are electronic. All department personnel have been trained.

2020 Projects and Initiatives:

- Service Levels and rate changes: Continue focus on meeting both objectives while supporting new billing system in 2020.
- Contribute and support the efforts and progress of the new Asset Management system.
- Develop an appropriate plan to transition customers to the billing system/bill while educating them on other functions that will be available with the online Customer portal.
- Update documentation and procedures for the new billing system (Cayenta) process, including updating the Terms & Conditions as needed.
- Work with the Public Relations Manager to promote our low-income programs.
- Support the efforts and progress of the new billing system project.
- Develop a transition plan for Meter Reader retirement (expected April of 2020.)
- Review current collection processes to improve efficiencies with the new Cayenta system.
- Participate in New England Water Works' Customer Service Committee efforts to develop customer service related training.

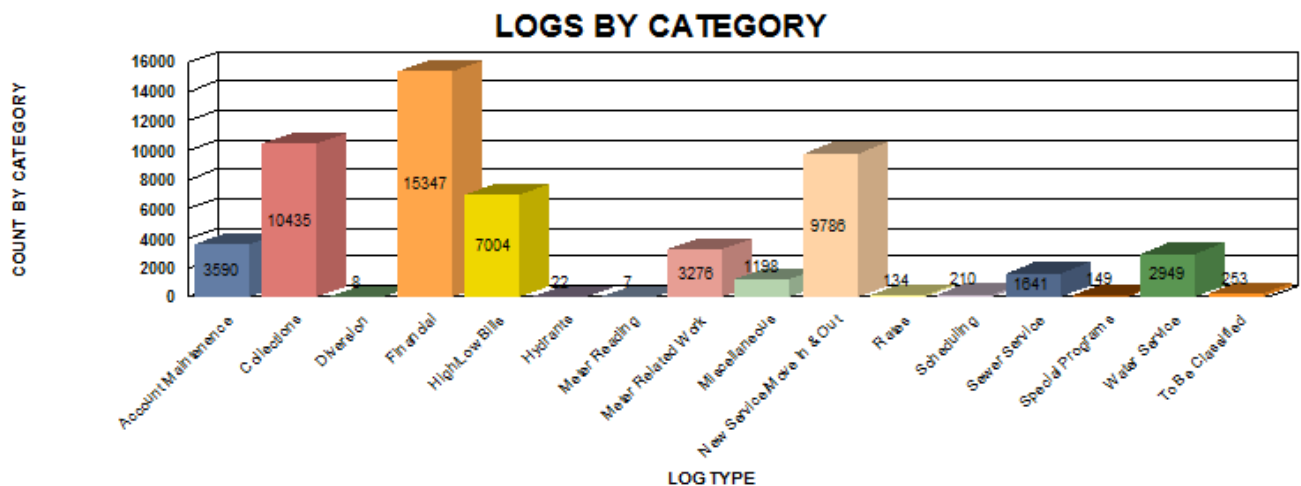
Customer Service (continued)

CS Department Key Statistics:

<u>Key Statistic</u>	<u>2016</u> <u>Actual</u>	<u>2017</u> <u>Actual</u>	<u>2018</u> <u>Actual</u>	<u>2019</u> <u>Actual</u>	<u>2020</u> <u>Goal</u>
Customers	54,700	55,100	55,500	55,900	56,300
Phone Calls answered within 1 min	88%	86%	93%	90%	82%
Customer Satisfaction	97%	98%	97%	98%	95%
Actual vs Estimated reads	99.63%	99.67%	99.58%	100%	99%
Accurate bill Index	99.96%	99.97%	99.96%	100%	99%
Customer Contacts	54,753	48,971	56,565	59,383	60,000
Bills produced	647,429	652,974	659,174	660,000	664,000

Customer Service – Customer Contacts

Customer Services handles over 56,000 customer contacts a year via phone, email and in person. With the billing system implementation scheduled for 2020, we anticipate higher contact levels.



Past Accomplishments and 2020 Projects and Initiatives (continued)

Information Services

2019 Accomplishments

System upgrades:

- Upgrades of internal Wi-Fi networks to support new asset/work management system.
- Continued migration to virtual servers has resulted in increased in network speed and reliability.
- Support of the eFinanace Plus upgrade.
- Completion of SharePoint 2010 to SharePoint 2016 upgrade.
- Support of CRM / Billing replacement project.
- Support of Asset, Work Management replacement project.
- Call recording software update.
- Roll out of Remote Desktop Services.
- Upgrades of Wide Area Network data links

Process Improvements:

- Employee Contact List implemented. Gives employees the ability to update their contact information vs. prior paper based process.
- Refined employee call in procedure.
- Developed a text alert notification system for employees.
- Refined Wide Area Network monitoring process.
- Refined network server backups.

System Security

- Security Awareness Training – End-user Cyber Security training conducted throughout the year to raise awareness related to the topic.
- New security software installed to increase our security posture.
- Network Security Audit conducted.
- Continued build out of cold site - As a backup to our data center at Douglass Street, we continued to build out our cold site at our Sebago Lake Treatment Plant. Tested twice in 2019.
- Additional firewalls added to increase security posture.
- Staff member attended 4-day Department of Homeland Security Cyber Security Training event.

2020 Projects and Initiatives

System upgrades:

- Upgrade of Microsoft Exchange email server.
- Provide support of CRM / Billing replacement project.
- Provide support of Asset, Work Management replacement project.
- Continued expansion of Wi-Fi networks to support new Asset, Work Management system.
- Continued migration of physical servers to virtual servers.
- Hach WIMS upgrade.
- Replacement of several data servers as part of annual server refresh program.

Information Services

2020 Projects and Initiatives (continued)

Process Improvements:

- Develop additional digital workflows to replace paper-based processes.
- Implement additional system monitoring.
- Conference room upgrades.

System Security

- Security Awareness Training – Continue End-user Cyber Security training throughout the year to raise awareness related to the topic.
- Network Security Audit – Admin Network
- Continued build out of cold site - As a backup to our data center at Douglass Street, we will continue to build out our cold site at our Sebago Lake Treatment Plant.

Training

- PWD IS Department Overview sessions – We will be conducting several sessions for employees to understand what the Information Services does on a daily basis
- Continued Information Services inter-departmental cross training.
- Technical training for Information Services staff.

IS Department Key Statistics:

Devices Maintained

Device Type	2018	2019	2020
Servers	20	15	20
Virtual Servers	50	60	75
Laptops	55	58	59
CPU	25	25	27
Thin Clients	130	140	145
Firewall	7	8	13
Switches	25	25	30
Routers	5	7	10
Phone Switches	11	11	12
Desk Phones	168	170	180
Smart Phones	20	20	21
Printers/Scanner	26	26	26
Copiers	9	9	9
iPads	21	21	21
Total	572	595	648

Major Applications

AutoCAD
 Callrex Call Recording
 Cayenta CRM
 Citrix Presentation Server
 eFinance Plus
 ESRI GIS
 Hach WIMS
 Hansen Assent Management /Customer Billing
 IBM Cognos Reports
 Lucity CMMS
 Microsoft Exchange
 Microsoft Office 2016
 Microsoft Power BI
 Microsoft Remote Desktop Services
 Microsoft Sharepoint 2016
 Microsoft Windows Server
 Mitel IP Phone System
 Oracle Database (3)
 SAP Crystal Reports
 Scale Computing
 SQL Databases (4)
 VMware

Past Accomplishments and 2020 Projects and Initiatives (continued)

Financial Services

2019 Accomplishments

- Received Government Finance Officers Association's "Certificate of Achievement for Excellence in Financial Reporting" for the 2017 Comprehensive Annual Financial Report (CAFR) and the "Distinguished Budget Presentation Award" for the 2019 Comprehensive Budget Report for the ninth year in a row.
- Completed the upgrade of the Finance Plus accounting system moving from version 4.3 to version 5.1 of the software. This included a requisition approval process via the vendor's "work flow" product and an enhanced Employee Access Center (EAC).
- Cross-trained new staff members on the different responsibilities of the department as previous staff turnover shifted responsibilities throughout the department.

2020 Projects and Initiatives

- Support the Asset and Billing projects so that we can continue to pull billing, payroll, transportation and inventory data into the financial system.
- Continue to upgrade financial information provided to the Board of Trustees and management through more visual/graphical presentations of financial data.
- Review and update department procedures for the newly updated financial system and in concert with the Asset and Billing projects.
- Continue efforts on employee training with a particular focus learning about other areas within the District.

Past Accomplishments and 2020 Projects and Initiatives (continued)

Employee Services

2019 Accomplishments and 2020 Projects

Student Outreach Program: With retirements across all industries on the rise, we began a student outreach program at PWD and joined the NEWWA Waterworks Committee. Since last fall, the NEWWA Committee has been collecting data, developing a survey, and working toward engaging local educators to develop some collaboration in our industry to address emerging labor shortages. At PWD, we have contacted high schools, including vocational technical schools, in an effort to raise awareness of careers in Water and Wastewater. We have hosted high school students to job shadow, visit the District for a presentation and tour, and attended high school job fairs. As part of our overall recruitment efforts, we have utilized the District's new videos and linked career pamphlets to our open positions.

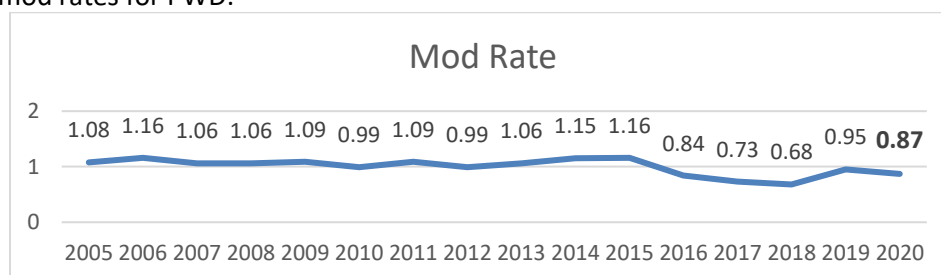
Employee Assistance Program: A more robust and comprehensive Employee Assistance Program (EAP) was introduced to PWD through Anthem in 2018, and we continue to draw on these resources and see an increase in confidential services. Representatives have come to the District and provided presentations on Work/Life Balance for all employees and two presentations to assist supervisors and managers at our supervisory workshops.

Compensation: A Request for Proposals was completed to provide a salary market survey for non-union positions. Career Management Associates has been selected and we are in the process of updating all non-union job descriptions for this purpose, and will begin the process this fall.

Retirement Planning:

- Representatives from the Principal, our carrier for the 457 Plan, provided both group and individual retirement planning counseling sessions.
- Presentations were provided on the topics of understanding Medicare and Social Security.

Worker's Compensation: The District's mod rate dropped for three years in a row to the lowest level in over a decade in 2018. Effective January 1, 2016 it dropped to 0.84, saving approximately \$60,000 annually in premiums. Effective January 1, 2017 it dropped to 0.73, resulting in approximately another \$10,000 in annual premium reductions. Effective January 1, 2018, the mod rate again dropped to 0.68, saving approximately \$4,000 more in annual premiums. However, due to a few high cost workplace injuries, all of which are fully resolved, our mod rate increased to 0.95 effective January 1, 2019. This resulted in an increase of \$45,000 in annual premiums. The 2020 mod rate is expected to decline to 0.87. We will continue to vigilantly monitor workplace injuries, investigate all accidents and examine the situations associated with these claims. The following is a recent history of the worker's compensation experience mod rates for PWD:



Past Accomplishments and 2020 Projects and Initiatives (continued)

Employee Services (continued)

2019 Accomplishments and 2020 Projects (continued)

Health Plan:

We received a reduction of 2% for the health renewal effective 1/1/20, with no change in our plan design. All employees will pay 9% toward single health insurance coverage in 2020. It should be noted that even with this increase to 9% for both union and non-union employees, the cost of single coverage for all of our benefits eligible employees is still significantly lower than the national average of 17%.

Updating Policies: For the purpose of reflecting the workplace that we are and desire to be, we continue to examine our policies as a strategy to retain valued employees and attract qualified candidates to PWD. This is an interdepartmental process to streamline, consolidate, update, and segregate procedures from policies.

Union:

- Union negotiations for the new three-year contract began in September 2018, and by February 2019, the District sought a mediator to make progress toward a new contract. As of September 2019, we have a new three-year contract.
- The Union stewards had their last monthly meeting with the General Manager and the Director of Employee Services in February. Due to the negotiation process underway, we were limited to discussing only day-to-day operations. At that meeting, we discussed the stipends, pension plans, policies, the smoking cessation program offered through the Employee Assistance Program, and the new winter jackets available to employees through the Fall Field Uniform Program. The group has adjourned until after the new contract is in place.
- Arbitrations: The last arbitration was in September 2017, when we arbitrated the interpretation of the contract pertaining to pay upgrades and received a favorable decision. Since then, there have been no further arbitrations, nor any grievances pending arbitration.

Safety:

- We are utilizing the services of a CDL driving school for ongoing support for CDL drivers.
- As needs are identified, Fall Protection is installed in some facilities; new PS200 Gas Detectors purchased and installed in operations; powered air purifying respirators (PAPR) have been purchased. (These are used when working when upgrading/painting of old lead pipes and bulk chemical receiving. Other Personal Protective Equipment (PPE) updated and in stock include vented construction helmets (for heat stress), muck boots (field workers), lineman gloves for electricians.
- The following safety audits/drills were completed:
 - Portland Fire Department conducted a Tier II Chemical Inspection at the East End Treatment Plant
 - Maine Municipal Association (MMA) will conduct a safety inspection at Sebago Lake Water Treatment Facility. An internal inspection took place earlier this year.
 - A Fire Evacuation drill is scheduled for Douglass Street in September.

2019 SAFETY REQUIRED TRAINING - PWD		
Topic	# Employees	Completed
Confined Space	10	May 2019 (Nov 2019)
Chemical Hygiene & Ethics	12	May 2019
VDT On-Line	97	Month of March/April
Fleet Driver Safety	80	Nov- Dec-Clark Insurance
Respiratory Pro./Fit Testing	46	July 2019 (August 2019)
Fire Extinguishers/New		
Hire Practical	78	June 2019 (November 2019)
Gas Detectors	22	April/ongoing
Bloodborne Pathogens	90	February 2019

Past Accomplishments and 2019 Projects and Initiatives (continued)

Employee Services (continued)

2019 Accomplishments and 2020 Projects

Expanded Wellness initiatives:

In the fall of 2019, we held a flu shot clinic, and expanded the offerings at the wellness and safety fair. In addition to the health screenings, we included information from the Poison Control Center, such as childhood lead poisoning prevention, smoking cessation, fire safety, cancer awareness and education and a dietitian from Hannaford.

Supervisory Workshops: Quarterly roundtable discussions continue. In April, 2019 and again in August, a representative from our Employee Assistance Program provided presentations on Motivating, Recognizing and Energizing Employees, and Stress Management for Managers. The group has also discussed the General Manager's Goals, ABC/CMMS updates, union negotiation/mediation updates, upgrade pay and changes to the Fall Field Uniform Program to include the addition of the choice of two winter coats, and a program allowing unused credit from the Spring T Shirt program to defray the cost.

Policies:

The review and revision of policies continues.

Retirement Planning: Group educational and individual counseling sessions continue to be provided to assist employees to better understand their investment and payout options under the 457 Deferred Compensation Plan and how to prepare for retirement.

Safety:

Safety Training for 2020 is scheduled to include:

- Chemical Hygiene and Ethics
- Confined Space
- Respiratory/Fit Protection
- Fire Extinguishers
- Safety Data Sheet Review
- VDT Training
- First Aid/CPR/AED recertification (2 Year cycle)
- Bloodborne Pathogens
- Walking/Working Surfaces/Fall Protection
- Annual Evacuation Drills/Emergency Action Plans

Supplemental Training for Specific Departments

- Dig Safe
- Trenching and Excavations
- Work Zone and Traffic Safety
- Lock Out Tag Out Refresher

Financial Overview

The Administrative Services budget request is \$6,064,147, which is \$242,690 or 4.2% higher than last year. The number of employees in the area is 44, an increase of 1 in each of Information and Employee Services area.

Customer Service (F1) Group (\$1,624,372 request; \$17,331 or 1.1% lower)

- Salaries/Wages and Benefits: Increased by \$30,842, or 2.7%. No changes in the number of employees except for a summer-time temporary to support the department during the billing system upgrade. Assumed 3% wage increase and reflects the lower benefits budget.
- Contracted Services: Decreased by \$71,084, or 26.5%. The new computer system maintenance contract impacts the budget in the fourth quarter 2020 rather than full year. In addition, Digsafe assessment is \$8,000 lower than prior year budget.
- Other Expenses increased by \$22,611 or 10.2%. The new billing system implementation will reduce the number of customer initially signed up for paperless bills, which will cause an increase in postage costs.

Information Service (G1) Group (\$1,155,624 request; \$117,328 or 11.3% higher)

- Salaries/Wages and Benefits: Increased by \$113,109, or 14.8%. A new Business Intelligence & Reporting Analyst included in budget. Assumed 3% wage increase and reflects the lower benefits budget.
- Telephone/Other Utilities: Decreased by \$4,272, or 56.7%. An audit of telecommunication services resulted in lower cell and data line costs.

Financial Services (H1) Group (\$924,918 request; \$16,978 or 1.9% higher)

- Salaries/Wages and Benefits: Increased by \$13,706, or 2.1%. No changes in the number of employees. Assumed 3% wage increase and reflects the lower benefits budget.
- Contracted Services: Increased by \$3,575, or 1.5%, due to increase in new audit contract (\$2,000), higher payment process costs (\$4,400) partially offset by lower maintenance cost of new finance system software (\$3,100).

Employee Service (I1) Group (\$588,665 request; \$100,967 or 20.7% higher)

- Salaries/Wages and Benefits: Increased by \$83,031, or 23.6%. An additional ES Consultant was included in the budget. Assumed 3% wage increase and reflects the lower benefits budget.
- Contracted Services: Increased by \$17,000, or 15.3%, due to hiring a new HR Consultant offset by lower amount for legal expenses.

Executive (J1) Group (\$1,770,568 request; \$24,748 or 1.4% higher)

- Salaries/Wages and Benefits: Increased by \$42,412, or 3.2%. The Public Relations Manager is planned to move to full time from a 35 hours per week. Assumed 3% wage increase and reflects the lower benefits budget.
- Contracted Services: Decreased by \$13,250, or 14%. Less legal expense expected to be spent on legislative issues.

Administrative Services - Total

Financial Summary:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Sub-Group:						
F1 - Customer Service	\$1,478,134	\$682,705	\$1,641,703	\$1,624,372	-\$17,331	-1.1%
G1 - Information Services	\$1,089,207	\$562,589	\$1,038,296	\$1,155,624	\$117,328	11.3%
H1 - Financial Services	\$896,653	\$433,734	\$907,940	\$924,918	\$16,978	1.9%
I1 - Employee Services	\$479,376	\$225,499	\$487,698	\$588,665	\$100,967	20.7%
J1 - BOT & Senior Management	\$1,528,304	\$732,260	\$1,745,820	\$1,770,568	\$24,748	1.4%
Grand Total	5,471,674	2,636,787	5,821,457	6,064,147	242,690	4.2%
Expense Type:						
Salaries & Wages	\$2,637,329	\$1,315,493	\$2,787,510	\$3,018,140	\$230,630	8.3%
Employee Benefits	1,394,569	663,003	1,398,392	1,450,862	52,470	3.8%
Contracted Services	816,702	386,928	944,604	889,436	-55,168	-5.8%
Insurance	86,348	42,828	89,355	95,724	6,369	7.1%
Materials & Supplies	67,910	26,447	51,230	55,191	3,961	7.7%
Other Expense	416,284	172,342	507,098	520,568	13,470	2.7%
Tele/Other Utilities	32,429	20,351	24,836	15,348	-9,488	-38.2%
Transportation	20,104	9,395	18,432	18,878	446	2.4%
Grand Total	5,471,674	2,636,787	5,821,457	6,064,147	242,690	4.2%
Headcount:						
Full Time	41	41	41	44	3	7.3%
Part Time	1	1	1	0	-1	-100.0%
Total	42	42	42	44	2	4.8%

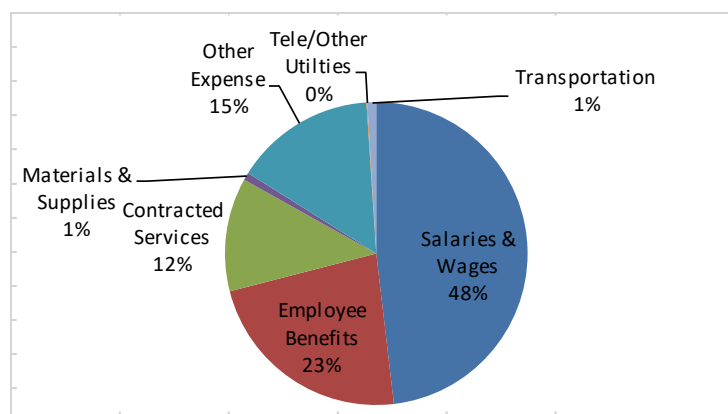
	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Salaries & Wages						
660111 - SALARIES/WAGES NON-UNION	\$1,888,451	\$969,193	\$2,030,700	\$2,230,807	\$200,107	9.9%
660112 - WAGES/OVERTIME NON-UNION	212	317	-	-	-	
660121 - WAGES/REGULAR UNION	678,892	327,666	705,703	730,497	24,794	3.5%
660122 - WAGES/OVERTIME UNION	6,658	3,365	23,107	23,116	9	0.0%
660131 - WAGES - REGULAR - TEMPS	5,359	2,128	-	6,720	6,720	n/a
660136 - CONTRACTED - TEMP	-	-	1,000	-	(1,000)	-100.0%
66014 - VACATION ACCRUAL	30,092	-	-	-	-	
660141 - TRUSTEES COMPENSATION	21,650	12,825	27,000	27,000	-	0.0%
66015 - SICKTIME ACCRUAL	6,016	-	-	-	-	
Salaries & Wages Total	2,637,329	1,315,493	2,787,510	3,018,140	230,630	8.3%
Employee Benefits						
660401 - FICA - EMPLOYERS' SHARE	197,168	100,223	213,170	230,891	17,721	8.3%
660405 - SAFETY/WHY PROGRAM ITEMS	5,407	1,272	5,940	6,140	200	3.4%
660411 - MEALS ALLOWANCE	10	-	80	100	20	25.0%
660413 - PWD TRAINING PROGRAM	25	-	-	-	-	
660418 - STIPENDS	300	300	200	200	-	0.0%
660419 - EMPLOYEE BENEFITS-MISC OTH	15,204	1,317	6,180	7,080	900	14.6%
660491 - FRINGE BENEFITS-REG/SAL	1,176,455	559,890	1,172,822	1,206,451	33,629	2.9%
Employee Benefits Total	1,394,569	663,003	1,398,392	1,450,862	52,470	3.8%
Contracted Services						
662063 - COPIER MAINTENANCE/TONER	14,054	8,671	13,000	15,000	2,000	15.4%
6632 - ACCOUNTING SERVICES	35,000	35,500	35,500	37,500	2,000	5.6%
66331 - LEGAL - LABOR RELATIONS	86,236	33,103	85,000	65,000	(20,000)	-23.5%
66333 - BOND COUNSEL	7,500	-	7,500	7,500	-	0.0%
66339 - LEGAL - OTHER	13,427	5,347	34,500	19,500	(15,000)	-43.5%
663545 - RADIO SERVICING AND EQUIP	12,266	1,148	3,500	4,000	500	14.3%
663561 - COMPUTER LICENSES	1,076	119	4,500	2,500	(2,000)	-44.4%
663562 - COMPUTER MAINTENANCE	280,959	121,531	342,350	276,418	(65,932)	-19.3%
663563 - COMPUTER CONSULTING/OTHER	18,439	34,118	20,000	25,000	5,000	25.0%
6635801 - EMPLOYEE HEALTH SERVICES	8,473	4,413	10,000	10,000	-	0.0%
663581 - UTILITY BILLING PRINTING	71,658	33,384	81,094	83,933	2,839	3.5%
663582 - PAYMENT PROCESSING	150,134	64,301	150,215	154,630	4,415	2.9%
663583 - RECEIVABLE COLLECTIONS	9,270	3,654	10,000	10,000	-	0.0%
663584 - BANK SERVICE CHARGES	22,105	12,443	22,800	26,400	3,600	15.8%
663587 - COURIER SERVICES	4,441	2,277	4,740	4,900	160	3.4%
663588 - EQUIPMENT MAINTENANCE	-	-	1,500	1,500	-	0.0%
663592 - RECRUITING SERVICES	2,252	2,620	7,000	7,000	-	0.0%
663594 - DIGSAFE	56,328	19,006	71,000	63,000	(8,000)	-11.3%
663595 - OUTPLACEMENT SERVICES	-	-	1,000	1,000	-	0.0%
663598 - HR CONSULTANT SERVICES	1,900	350	8,000	45,000	37,000	462.5%
6635984 - LANGUAGE INTERPRETATION	32	51	355	355	-	0.0%
663599 - MISC OTHER SERVICES	21,153	4,892	31,050	29,300	(1,750)	-5.6%
Contracted Services Total	816,702	386,928	944,604	889,436	(55,168)	-5.8%
Insurance						
6657 - GEN LIABILITY INSURANCE	52,252	27,983	55,966	59,884	3,918	7.0%
66592 - DAMAGES & CLAIMS-GOODWILL	5,333	200	4,000	4,500	500	12.5%
66593 - UMBRELLA INSURANCE COVER	3,176	1,684	3,362	3,604	242	7.2%
66594 - PROFESSION/CRIME BONDING	25,587	12,961	26,027	27,736	1,709	6.6%
Insurance Total	86,348	42,828	89,355	95,724	6,369	7.1%

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Materials & Supplies						
6619 - ASSET PURCHASES	424	1,558	5,000	4,500	(500)	-10.0%
66202 - TOOLS	65	263	300	300	-	0.0%
66203 - VENDOR PURCHASED SUPPLIES	2,998	1,900	3,100	3,300	200	6.5%
662041 - MATERIALS INVENTORY	210	-	-	-	-	-
662042 - SUPPLIES INVENTORY	2,680	1,166	2,400	2,550	150	6.3%
662043 - TOOL INVENTORY	5,534	960	2,650	1,700	(950)	-35.8%
66204301 - INVENTORY - TONER	947	537	1,000	500	(500)	-50.0%
66204302 - INVENTORY - PAPER	3,063	1,928	2,000	4,000	2,000	100.0%
66204303 - INVENTORY-COMPUTER EQUIP	8,894	1,558	7,140	9,026	1,886	26.4%
662047 - GARAGE INVENTORY	29	20	-	-	-	-
66205 - CONSUMABLE SUPPLIES	2,017	302	2,700	2,750	50	1.9%
66206 - COMPUTER RELATED EQUIP	41,049	16,256	24,940	26,565	1,625	6.5%
Materials & Supplies Total	67,910	26,447	51,230	55,191	3,961	7.7%
Other Expense						
6642 - EQUIPMENT RENT	2,892	1,446	2,900	3,000	100	3.4%
66601 - PUBLIC RELATIONS	2,444	2,057	5,250	5,250	-	0.0%
66609 - OTHER ADVERTISING	13,354	2,750	6,500	7,100	600	9.2%
6675111 - INSTATE TRAINING/CONF	11,489	5,609	23,500	21,500	(2,000)	-8.5%
6675112 - OUT OF STATE TRAINING/CON	27,176	9,924	20,500	20,500	-	0.0%
667513 - DUES	51,114	3,725	53,015	54,165	1,150	2.2%
667514 - PROFESSIONAL LICENSES	465	265	900	900	-	0.0%
667515 - PERIODICAL SUBSCRIPTIONS	4,587	2,812	6,675	7,735	1,060	15.9%
667521 - POSTAGE - THIRD PARTY	201,028	98,459	221,027	242,438	21,411	9.7%
667522 - POSTAGE - INTERNAL	12,982	7,293	15,191	15,391	200	1.3%
667523 - POSTAGE - EXPRESS DELIVER	337	-	400	400	-	0.0%
667531 - PRINTING COSTS	27,058	21,157	34,850	34,600	(250)	-0.7%
667532 - PHOTOCOPYING COSTS	(111)	(133)	-	-	-	-
667533 - FORMS STOCK	-	-	925	925	-	0.0%
667552 - SAFETY TRAINING	242	-	3,000	4,200	1,200	40.0%
667553 - DOT SUBSTANCE ABUSE	1,362	1,271	2,000	2,000	-	0.0%
667555 - SAFETY EXPENSES	14,327	3,558	5,000	5,200	200	4.0%
667592 - FOOD SUPPLIES	2,475	1,124	3,700	3,700	-	0.0%
667593 - VENDOR INTEREST CHARGES	-	(4,372)	-	-	-	-
667598 - GEN MANAGER CONTINGENCY	-	-	61,500	50,000	(11,500)	-18.7%
6675981 - GEN MNG - TRUSTEES	8,338	6,631	11,550	12,750	1,200	10.4%
6675982 - GEN MNG - COMMUNITY	29,721	7,342	27,215	27,215	-	0.0%
667599 - OTHER MISCELLANEOUS	5,003	1,425	1,500	1,599	99	6.6%
Other Expense Total	416,284	172,342	507,098	520,568	13,470	2.7%
Tele/Other Utilities						
66111 - TELEPHONE LINES	-	18	-	-	-	-
66112 - DATA LINES	18,560	9,145	14,760	7,392	(7,368)	-49.9%
66113 - CELLULAR PHONES	13,790	11,189	9,980	7,860	(2,120)	-21.2%
66114 - PAGERS	78	-	96	96	-	0.0%
Tele/Other Utilities Total	32,429	20,351	24,836	15,348	(9,488)	-38.2%
Transportation						
66501 - TRANSPORTATION - INTERNAL	10,266	5,460	9,170	9,094	(76)	-0.8%
665019 - TRANS INTERNAL INACTIVE	5,644	2,072	5,547	5,309	(238)	-4.3%
66502 - TRANSPORTATION - EXTERNAL	1,002	442	850	850	-	0.0%
66503 - MILEAGE REIMBURSEMENT	3,175	1,421	2,865	3,625	760	26.5%
66504 - MTA TRANS-PASS TOLL FEES	16	-	-	-	-	-
Transportation Total	20,104	9,395	18,432	18,878	446	2.4%
Grand Total	5,471,674	2,636,787	5,821,457	6,064,147	242,690	4.2%

Administrative Services: Customer Services (F1)

Financial Summary:

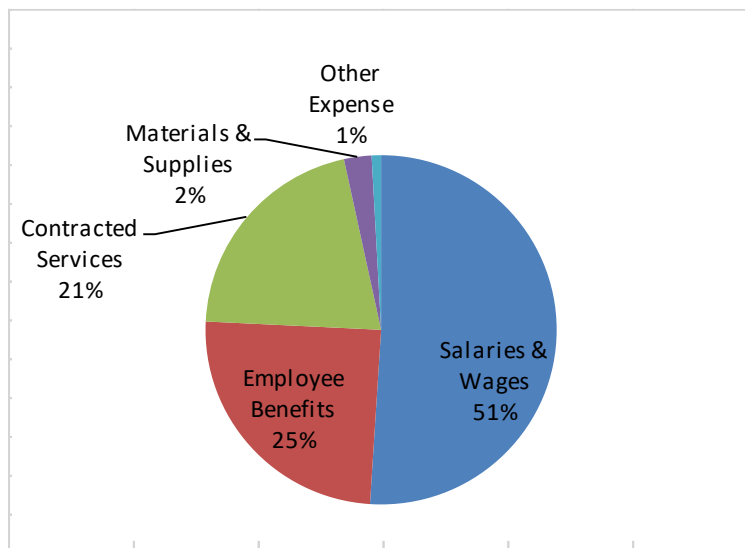
	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$721,666	\$346,917	\$748,695	\$781,913	\$33,218	4.4%
Employee Benefits	381,556	174,690	373,509	371,133	(2,376)	-0.6%
Contracted Services	151,337	56,546	267,949	196,865	(71,084)	-26.5%
Materials & Supplies	7,809	3,612	11,965	13,203	1,238	10.3%
Other Expense	197,315	91,434	221,768	244,379	22,611	10.2%
Tele/Other Utilities	2,267	1,836	2,100	1,476	(624)	-29.7%
Transportation	16,184	7,671	15,717	15,403	(314)	-2.0%
Grand Total	1,478,134	682,705	1,641,703	1,624,372	(17,331)	-1.1%
Programs:						
74 - Control Center	177,904	78,849	186,011	180,534	(5,477)	-2.9%
76 - Collection	57,106	28,472	60,054	58,197	(1,857)	-3.1%
77 - Billing	265,250	122,943	402,858	344,019	(58,839)	-14.6%
80 - Meter Reading	74,426	35,652	79,634	79,850	216	0.3%
98 - Training	92,154	13,030	58,810	163,971	105,161	178.8%
99 - Administration	811,293	403,760	854,336	797,801	(56,535)	-6.6%
Grand Total	1,478,134	682,705	1,641,703	1,624,372	(17,331)	-1.1%
Funds:						
10 - General	1,420,625	654,233	1,581,649	1,566,175	(15,474)	-1.0%
20 - Water General	37,136	18,371	37,368	19,343	(18,025)	-48.2%
30 - Water Standish	1,975	751	1,769	1,958	189	10.7%
51 - WW Cape Elizabeth	1,251	666	1,218	2,534	1,316	108.0%
53 - WW Cumberland	518	206	415	1,056	641	154.5%
54 - WW Falmouth	729	357	595	1,488	893	150.1%
57 - WW Portland	7,874	4,159	10,197	15,634	5,437	53.3%
59 - WW South Portland	3,569	2,094	4,079	7,117	3,038	74.5%
61 - WW Gorham	1,364	429	1,091	2,727	1,636	150.0%
62 - WW Westbrook	3,092	1,439	3,322	6,340	3,018	90.8%
Grand Total	1,478,134	682,705	1,641,703	1,624,372	(17,331)	-1.1%
Headcount:						



Administrative Services: Information Services (G1)

Financial Summary:

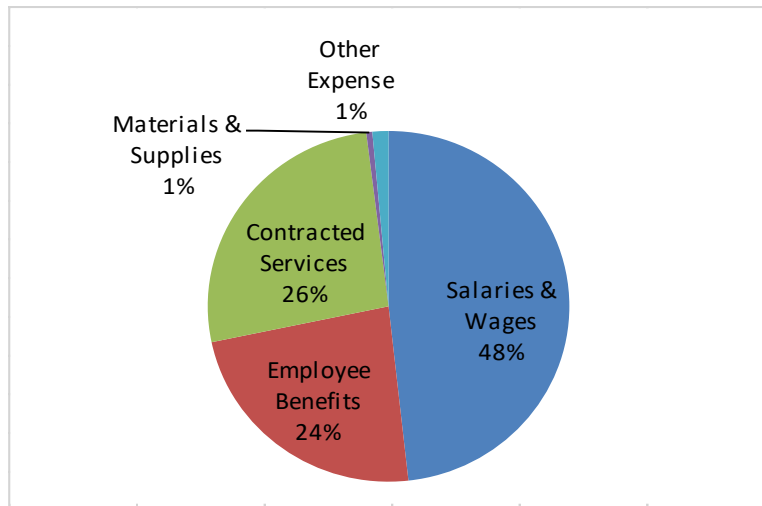
	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$496,319	\$252,645	\$506,043	\$589,494	\$83,451	16.5%
Employee Benefits	262,834	129,490	256,342	286,000	29,658	11.6%
Contracted Services	265,858	154,651	232,250	240,841	8,591	3.7%
Materials & Supplies	46,593	15,495	26,000	29,300	3,300	12.7%
Other Expense	1,114	2,575	9,125	5,225	(3,900)	-42.7%
Tele/Other Utilities	14,975	7,042	7,536	3,264	(4,272)	-56.7%
Transportation	1,514	691	1,000	1,500	500	50.0%
Grand Total	1,089,207	562,589	1,038,296	1,155,624	117,328	11.3%
Programs:						
98 - Training	82,666	19,358	36,294	37,147	853	2.4%
99 - Administration	1,006,541	543,231	1,002,002	1,118,477	116,475	11.6%
Grand Total	1,089,207	562,589	1,038,296	1,155,624	117,328	11.3%
Funds:						
10 - General	1,089,207	562,589	1,038,296	1,155,624	117,328	11.3%
Grand Total	1,089,207	562,589	1,038,296	1,155,624	117,328	11.3%
Headcount:						
Full-Time	7	7	7	8	1	12.5%
Part-Time	0	0	0	0	0	n/a
Total	7	7	7	8	1	12.5%



Administrative Services: Financial Services (H1)

Financial Summary:

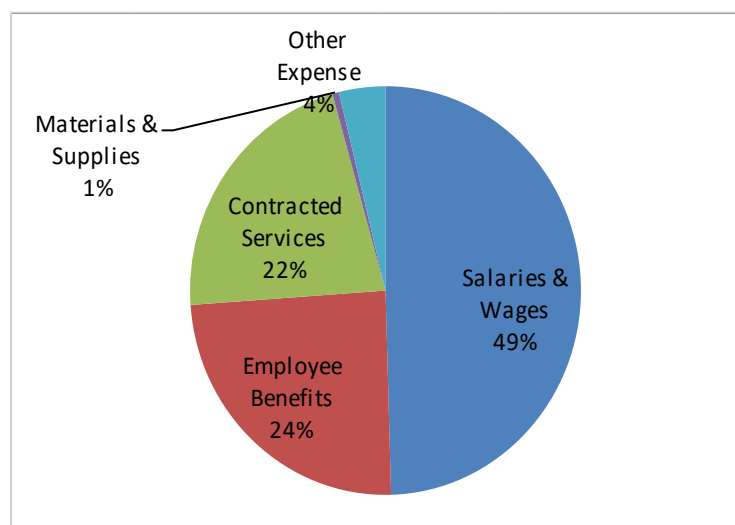
	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$419,892	\$211,742	\$431,142	\$446,232	\$15,090	3.5%
Employee Benefits	221,443	106,824	218,483	217,099	(1,384)	-0.6%
Contracted Services	236,953	113,013	239,755	243,330	3,575	1.5%
Materials & Supplies	7,548	2,120	4,440	4,988	548	12.3%
Other Expense	10,758	18	13,845	12,994	(851)	-6.1%
Transportation	59	17	275	275	-	0.0%
Grand Total	896,653	433,734	907,940	924,918	16,978	1.9%
Programs:						
77 - Billing	171,726	64,301	186,132	181,928	(4,204)	-2.3%
98 - Training	20,428	5,368	27,352	27,904	552	2.0%
99 - Administration	704,499	364,064	694,456	715,086	20,630	3.0%
Grand Total	896,653	433,734	907,940	924,918	16,978	1.9%
Funds:						
10 - General	818,726	394,284	828,479	843,827	15,348	1.9%
20 - Water General	77,927	39,450	79,461	81,091	1,630	2.1%
Grand Total	896,653	433,734	907,940	924,918	16,978	1.9%
Headcount:						
Full-Time	8	8	8	8	0	0.0%
Part-Time	0	0	0	0	0	n/a
Total	8	8	8	8	0	0.0%



Administrative Services: Employee Services (I1)

Financial Summary:

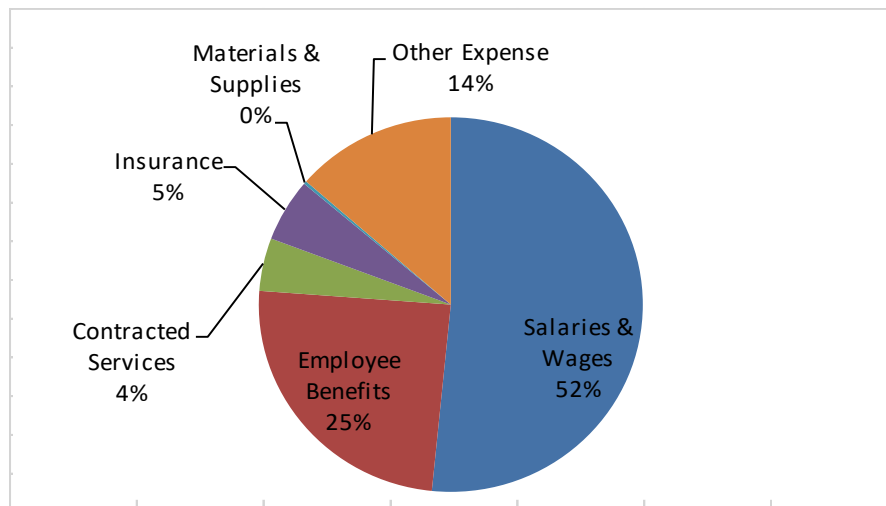
	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$228,514	\$114,753	\$232,837	\$291,642	\$58,805	25.3%
Employee Benefits	123,936	59,430	119,001	143,227	24,226	20.4%
Contracted Services	98,906	40,036	111,000	128,000	17,000	15.3%
Materials & Supplies	1,188	856	3,500	3,200	(300)	-8.6%
Other Expense	23,662	8,883	18,500	19,900	1,400	7.6%
Tele/Other Utilities	2,658	1,395	2,360	2,196	(164)	-6.9%
Transportation	513	144	500	500	-	0.0%
Grand Total	479,376	225,499	487,698	588,665	100,967	20.7%
Programs:						
98 - Training	15,677	11,510	17,321	21,481	4,160	24.0%
99 - Administration	463,699	213,989	470,377	567,184	96,807	20.6%
Grand Total	479,376	225,499	487,698	588,665	100,967	20.7%
Funds:						
10 - General	479,376	225,499	487,698	588,665	100,967	20.7%
Grand Total	479,376	225,499	487,698	588,665	100,967	20.7%
Headcount:						
Full-Time	3	3	3	4	1	25.0%
Part-Time	0	0	0	0	0	n/a
Total	3	3	3	4	1	25.0%



Administrative Services: Executive (J1)

Financial Summary:

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Expense Type:						
Salaries & Wages	\$770,938	\$389,437	\$868,793	\$908,859	\$40,066	4.6%
Employee Benefits	404,801	192,569	431,057	433,403	2,346	0.5%
Contracted Services	63,647	22,681	93,650	80,400	(13,250)	-14.1%
Insurance	86,348	42,828	89,355	95,724	6,369	7.1%
Materials & Supplies	4,772	4,364	5,325	4,500	(825)	-15.5%
Other Expense	183,435	69,432	243,860	238,070	(5,790)	-2.4%
Tele/Other Utilities	12,529	10,078	12,840	8,412	(4,428)	-34.5%
Transportation	1,834	870	940	1,200	260	27.7%
Grand Total	1,528,304	732,260	1,745,820	1,770,568	24,748	1.4%
Programs:						
5 - Public Relations	161,245	78,640	172,611	190,217	17,606	10.2%
98 - Training	86,695	21,240	74,717	76,131	1,414	1.9%
99 - Administration	1,280,363	632,338	1,498,492	1,504,220	5,728	0.4%
Grand Total	1,528,304	732,260	1,745,820	1,770,568	24,748	1.4%
Funds:						
10 - General	1,476,844	713,790	1,677,720	1,708,768	31,048	1.9%
20 - Water General	47,943	17,908	68,100	61,800	(6,300)	-9.3%
50 - Wastewater General	290	279	-	-	-	
57 - WW Portland	3,227	-	-	-	-	
62 - WW Westbrook	-	284	-	-	-	
Grand Total	1,528,304	732,260	1,745,820	1,770,568	24,748	1.4%
Headcount:						
Full-Time	9	9	9	10	1	10.0%
Part-Time	1	1	1	0	-1	n/a
Total	10	10	10	10	0	0.0%



Non-Departmental

Non-Department expenses are expenses that are not specifically assigned to a department. Other expenses include Public Utilities Commission's assessment, real estate taxes assessed by the Town of Standish and Bad Debt write-off. A one-time write reduction of \$508,673 was done in 2018 to reflect the costs of proposed asset management system.

	2018 Actual	2019 Jan-Jun	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Contracted Services						
663599 - MISC OTHER SERVICES	8,357	11,984	-	-	-	n/a
Contracted Services Total	8,357	11,984	-	-	-	n/a
Deferred Cost W/O						
66754 - DEFERRED COSTS WRITE OFF	508,673	-	-	-	-	n/a
Deferred Cost W/O Total	508,673	-	-	-	-	n/a
Other Expense					-	n/a
6670 - BAD DEBT EXPENSE	19,950	15,000	30,000	27,500	(2,500)	-8.3%
667561 - WATERSHED GRANTS/SUPPORT	-	25,270	-	-	-	n/a
6675611 - GRANTS - PASS-THROUGH	23,379	-	-	-	-	n/a
6706 - AMORT OF U P ACQ ADJUSTS	17,000	8,500	17,000	17,000	-	0.0%
Other Expense Total	60,329	48,770	47,000	44,500	(2,500)	-5.3%
Regulatory/Taxes					-	n/a
670821 - STANDISH REAL ESTATE TAX	49,035	24,152	47,800	50,500	2,700	5.6%
670822 - OTHER R/E TAX(NON-STANDI)	8,038	5,288	8,000	8,874	874	10.9%
670823 - PUC ASSESSMENT	85,583	94,327	79,500	90,000	10,500	13.2%
670824 - ME DRINKING WTR PROGRAM	82,438	82,438	68,665	80,275	11,610	16.9%
670825 - PUC PUBLIC ADVOCATE	3,069	-	10,000	15,000	5,000	50.0%
Regulatory/Taxes Total	228,163	206,205	213,965	244,649	30,684	14.3%
Grand Total	805,522	266,959	260,965	289,149	28,184	10.8%

The District pays (670821 – Standish Real Estate Tax) real estate taxes. Real estate charges in other municipalities are paid using account 670822 – Other R/E Tax (Non-Standish).

The District also pays annual assessments to the Maine Public Utility Commission (PUC) and the Maine Drinking Water Program. The PUC assessment has two components – general assessment (670823 – PUC Assessment) and public advocacy (670825 – PUC Public Advocate). The PUC bases the general assessment on the utility's size and the amount of time the Commission spends in each industry sector. The assessment from the Drinking Water Program (670824 – ME Drinking WTR Program) is based on population served.

Green Bonds Issued in 2019



MOORS & CABOT
INVESTMENTS
Banking & Advisory Group

PRESS RELEASE
JULY 1, 2019

PORTLAND WATER DISTRICT TO SELL IT'S FIRST SERIES OF GREEN BONDS

The Portland Water District expects to sell \$6,500,000 Water System Bonds on July 16, 2019, to provide funds to finance improvements throughout the District's distribution system, including but not limited to repair and replacement of water mains, services lines, valves and related appurtenances, including the costs of issuance.

The Trustees of the District have determined that the 2019 Bonds will provide funds to finance the installation and renewal of water main improvements and other related infrastructure upgrades and improvements which are environmentally beneficial projects designed to ensure safe drinking water for the public in the State in accordance with State, federal and local standards. Therefore, on June 24, 2019, the Trustees adopted Resolution 19-026 designating the Bonds as "Green Bonds."

The purpose of labeling the bonds as Green Bonds is to allow purchasers of the Bonds to invest directly in bonds that finance such environmentally beneficial purposes. The holders of the bonds do not assume any specific project risk or economic benefit related to any of the funded projects as a result of the Green Bonds designation.

This is the first series of Green Bonds that have been issued by the District.

The first U.S. municipal bond to use the Green Bond label in its offering documents was issued by Massachusetts in 2013 whereby issuers must commit to deploying 100% of bond proceeds for environmental sustainability-oriented activities in order for their bond to be identified a Green Bond.

Each time that the District sells its bonds in the public market, it re-applies for a rating review and assignment. The District's 2018 Bonds' prior ratings were affirmed by Moody's as Aa3; S&P's AA. The assignment of bond ratings for the 2019 Bonds is expected to be received by the District on or about July 12.

Introduction

Total salaries, wages and benefits budget for 2020 is \$18,168,026. This is 3.9% higher than the 2019 budget.

Total Labor & Benefits (O&M and Capital):

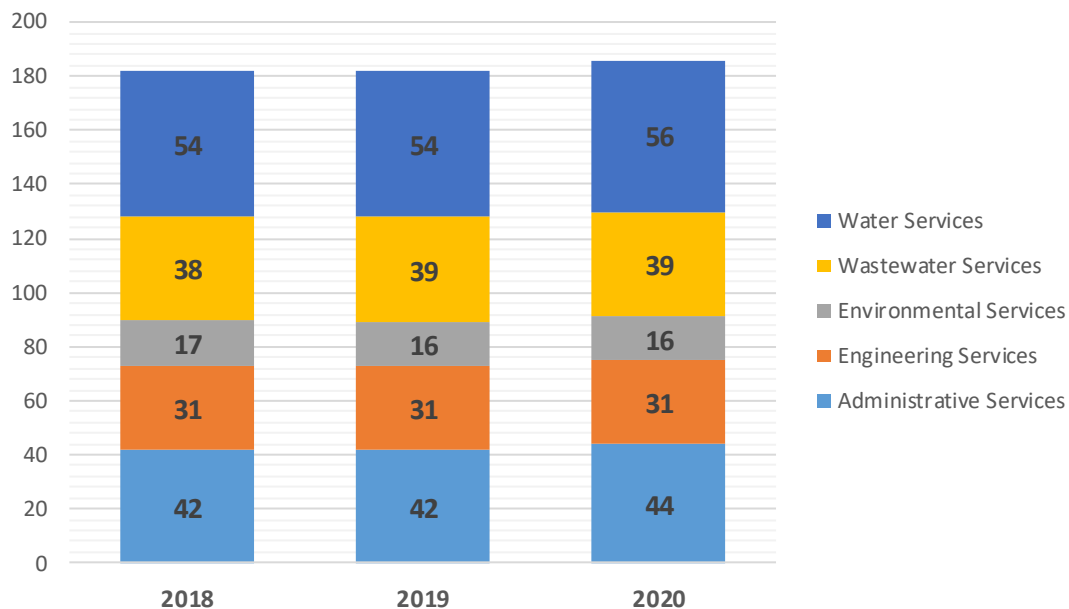
	2018 Actual	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Salaries & Wages	\$11,111,090	\$11,900,627	\$12,536,522	\$635,895	5.3%
Employee Benefits	5,479,428	5,587,775	5,631,504	\$43,729	0.8%
Actual	16,590,518	17,488,402	18,168,026	679,624	3.9%

Employees record their labor hours by specific water and wastewater operating funds and capital projects. Benefits are allocated based on the labor dollars to the funds. It is estimated staff will allocate \$440,774 in labor/benefits to capital projects in 2020; which is \$19,430 (4.2%) lower than the 2019 budget.

	2018 Actual	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Operations & Maintenance	\$16,126,687	\$17,028,198	\$17,727,252	\$699,054	4.1%
Capital	463,831	460,204	440,774	(19,430)	-4.2%
	16,590,518	17,488,402	18,168,026	679,624	3.9%

Total Employee Positions:

Authorized positions were 182 in 2018 and 2019. They increased by four (4) to 186 in the 2020 Budget as Water Services and Administrative Services both added two (2) positions.



Salary Costs

The Budget for total labor costs will increase by 5.3% (\$635,895).

Labor rates for Non-Union employees were assumed to be 3.0% higher than the rates paid on July 1, 2019. The Union contract, which ended on 11/04/18, was under negotiation during the budget process. The assumption we used in the budget (that Union pay rates would increase 3.0% in November of 2018, 2019 and 2020) were the terms agreed to with the Union prior to the completion of this document.

Overall hours budgeted increased 2.4% due to the addition of four new full time positions as well as increases in hours for overtime, doubletime, standby and temporary employees.

Operating labor will increase 5.6% while capital labor will decrease 1.6% as the ratio of operating/capital labor goes from 96.7%/3.3% in 2019 to 96.9%/3.1% in 2020.

Total Labor (O&M and Capital) by Type:

	2018 Actual	2018 Budget	2019 Budget	Budget Diff \$	Budget Diff %
Regular (Hourly & Salaried)	\$10,228,910	\$10,914,037	\$11,468,832	\$554,795	5.1%
Overtime	546,565	583,593	629,379	45,786	7.8%
Doubletime	55,283	62,170	69,749	7,579	12.2%
Standby	148,253	137,677	163,272	25,595	18.6%
Premium Time/Standby	750,101	783,440	862,400	78,960	10.1%
Trustee Compensation	21,650	27,000	27,000	0	0.0%
District Employed Temps	109,197	171,150	178,290	7,140	4.2%
Agency Temps	1,232	5,000	0	-5,000	-100.0%
Temporary Employees	110,429	176,150	178,290	2,140	1.2%
Total Labor Cost	11,111,090	11,900,627	12,536,522	635,895	5.3%

Total Labor Broken Out by O&M and Capital:

	2018 Actual	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Operating Expense	\$10,785,763	\$11,507,789	\$12,149,805	\$642,016	5.6%
Capital Expenditures	325,327	392,838	386,717	-6,121	-1.6%
	11,111,090	11,900,627	12,536,522	635,895	5.3%
Operating Expense	97.1%	96.7%	96.9%		
Capital Expenditures	2.9%	3.3%	3.1%		
	100.0%	100.0%	100.0%		

Labor Hours/Average Pay Rates

Budgeted hours for the 2020 Budget were up by 9,952 hours or 2.4%. Regular hours were up 8,060 (2.1%) due to the addition of four new positions in the budget. All other labor categories also saw increases in the 2020 Budget.

Total Labor (O&M and Capital) Hours by Type:

	2018 Actual	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Regular (Hourly & Salaried)	365,165	377,520	385,580	8,060	2.1%
Overtime	15,100	15,408	16,151	743	4.8%
Doubletime	1,167	1,202	1,307	105	8.7%
<u>Standby</u>	<u>5,592</u>	<u>5,495</u>	<u>6,279</u>	<u>784</u>	<u>14.3%</u>
Premium Time/Standby	21,859	22,105	23,737	1,632	7.4%
District Employed Temps	7,475	12,225	12,735	510	4.2%
<u>Agency Temps</u>	<u>62</u>	<u>250</u>	<u>-</u>	<u>(250)</u>	<u>-100.0%</u>
Temporary Employees	7,537	12,475	12,735	260	2.1%
	394,561	412,100	422,052	9,952	2.4%

Labor Rates by Type:

On average pay rates were increased 2.6%. Changes to overtime, double-time and standby varied due to shifts in personnel budgeted to cover those hours. Temporary Employee rates are flat.

	2018 Actual	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Regular (Hourly & Salaried)	\$28.01	\$28.91	\$29.74	\$0.83	2.9%
Overtime	36.20	37.88	38.97	1.09	2.9%
Doubletime	47.39	51.72	53.37	1.65	3.2%
<u>Standby</u>	<u>26.51</u>	<u>25.05</u>	<u>26.00</u>	<u>0.95</u>	<u>3.8%</u>
Premium Time/Standby	34.05	35.44	36.33	0.89	2.5%
District Employed Temps	14.61	14.00	14.00	0.00	0.0%
<u>Agency Temps</u>	<u>20.00</u>	<u>20.00</u>	<u>0.00</u>	<u>-20.00</u>	<u>-100.0%</u>
Temporary Employees	14.65	14.12	14.00	-0.12	-0.8%
	28.10	28.88	29.64	0.76	2.6%

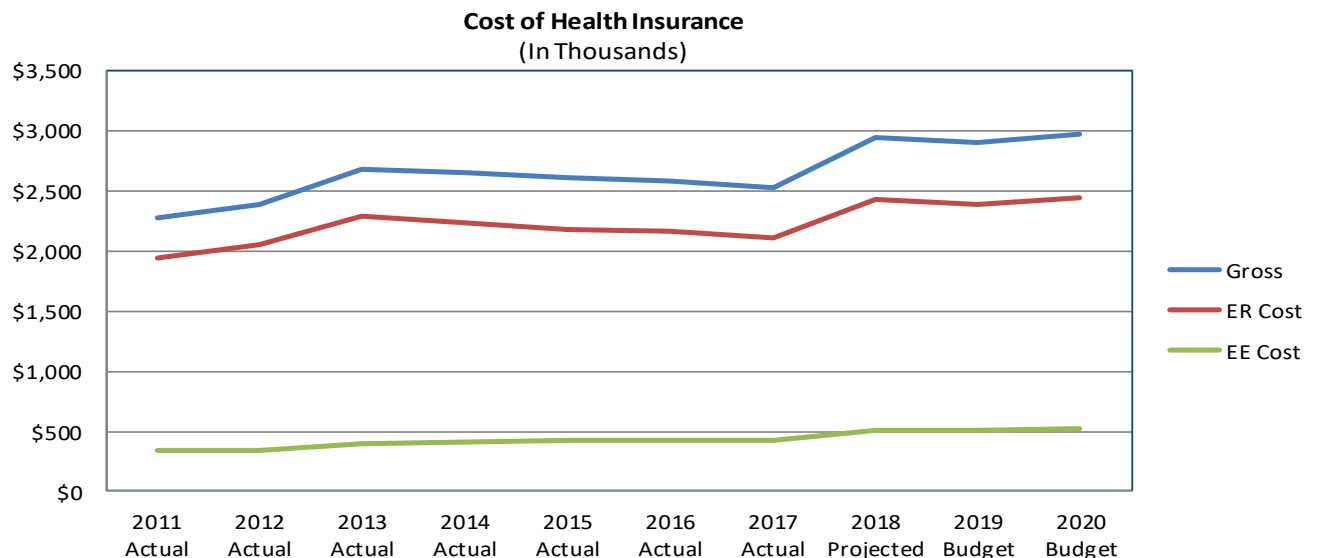
Employee Benefits

In order to qualify for benefits, employees must work more than 20/24 hours/week (non-union/union). Seasonal or temporary employees are monitored for eligibility as required under Affordable Care Act (ACA), but in general do not qualify for benefits. Benefits are charged to departments as a percentage of the regular non-premium pay. In 2020, the benefits percentage decreased from 42.86% to 40.74% as overall benefit costs were flat while regular wages grew 5.1%.

Health Insurance

Based on recent claims experience for the health plan, the District was able to lower the renewal rate by 2.0% for calendar year 2020. However, the budget increased by \$53,805 (2.2%) because of the additional number of employees expected to participate in the program.

The 2019 Budget assumed the District would pay 91% of an employee's health insurance premiums and 70% of the premiums for dependents. The 2020 Budget assumes a reduction in the employee coverage to 91% while keeping the dependent percentage the same. The result, when combined with other factors such as changes to employee plans (single, employee with children, employee and spouse only for family plans) resulted in an increase in total employee contributions of \$17,192 (3.4%) to \$527,802.



The District makes health insurance coverage available to regular employees who work over 20 hours per week (24 hours per week for Union employees). The medical cost for part-time employees is pro-rated based on hours worked. The District provides \$30/week to any employee who is insured outside the District. The Budget assumed six positions will be vacant:

Year	Insured	Non-Insured	Total
2018	168	8	176
<u>2019</u>	<u>173</u>	<u>7</u>	<u>180</u>
Change	+5	-1	4

Employee Benefits (continued)

Pension

Pension related expenses are \$1,662,162 in the 2020 Budget. The District offers employees a defined benefit plan and a deferred compensation plan.

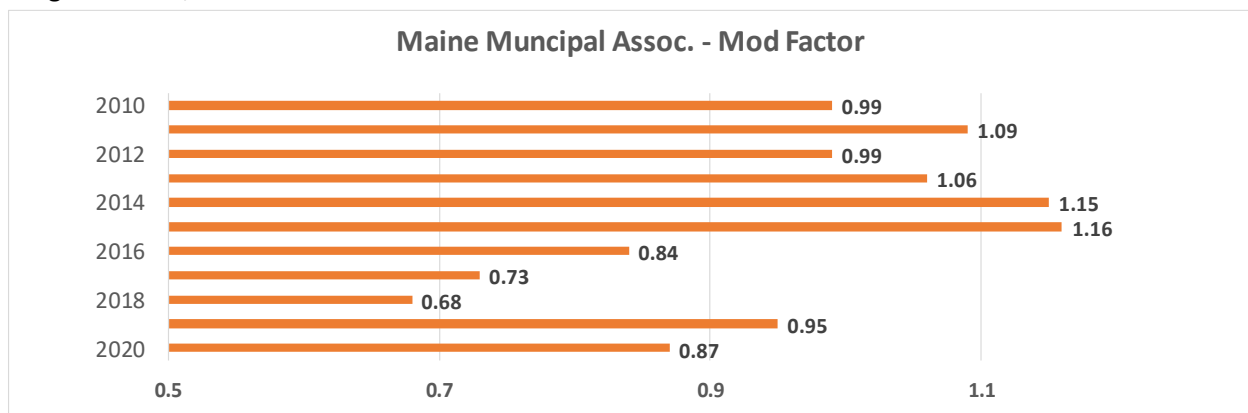
The defined benefit plan's contributions in the 2020 Budget increased 0.7% (\$7,888) to \$1,120,662. This contribution is consistent with the Board adopted long-term funding policy and represents the amount calculated by the District's actuary in 2019. The small increase is primarily due to the better than expected investment returns. The plan is solely funded by the District without any employee contributions.

In addition, the deferred compensation plan for Union employees hired prior to 2011, and Non-Union employees hired prior to 2012, will fully match employee contributions up to \$1,225 annually. This cost has been budgeted at \$112,000 for 2020, the same as the prior year.

New Union employees hired during or after 2011, and Non-Union employees hired during or after 2012, are enrolled in the deferred compensation plan only. The plan requires employees to contribute 3.0% of their pay, which the District matches at a rate of 150%. Effective April 4, 2016, the District matches up to 4.5% of their pay, with employee contributions above 3% remaining voluntary. The expense for the match is budgeted at \$350,000 for 2020, an increase of \$50,000 (16.7%).

Workers Compensation

The District participates in the Maine Municipal Association's workers' compensation program. The premium assessed is based on amount of wages and a claim experience factor. In 2019, the "Mod" factor of 0.68 was increased to 0.95 a number close to the 10-year average of 0.964. The increase over the prior year was due to a few high cost injuries. However, the expected 2020 mode rate is expected to decline to .87. The 2020 Budget is \$230,000 with a deductible cost of \$9,000 resulting in a total budget of \$239,000.



Other Benefits

Other benefits, which include dental, uniforms, unemployment, long-term disability, life insurance and a contingency for higher benefit costs total \$317,112.

Employee Benefits (continued)

	2018 Actual	2019 Budget	2020 Budget	Budget Diff \$	Budget Diff %
Health Insurance:					
6604041 - HEALTH INSURANCE-EMPLOYEE	\$2,725,620	\$2,898,513	\$2,966,990	\$68,477	2.4%
66040419 - HEALTH INSUR - EE CONTRIB	(468,772)	(510,610)	(527,802)	(17,192)	3.4%
6604043 - MEDICAL INSURANCE PAYOUT	12,780	12,480	15,000	2,520	20.2%
	2,269,628	2,400,383	2,454,188	53,805	2.2%
Pension:					
66040611 - PEN EXP - DEFINED BENEFIT	81,894	43,500	44,500	1,000	2.3%
66040612 - PEN EXP - DEFER COMP 457	20,215	25,000	25,000	-	0.0%
6604062 - PENSION CONTRIBUTION	1,414,448	1,112,774	1,120,662	7,888	0.7%
6604063 - DEF COMP 457 MATCH - NEW	280,130	300,000	350,000	50,000	16.7%
6604064 - DEF COMP 457 MATCH - OLD	116,959	112,000	112,000	-	0.0%
6604065 - PENSION LEGAL EXPENSE	12,600	10,000	10,000	-	0.0%
	1,926,246	1,603,274	1,662,162	58,888	3.7%
Workers Compensation:					
660409 - WORKERS' COMPENSATION	167,749	224,000	230,000	6,000	2.7%
6604091 - WORKES COMP DEDUCTABLE	5,956	9,000	9,000	-	0.0%
	173,705	233,000	239,000	6,000	2.6%
Other Benefits:					
66025 - BENEFITS CONTINGENCY	-	182,500	50,000	(132,500)	-72.6%
660402 - LONG-TERM DISABILITY	27,232	28,000	30,000	2,000	7.1%
660403 - LIFE INSURANCE	19,631	22,000	25,000	3,000	13.6%
660407 - EDUCATION SUBSIDY	8,929	11,000	11,000	-	0.0%
660408 - PROGRAMS ADMINISTRATION	8,398	15,000	15,000	-	0.0%
660410 - UNEMPLOYMENT COMPENSATION	4,936	20,000	20,000	-	0.0%
660413 - PWD TRAINING PROGRAM	-	5,000	5,000	-	0.0%
6604151 - FIELD UNIFORMS	47,314	35,450	36,000	550	1.6%
6604152 - OFFICE CLOTHING	6,109	7,200	7,200	-	0.0%
660416 - DENTAL COVERAGE	53,356	63,000	65,000	2,000	3.2%
660417 - WELLNESS PROGRAM	469	2,500	2,500	-	0.0%
660419 - EMPLOYEE BENEFITS-MISC OTH	29,876	34,900	35,775	875	2.5%
660420 - WORKFORCE PLANNING	-	1,000	1,000	-	0.0%
660422 - ACTUARY NON-PENSION	7,241	2,500	2,500	-	0.0%
663592 - RECRUITING SERVICES	-	10,000	10,000	-	0.0%
663598 - HR CONSULTANT SERVICES	1,870	-	-	-	n/a
66595 - INDENTITY FRAUD INSURANCE	1,067	1,067	1,142	75	7.0%
667599 - OTHER MISCELLANEOUS	(3,025)	(21)	(5)	16	-76.2%
	213,403	441,096	317,112	(123,984)	-28.1%
Total Employee Benefits	4,582,982	4,677,753	4,672,462	(5,291)	-0.1%
660401 - FICA - EMPLOYERS' SHARE	837,474	910,022	959,042	49,020	5.4%
Total Costs	5,420,456	5,587,775	5,631,504	43,729	0.8%
Total Regular Labor (Benefits Basis)	10,130,155	10,914,037	11,468,832	554,795	5.1%
Benefit Rate	45.24%	42.86%	40.74%	-2.12%	-4.9%
Total Rate (with FICA of 7.65%)	52.89%	50.51%	48.39%	-2.12%	-4.2%

Note: The total employee benefits expense above (\$5,631,504) does not include \$102,945 in employee benefits charged directly to departments. With these costs, the District's benefits cost is \$5,734,449.

Authorized Headcount

-

The overall headcount was increased from 182 to 186. Water Operations added a Water System Operator and an Equipment Operator 1. Administration added an IS Business Intelligence & Reporting Analyst and an Employee Services Consultant

In addition, Wastewater **reclassified** two (2) Technical Maintenance Person - Mechanical/Electrical positions were replaced by two Technical Maintenance Person – Mechanical positions.

	2018 Budget	2019 Budget	2020 Budget	Change
<u>Water Services</u>				
A1 - Water Administration	5	5	5	0
A2 - Wtr Transmission/Distrib	22	22	24	2
A3 - Water Treatment	11	11	11	0
A6 - Water Utility Services	<u>16</u>	<u>16</u>	<u>16</u>	<u>0</u>
	54	54	56	2
<u>Wastewater Services</u>				
B1 - Wastewater Administration	2	3	3	1
B3 - Wastewater Treatment	23	23	23	0
L9 - Wastewater Systems	<u>13</u>	<u>13</u>	<u>13</u>	<u>0</u>
	38	39	39	1
<u>Environmental Services</u>				
A5 - Water Resources	9	9	9	0
L6 - Water/WW Laboratory	<u>8</u>	<u>7</u>	<u>7</u>	<u>-1</u>
	17	16	16	-1
<u>Engineering Services</u>				
C1 - Facilities Services	10	10	10	0
E2 - Asset Engineering	18	18	18	0
E7 - Instrumentation	<u>3</u>	<u>3</u>	<u>3</u>	<u>0</u>
	31	31	31	0
<u>Administration</u>				
F1 - Customer Service	14	14	14	0
G1 - Information Services	7	7	8	1
H1 - Financial Services	8	8	8	0
I1 - Employee Services	3	3	4	1
J1 - BOT & Senior Management	<u>10</u>	<u>10</u>	<u>10</u>	<u>0</u>
	42	42	44	2
	182	182	186	4

Non-Union Positions

The overall Non-Union headcount increased from 60 to 62. The table below shows the requested Non-Union positions by pay range. The Job Class Code (JCC) is in parentheses:

Range 1 (\$40,000 to \$60,000)	2019	2020	Change	Range 4 (\$71,400 to \$107,000)	2019	2020	Change
Executive Admin Asst (5010)	1	1	0	Customer Service Manager (9006)	1	1	0
General Accounting Asst (5028)	<u>1</u>	<u>1</u>	<u>0</u>	Director of Finance Serv (9008)	1	1	0
	2	2	0	Dist Sys Manager - Water (9014)	1	1	0
				Eng/Asset Mgmt Srv Mngr (9031)	1	1	0
Range 2 (\$51,000 to \$76,400)	2019	2020	Change	Environmental Srv Manager (9020)	1	1	0
Asset Analyst (9043)	1	0	-1	Information Srvs Manager (9010)	1	1	0
BSA - GIS (5022)	1	1	0	Senior Project Engineer (9045)	3	3	0
Business Intelligence & Reporting Analyst	0	1	1	Project Manager - Admin (9047)	<u>1</u>	<u>1</u>	<u>0</u>
Business Systems Analyst (9501)	1	1	0		10	10	0
Chief of Security Oper (1069)	1	1	0				
Associate Engineer (5023)	2	3	1	Range 5 (\$80,00 to \$120,000)	2019	2020	Change
Environmental Educ Coord (5017)	1	1	0	Director of Opr Srvs (9011)	2	2	0
ES Conslt Safety/Training (5004)	1	1	0	Exec Director of EE Srvs (9007)	<u>1</u>	<u>1</u>	<u>0</u>
ES Consultant Empl Benefits (5003)	1	2	1		3	3	0
Financial Analyst (5020)	2	2	0				
Industrial Pretreatment Program Supv (5035)	1	1	0	Range 6 (\$90,000 to \$134,800)	2019	2020	Change
Network Admin I (9503)	1	1	0	Corporate Counsel (9035)	1	1	0
Network Admin II (9044)	1	1	0	Exec Director of Admin (9004)	1	1	0
Purchasing Agent/Buyer (5005)	1	1	0	Exec Director of AMAP (9005)	<u>1</u>	<u>1</u>	<u>0</u>
Right of Way Agent (5014)	1	1	0		3	3	0
Scheduler/Coord AMAP (5032)	1	1	0				
Scheduler/Coordinator Ops (5033)	1	1	0	Range 7 (\$108,400 to \$162,400)	2019	2020	Change
Source Protection Coord (5018)	<u>1</u>	<u>1</u>	<u>0</u>	General Manager (9018)	1	1	0
	19	21	2				
				Workforce Management	2019	2020	Change
Range 3 (\$59,500 to \$89,300)	2019	2020	Change	Position (9600)	3	3	0
Chief Admin Facility Operator (5019)	1	1	0				
Asset MGMT Program Manager	1	1	0	Full Time Positions	59	61	2
Cust Srv Program Manager (9502)	1	1	0	Part Time Positions	<u>1</u>	<u>1</u>	<u>0</u>
Database Administrator (9027)	1	1	0	Total Non-Union Positions:	60	62	2
Network Admin III (9026)	1	1	0				
WW Maintenance Manager Planner Scheduler (9048)	1	1	0				
Project Engineer (9030)	3	3	0				
Public Relations Manager (PT) (9025)	1	1	0				
Regulatory & Security Advisor (9028)	1	1	0				
Transm Dist Supervisor (5011)	2	2	0				
Utility Asset Coord AMAP (9038)	1	1	0				
Utility Asset Coord Water (9039)	1	1	0				
Utility Specialist Suprv (9023)	1	1	0				
Wtr Svs Plnt/Sys Chief Op (9002)	1	1	0				
WW Chief Oper Plant/Sys (9042)	<u>2</u>	<u>2</u>	<u>0</u>				
	19	19	0				

Effective Date of Pay Range: 1/1/2019

Union Positions

For the 2020 Budget, the Union headcount went up by two (2) to 124. One position, Laboratory Assistant II, was moved from Paygrade D to E. The table below shows the requested Union positions by pay grade. The rates shown are effective starting 11/04/19 and will be in effect until 11/02/20. The Job Class Code (JCC) is in parentheses:

<u>Paygrade - D (\$19.22/\$20.23)</u>	<u>2019</u>	<u>2020</u>	<u>Change</u>	<u>Paygrade - I (\$25.68/\$27.03)</u>	<u>2019</u>	<u>2020</u>	<u>Change</u>
AMR Specialist (1577)	1	1	0	Instrumentation Maint Per (1038)	2	2	0
Laboratory Assistant II (1092)	<u>1</u>	<u>0</u>	<u>-1</u>	Senior WW Operator (1055)	5	5	0
	2	1	-1	Utility Specialist (1085)	13	13	0
				Wtr Treat Plant Sys Oper (1051)	7	7	0
<u>Paygrade - E (\$20.35/\$21.42)</u>	<u>2019</u>	<u>2020</u>	<u>Change</u>	WW System Maint/Operator (1082)	<u>3</u>	<u>3</u>	<u>0</u>
Admin Asst Finance II (1094)	3	3	0		30	30	0
Administrative Asst WW (1083)	1	1	0				
Environmental Educator (5029)	1	1	0	<u>Paygrade - J (\$27.27/\$28.71)</u>	<u>2019</u>	<u>2020</u>	<u>Change</u>
Laboratory Assistant II (1092)	<u>0</u>	<u>1</u>	<u>1</u>	Environmental Scientist (1022)	3	3	0
	5	6	1	Facility Maint Foreperson (1565)	0	0	0
				Tech Maint Pers Mech/Elec (1073)	5	5	0
<u>Paygrade - F (\$21.56/\$22.69)</u>	<u>2019</u>	<u>2020</u>	<u>Change</u>	Tech Maint Person SLWTF (1070)	1	1	0
Cust Serv Coord Ctrl Ctr (1008)	3	3	0	Water Resource Specialist (1021)	<u>4</u>	<u>4</u>	<u>0</u>
Facility Maint Technician (1086)	3	3	0	(1 of 4 is part-time)	13	13	0
Facility Supp Generalist (1091)	1	1	0				
Technical Admin Asst (1522)	2	2	0	<u>Paygrade - K (\$28.84/\$30.36)</u>	<u>2019</u>	<u>2020</u>	<u>Change</u>
Wastewater Operator (1006)	3	3	0	Dist System Foreperson (1557)	5	5	0
Water System Operator (1005)	<u>12</u>	<u>13</u>	<u>1</u>	Facility Maint Foreperson (1565)	1	1	0
	24	25	1	Garage Foreperson (1528)	1	1	0
				Environ Scien Lead Fore (1573)	1	1	0
<u>Paygrade - G (\$22.86/\$24.06)</u>	<u>2019</u>	<u>2020</u>	<u>Change</u>	Operations Foreman, Sys (1090)	1	1	0
Collections Coordinator (1028)	1	1	0	Operations Foreperson (1053)	3	3	0
Cust Serv Coordinator (1017)	4	4	0	Utility Foreperson (1095)	1	1	0
Engineering Tech II (1020)	1	1	0	Ops Foreman, WW System (1093)	<u>1</u>	<u>1</u>	<u>0</u>
Equip Operator I (1023)	4	5	1		14	14	0
Fleet Maintenance Tech (1058)	1	1	0				
Millwright I (1049)	1	1	0	<u>Paygrade - L (\$30.63/\$32.24)</u>	<u>2019</u>	<u>2020</u>	<u>Change</u>
WW Maintenance Operator (1059)	<u>10</u>	<u>10</u>	<u>0</u>	Inst Maint Foreperson (1537)	1	1	0
	22	23	1	Tech Maint Foreperson (1569)	<u>2</u>	<u>2</u>	<u>0</u>
					3	3	0
<u>Paygrade - H (\$24.24/\$25.52)</u>	<u>2019</u>	<u>2020</u>	<u>Change</u>				
Asset Mgmt Technician (1575)	4	4	0				
Cust Serv Coordinator (1017)	3	3	0	Full Time Positions	121	123	2
Collection Sys Maint Oper (1576)	1	1	0	<u>Part Time Positions</u>	<u>1</u>	<u>1</u>	<u>0</u>
Inv Control Leadperson (1564)	<u>1</u>	<u>1</u>	<u>0</u>	Total Union Positions	122	124	2
	9	9	0				

Temporary & Non-Benefit Employees

Temporary and non-benefit employees supplement regular employees particularly during the busy times of year. These positions are not benefit eligible, but the hours for benefit eligibility are monitored carefully as is required under the Affordable Care Act. All other positions are classified as “seasonal” employees who also are not offered benefits, but do have their hours tracked to monitor for benefits eligibility. The position totals are listed as full time equivalents (FTE’s). Temporary employees hired via outside agencies are also included below.

Water Operations	2018	2019	2020	Change '19 to 20
A1 - Water Administration	0.00	0.00	0.35	0.35
A2 - Transmission/Distribution	1.67	0.40	0.00	(0.40)
A3 - Water Treatment	0.00	0.00	0.00	0.00
A6 - Utility Services	<u>1.00</u>	<u>1.97</u>	<u>1.96</u>	<u>(0.01)</u>
	2.67	2.37	2.31	(0.06)
<u>Wastewater Operations</u>				
B1 - Wastewater Administration	0.00	0.00	0.00	0.00
B3 - Portland/Cape/Peaks WWTP's	0.19	0.19	0.18	(0.01)
B4 - Westbrook/Gorham/Windham WWTP	0.00	0.00	0.00	0.00
L9 - Water / WW Systems	<u>0.10</u>	<u>0.10</u>	<u>0.17</u>	<u>0.07</u>
	0.29	0.29	0.35	0.06
<u>Environmental Services</u>				
A5 - Environmental Services	1.72	1.82	1.78	(0.04)
L6 - Water / WW Laboratory	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
	1.72	1.82	1.78	(0.04)
<u>Engineering Services</u>				
C1 - Facility Services Administration	0.50	0.50	0.50	0.00
E2 - Planning & Design	1.00	1.00	0.92	(0.08)
E3 - New Mains & Construction	0.00	0.00	0.00	0.00
E7 - Instrumentation	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
	1.50	1.50	1.42	(0.08)
<u>Administration Department</u>				
F1 - Customer Service	0.00	0.00	0.23	0.23
G1 - Information Services	0.00	0.00	0.00	0.00
H1 - Financial Services	0.00	0.00	0.00	0.00
I1 - Employee Services	0.02	0.02	0.00	(0.02)
J1 - Executive Office	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
	0.02	0.02	0.23	0.21
	6.20	6.00	6.09	0.09

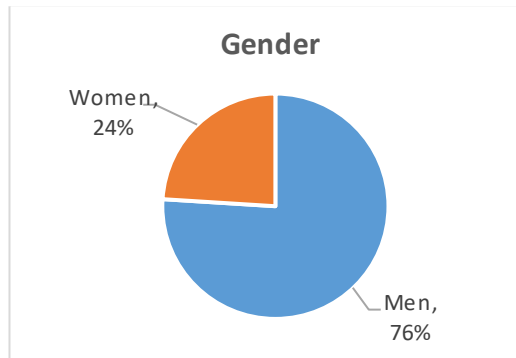
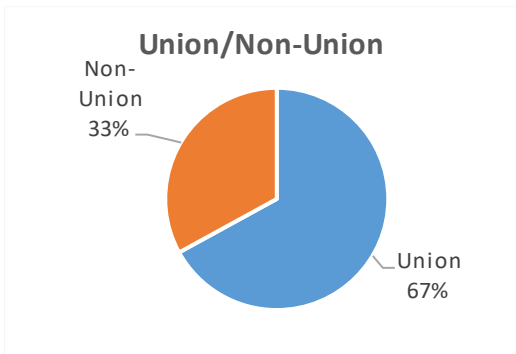
Temporary & Non-Benefit Employees (continued)

Temporary Positions Detail:

District Paid (Account 660131):

Org	Job Class	#EE	Hrs/Wk	# Wks	Hours	FTE's
A1	Water Operations Intern	1.5	40	12	720	0.35
A5	Lake Security	6	10	20	1,200	0.58
	Lake Security	2	17	25	850	0.41
	Lake Security	1	10	46	460	0.22
	Environmental Educator	1	20	26	520	0.25
	Watershed Protection Specialist	1	40	17	680	0.33
A6	Construction Laborer	4	40	25.5	4,080	1.96
B3/L9	Wasterwater Operations Intern	1.5	40	12	720	0.35
C1	Facility Maintenance Technician	1	40	26	1,040	0.50
E2	Engineering Intern	4	40	12	1,920	0.92
F1	Customer Service Temp	1	40	12	480	0.23
		24				6.09

Headcount - All Regular Employees



Work Force Management

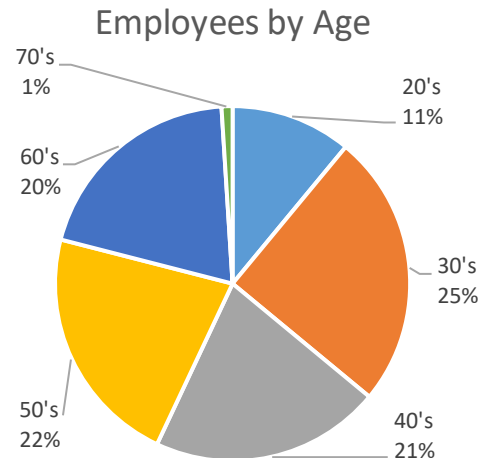
In 2020, five (5) employees will reach age 65, the normal retirement age. That would bring the total of current employees, at or above 65, to 15.

Management has been proactively managing the challenges of baby boomer retirements and the development of promoted personnel and unseasoned new hires.

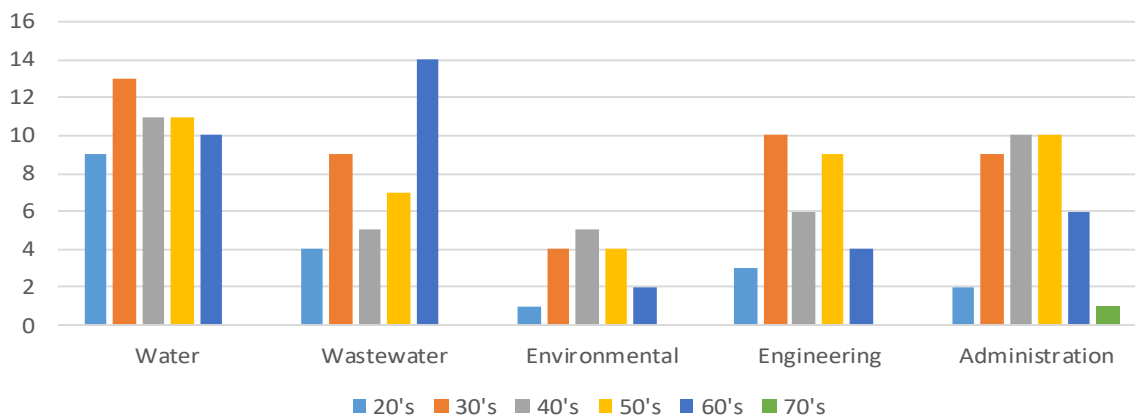
The Wastewater Department has implemented an Apprentice Program to help educate new hires to the breadth of knowledge needed to operate our facilities, as well as to get exposure to other areas of PWD operations. Documentation, such as procedures for operating the rotary press, has further supported knowledge transfer.

The Water Department's apprentice program has been satisfying its labor needs. It has served to launch capable Water System Operators into the more advanced Utility System and Water Treatment System Operator roles. The next challenge is preparing employees for the highest technical roles, and foreperson or supervisory role.

Generally speaking, the Administration Department is well positioned with existing personnel.



Age by Department



Average Length of Service (years)

<u>Water</u>	<u>Wastewater</u>	<u>Environmental</u>	<u>Engineering</u>	<u>Administration</u>	<u>All Depts</u>
14.6	15.7	14.6	14.6	11.3	14.1

Work Force Management (continued)

Employee Development

The District actively promotes skill development by encouraging participation in local, regional and national organizations, and on the job training. Also, a goal of an average of 80 hours of training per employee per year has been established.

Managing Today

To address work force management issues, the District requires all employees' performance be evaluated yearly with an action plan to assist with continuous development. Pay adjustments for non-union employees are based on performance. Non-Union Compensation policy requires that a market survey be conducted every two years to assure we are competitively compensating employees. The non-union market survey was conducted in 2018 with results implemented January 2019. A more detail review is underway review and should be completed early 2020.

Travel Budget

The Board of Trustees approves an annual budget for out-of-state and overnight business travel. The General Manager specifically approves these travel requests. The total costs may not exceed the District's total budget without the Board's authorization.

Department	2019 Budget	2020 Budget	Change
Water Services	\$7,000	\$11,500	\$4,500
Wastewater Services	8,750	10,950	2,200
Environmental Services	6,300	6,600	300
Engineering Services	9,100	9,600	500
Administration	<u>20,500</u>	<u>20,500</u>	<u>0</u>
	\$51,650	\$59,150	\$7,500

Training Budget

Employee development is comprised of the annual budget for all in-state and out-of-state training events. Employee development costs include the travel budget listed above.

Department	2019 Budget	2020 Budget	Change
Water Services	\$261,754	\$284,103	\$22,349
Wastewater Services	179,860	190,135	10,275
Environmental Services	70,626	69,941	-685
Engineering Services	150,496	157,163	6,667
Administration	<u>214,494</u>	<u>326,634</u>	<u>112,140</u>
	\$877,230	\$1,027,976	\$150,746

Operating Expense Budget	\$30,042,141	\$31,253,832
Percentage of O&M Budget	2.9%	3.3%

Work Force Management (continued)

Environment and Tools

Organizational development and improvement is an on-going process. Management continues to evaluate areas that require additional focus as business needs and demands evolve, and as laws or rules governing our practices change. Many of these focus areas require cross-functional involvement including alignment to ensure understanding, practical and consistent application and communication of changes.

Management continues to utilize department monthly meetings to keep employees up to date on Board activities and decisions, significant capital improvement projects, business challenges and changes, and updates of organizational practices and policies.

SharePoint will continue to evolve in 2020 as our forum of daily information sharing, and document management across PWD. Developing and implementing a common methodology for cataloging documents to improve knowledge retrieval/sharing, and reducing document redundancy are significant areas of growth this year, ultimately involving every employee.

An organization's total compensation package is a key factor in establishing our competitive posture in the employment market, and employee satisfaction. A detail market review of the non-union salaries will be completed in 2020. As with most organizations, we continue to monitor our health care plan and explore ways to promote employees to live a healthy life style.

Employee Satisfaction Survey

A survey of employees on the work climate is conducted every other year and was done late 2019 but the results have not been published. A new survey was devised in 2017 by Market Decisions Research and was used again in 2019. 80% of employees across PWD participated in the 2017 survey and the results have been analyzed. Employee loyalty was reflected in the fact that two out of five employees reported that they are extremely likely to recommend PWD as a workplace.

New in the 2017 survey, was the inclusion of Gallup Poll questions as a point of comparison to the overall working population in the United States. From the responses to these questions, 45% of PWD employees are highly engaged as compared to 31% of the general working population. The overall engagement index ratio for PWD is 2.8. This means that employees at PWD are 2.8 times more likely to be engaged rather than disengaged. The factors within that ratio were the responses by participants that they had the materials and equipment to do their jobs safely (4.56); employees said that they know what is expected of them (4.25); and the mission/purpose of PWD makes them feel that their jobs are important.

PORTLAND WATER DISTRICT PROFESSIONAL REPRESENTATION IN 2019

Employees participate in the following associations.

Association of Metropolitan Water Agencies

Board of Directors

Casco Bay Estuary Partnership

Executive Committee

Nutrient Council

City of Portland Integrated Plan

Steering Committee

Cumberland District Public Health Council

Executive Committee

Health Care Coalition of Southern Maine

Steering Committee

International Right-of-Way Association

Member, Past President

Maine GIS User Group

Board of Directors

Maine Inland Fisheries and Wildlife

Sebago Lake Fisheries Focus Group

Maine Sustainability & Water Conference

Planning Committee

Maine Water Environment Association

Asset Management Committee

Collections System Committee

Government Affairs Committee

Laboratory Committee

Personal Advancement Committee

Pretreatment Committee

Treatment Plant Operators Committee

Young Professionals Committee

Maine Water Utilities Association

Board of Directors

Education & Operations Committee

Public Awareness Committee

Water Resources Committee

Scholarship Fund

Utilities Finance Officer Group

National Association of Clean Water Agencies

Blending Workgroup

National Drinking Water Advisory Council

Chair

New England Chapter - North American Lake Management Society

Board of Directors

New England Water Environment Association

Government Affairs Committee

Laboratory Committee

Laboratory Certification Subcommittee

Laboratory Practices Committee

Operations Challenge Committee

Utilities Management Committee

Water Warriors Committee

New England Water Works Association

Board of Directors

Customer Service Committee

Finance Management Committee

Diversity Committee

Management Development Committee

Emergency Preparedness Committee

NEWWA Water WORKS Committee for

Student Outreach

Presumpscot Regional Land Trust

Stewardship Committee

Sebago Clean Waters

Communications Committee

Governance and Steering Committees

Southern Maine Children's Water Festival

Organizing Committee

Southern Maine Conservation Collaborative

Advisory Board

Southern Maine Regional Water Council

Board of Directors

University of Maine Cooperative Extension

Master Gardener

Utilities United Against Scams

Committee

Water Environment Federation

Collections Systems Committee

Government Affairs Committee

Employee Events



Dave Dougherty presented GM Award

Every year, the General Manager presents the General Manager's Award to a previous Inspire Award recipient to further recognize his or her outstanding efforts. The 2018 GM Award went to Dave Dougherty. Dave Dougherty received the Inspire Award in December for his initiative in investigating unusual alarms and resolving a problem that could have been quite serious had it continued.

While on shift, Dave observed alarms from Westbrook that did not trigger an audible noise. He saw these alarms on his own by being diligent. Even though the alarms didn't make sense (the equipment that generated the alarm doesn't typically run on weekends), Dave did not just clear the alarms and disregard them as a glitch. Instead, he used the SCADA system to investigate, and identified several issues. He found the aeration system had tripped off, and he reset the aerators and notified the on-call operator. His initiative, in-depth investigation and sound decision-making protected the quality of our effluent and likely prevented a permit violation.

The General Manager's Award recognizes his initiative, attention to detail, and expertise that led to a positive outcome in this situation. Thank you Dave!



1/2 raffle proceeds presented to the Center for Grieving Children

Annually, the Center for Grieving Children provides support to more than 4,000 children, teens, families, and young adults grieving with a loss of a loved one. We couldn't be more proud to have presented them a check for \$750 from the Annual Giving raffle, thanks to our generous employees!! Through payroll deduction and our fundraising activities, last year we raised \$16,185 for worthy causes including United Way, MaineShare, Make A Wish Maine, The Center for Grieving Children and The Travis Mills Foundation!

Employee Holiday Party



PWD goes to high school

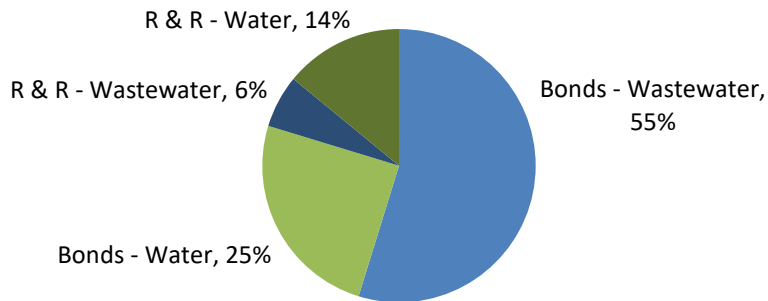
The Portland Water District's recruiting efforts have gained momentum this spring. We have designed an eye catching booth and attended two high school job fairs, one at Bonny Eagle High School and one multi-school event (South Portland, Cape Elizabeth, and Scarborough).



Introduction

Capital expenditures are financed either from withdrawals from the Renewal and Replacement fund (R&R fund) established for each enterprise fund or through the issuance of a bond. The financing option for each project is noted when the Board authorizes the project. A summary of the planned 2020 capital financing options (source of funds) are noted in the chart below. The funds will be used to fund \$10.95 million in water projects and \$17.13 million in wastewater projects.

Financing Summary



Annual Fund Operating Budget

The annual budget includes the impact of issuing \$22.38 million of debt and \$5.75 million in contributions to the renewal and replacement funds. All the funds are below the Board target maximum debt service. The projects financed have minimal impact to the operating budget. Most of the projects address aging assets so related maintenance costs of those assets will be lower.

The transportation debt service and Renewal & Replacement contributions are allocated to funds and departments through an hourly rate and are included in the transportation - internal line item.

	2019 Budget	2020 Budget	\$ Change
Debt Service Principal, Interest & Related Expense	9,722,048	10,195,431	\$473,383
Debt Service - Meters Allocated	670,130	469,140	(200,990)
Lease Expenses	-	13,981	13,981
Debt Service - Watershed Protection	-	39,791	39,791
Annual Debt Service	10,392,178	10,718,343	326,165
Renewal & Replacement - Water - General	2,750,000	2,800,000	50,000
Renewal & Replacement - Wastewater	1,505,549	1,677,349	171,800
Renewal & Replacement - Multi-Fund Assets	850,000	1,050,000	200,000
Renewal & Replacement - Funds	5,105,549	5,527,349	421,800
Renewal and Replacement - Transportation	320,000	400,000	80,000
Annual Renewal and Replacement Contributions	5,425,549	5,927,349	501,800
Total Capital / Finance	15,817,727	16,645,692	827,965

Bond Financing

Overview

The District typically finances larger capital projects by issuing revenue bonds for a term of the asset's useful life or 20 years, whichever is shorter. Since most of the District's assets have a useful life in excess of 20 years, the typical bond term is 20 years. A financial analysis is conducted before issuing the bond to determine the optimal bond term. The District's charter authorizes the District, through its trustees and without vote of its inhabitants, to issue bonds to pay for the costs of capital outlays incurred in connection with acquiring, renovating or constructing water and wastewater assets.

Water bonds are secured by the revenues of customers' water rates and charges. In the event of a bond payment default, the District has the power to assess its member municipalities to provide funds to cure the default. Such assessments would be allocated based upon the municipalities' respective state valuation.

Wastewater bonds are secured by the District's sewer assessment revenue. In the event of a bond payment default, the municipalities served would be responsible for the debt service related to assets serving that municipality. The annual sewer assessment once certified to the municipality by the District is an obligation of the municipality on *parity* with the municipalities' general obligation debt and entitled to the full faith and credit of the municipality.

Water Capital Reserve Bond

The 2020 Budget includes issuing a \$2 million, **10-Year** bond to finance the replacement of aging water mains. In 2013, a law (35-A M.R.S. §§ 6107-A) was enacted allowing utilities to create a capital reserve to pay for infrastructure improvements, including debt service costs, and allows the reserve to be funded by designating a portion of the utility's revenue. The 2020 budget assumes that 1% of the proposed 3.5% rate adjustment will be used to fund the reserve and will pay for the debt service of the proposed \$2 million bond. The tentative plan is to issue a \$2 million bond each for the 10 years starting in 2014, which will be funding by raising water rates an additional 1% each year.

Bond Options

The District issues bonds either directly to the market or through the Maine Municipal Bond Bank (MMBB). For larger projects, typically greater than \$10 million, the District considers issuing directly to the market. For smaller projects, the most cost effective option is to issue through MMBB.

MMBB has three different programs – General Bond, Drinking Water SRF (State Revolving Fund) and Clean Water SRF programs. General Bond issues are done twice a year at tax-exempt market rates. The SRF programs have a more flexible closing date and typically result in an interest rate 2% less than market. For qualifying projects, part of the principal may be forgiven. Projects financed through the SRF are competitively awarded by the State of Maine's Department of Human Services (water projects) or Department of Environmental Protection (wastewater projects). Those projects need to comply with certain procurement standards.

Bond Financing (continued)

The current water bond ratings by Moody's and Standard & Poor's ratings are Aa3 and AA, respectively. Moody's bond ratings range from AAA (highest quality) to C (lowest quality) and apply a number qualifier (1-high, 2-mid and 3-low) for each letter range. Standard & Poor's top four bond ratings (AAA, AA, A and BBB) generally are regarded as eligible for bank investment (AAA is highest rating). The latest rating for both was in July 2019. Moody's noted the District's deregulation from the Maine Public Utilities Commission. Additionally, the District's sizable and wealthy service area, as well as its strong liquidity and sound debt service coverage supported by annual rate increases were factors. In addition to the items Moody noted, S&P noted the District's sound system operations with virtually unlimited water supply and good financial flexibility due to the affordability of the water rates. Moody's noted the weak legal security as a challenge. The weak legal security references that the District has to be in default before evoking the municipalities' 'double barrel' general taxes cure.

Maine Municipal Bond Bank

The Maine Municipal Bond Bank was created in 1972 by the Maine State Legislature. The agency has an immense history of providing Maine's cities, towns, school systems, water and sewer districts, and other governmental entities access to low cost capital funds through the sale of its highly rated tax-exempt bonds. Established as an independent agency, the Bond Bank is administered by a board of commissioners appointed by the Governor. The Bond Bank works closely with its municipal clientele to provide unique, cost effective and competitive financing programs.

GENERAL RESOLUTION PROGRAM

For municipalities, schools districts, water districts, sewer districts and other local governments requesting loan financing through the General Resolution program. Under this tax-exempt bond financing program, the proposed debt will be paid from a General Resolution pledge of the municipality or municipalities. [Click here to learn more about the approval and financing process of this program.](#)

CLEAN WATER SRF PROGRAM

Created in 1987 by the Clean Water Act, the Maine Municipal Bond Bank serves as financial manager of the Clean Water State Revolving Loan Fund in cooperation with the Maine Department of Environmental Protection. [Click here to learn more about the approval and financing process of this program.](#)

DRINKING WATER SRF PROGRAM

Created by the Safe Drinking Water Act of 1996, the Maine Municipal Bond Bank serves as the financial manager of the Drinking Water State Revolving Loan Fund in cooperation with the Maine Department of Human Services. [Click here to learn more about the approval and financing of this program.](#)

Bond Financing (continued)

Bond Limits

The District has no legal limits of debt. A board-approved policy establishes a target maximum level of debt service to 35% of total fund budget and minimum debt service ratio of 1.25. The table indicates the status and projected status. The projected status is based on the projection included at the end of the Revenue section and includes bond financed capital projects as noted in the 5-year capital plan in the Capital Expenditures section.

The Gorham & Windham funds exceed the debt service target due to a 2009 project requested by both municipalities. The project connected the Little Falls area to the Westbrook Regional Treatment Facility. A \$10.5M upgrade at the Westbrook Regional Wastewater Treatment facility is planned causing Westbrook's, Gorham's and Windham's debt service ratio to exceed 35% in 2022.

Percent of Budget Dedicated to Debt Service – Target: Not to Exceed 35%

Funds	2018	2019	2020	2021	2022	2023	2024
Water	21%	22%	23%	23%	25%	26%	28%
Wastewater							
Cape Elizabeth	15%	15%	17%	21%	23%	22%	22%
Cumberland	33%	34%	31%	32%	32%	31%	30%
Gorham	31%	34%	32%	34%	42%	41%	40%
Portland	21%	20%	19%	18%	21%	20%	21%
Westbrook	17%	19%	21%	23%	32%	31%	30%
Windham	35%	38%	35%	38%	39%	39%	43%

Debt Service Ratio – Target: Greater or Equal to 1.25

Funds	2018	2019	2020	2021	2022	2023	2024
Water	1.82	1.51	1.57	1.57	1.53	1.49	1.44
Wastewater							
Cape Elizabeth	1.65	1.49	1.52	1.41	1.36	1.39	1.39
Cumberland	1.03	1.19	1.28	1.17	1.16	1.17	1.17
Gorham	1.12	1.25	1.30	1.29	1.20	1.20	1.21
Portland	1.50	1.36	1.53	1.52	1.42	1.45	1.42
Westbrook	1.81	1.67	1.56	1.47	1.29	1.30	1.30
Windham	0.96	1.19	1.29	1.25	1.23	1.22	1.19

Water & Wastewater Funds Debt Service

Long-Term Debt Principal & Interest

The District has \$8,199,667 and \$2,227,170 of principal and interest payments in 2020. Of the total, \$7,708,254 and \$2,171,141 of principal and interest, respectively, are expensed to the individual funds. A portion of the debt service related to Meters is allocated to water and wastewater funds (principal of \$444,250 and interest of \$51,318) based on relative benefit received by each fund. Lease expense, which is based on the present value of future lease payments, was budgeted for \$13,981 in 2020. Principal and interest related to Watershed Protection debt service totals to \$37,893.

Administrative Fees

Maine Municipal Bond Bank (MMBB) bonds issued under the Drinking Water State Revolving Fund (DWSRF) for Water and the State Revolving Fund (SRF) for Wastewater assess an administrative fee of 5% of each year's principal and coupon interest payments. Maine Municipal Bond Bank Non-SRF bonds do not assess any administrative fees. Water and Wastewater bonds issued as stand-alone bonds directly to the market also do not assess administrative fees. Total fees in 2020 are budgeted at \$196,233.

Debt Issuance Expense

The Water and Wastewater funds incur costs for issuance of the permanent financing. Prior to 2014 governments were allowed to carry the cost of these issuances on their balance sheets and write off the expense over the life of the debt. A change in accounting rules now requires that all issuance costs be recognized in the year of debt issuance. That cost in 2020 is estimated to be \$86,475.

Premiums & Deferred Outflow

The District has received premiums on bonds issued directly to the market. These premiums are recognized over the life of the bonds as a reduction in interest expense. In addition, a bond refunding was done in 2016 that resulted in a deferred outflow being added to the District's balance sheet. That outflow is being amortized over the remaining life of those bonds as an addition to interest expense. The net impact of these items on the 2020 Budget is a reduction of debt service expense of \$286,604.

Contracted Debt Service, Intra-Fund Note & Lease Expense

The Cumberland Wastewater Fund contracts with the Town of Falmouth for the use of treatment and wastewater pump stations. Contracted Debt Service expense are payments made by Cumberland to reimburse Falmouth for debt issued to support the services provided, that cost in 2020 is \$290,601. The Windham Intra-fund note payable to Westbrook is for Windham's portion of a one-time buy-in of the regional treatment facility. The original note of \$264,733 was issued on 4/1/08 at 4.395% interest with annual principal and interest payments. The 2020 principal (\$13,240) and interest expense (\$4,801) totaling \$18,041 are budgeted for 2020.

Water & Wastewater Funds Debt Service (continued)

Summary of Debt Service

	Principal	Interest	MMBB & DEP Admin Fees	Debt Issuance Expense	Premiums, Deferred Outflow	Contracted & Notes	Debt Service Total
<u>Direct Charges</u>							
Water Fund:							
Water General Assets	3,172,613	1,203,589	53,030	50,000	(251,176)	-	4,228,056
Water Capital Reserve	1,172,500	378,084	-	20,000	-	-	1,570,584
Sub-Total Water	4,345,113	1,581,673	53,030	70,000	(251,176)	-	5,798,640
Wastewater:							
Cape Elizabeth	218,100	48,462	9,954	2,200	-	-	278,716
Cumberland	6,250	614	344	-	-	290,601	297,809
Falmouth	238,000	40,587	13,933	-	-	-	292,520
Gorham	303,766	50,018	14,788	853	-	-	369,425
Portland	2,025,757	313,143	77,371	10,875	(9,000)	-	2,418,146
Westbrook	469,095	123,170	19,859	1,675	-	(13,240)	600,559
Windham	102,173	13,474	5,056	872	-	18,041	139,616
Sub-Total Wastewater	3,363,141	589,468	141,305	16,475	(9,000)	295,402	4,396,791
Total Direct	7,708,254	2,171,141	194,335	86,475	(260,176)	295,402	10,195,431
<u>Meters</u>							
Water Fund	271,736	30,478	-	-	(15,630)	-	286,584
Wastewater:							
Cape Elizabeth	11,148	1,449	-	-	(758)	-	11,839
Cumberland	5,441	684	-	-	(356)	-	5,769
Falmouth	-	-	-	-	-	-	-
Gorham	8,601	1,073	-	-	(558)	-	9,116
Portland	84,218	10,098	-	-	(5,227)	-	89,089
Westbrook	21,162	2,557	-	-	(1,325)	-	22,394
Windham	340	40	-	-	(21)	-	359
Sub-Total Wastewater	130,910	15,901	-	-	(8,245)	-	138,566
Contracted Services:							
Scarborough	4,648	521	-	-	(267)	-	4,902
South Portland	36,956	4,418	-	-	(2,286)	-	39,088
Sub-Total Contracted	41,604	4,939	-	-	(2,553)	-	43,990
Total Meters Allocated	444,250	51,318	-	-	(26,428)	-	469,140
<u>Leases</u>							
Water Fund	8,906	280	-	-	-	-	9,186
Cape Elizabeth WW	3,757	1,038	-	-	-	-	4,795
Total Leases	12,663	1,318	-	-	-	-	13,981
Total Water/WW Funds	8,165,167	2,223,777	194,335	86,475	(286,604)	295,402	10,678,552
Watershed Protection	34,500	3,393	1,898	-	-	-	39,791
Total Debt Service	8,199,667	2,227,170	196,233	86,475	(286,604)	295,402	10,718,343

Debt Service Summary

The debt service expense for each fund consists of three parts:

Direct Debt Service – These charges are related to assets belonging to the specific fund such as treatment plants, pump stations, mains, etc.

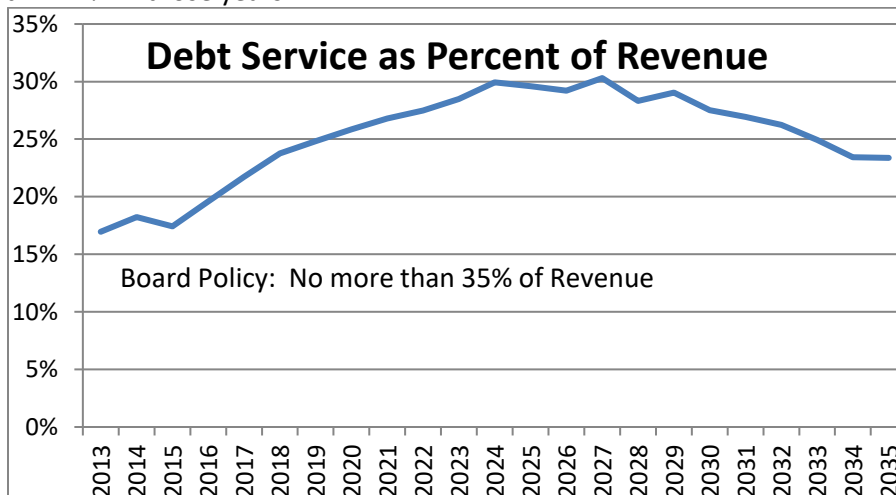
Meter (Allocated) Debt Service – Meters are an asset of the Water fund but are used to calculate both water and wastewater bills. The debt related to meters is allocated to each fund based on number and size of the meters in each municipality.

Lease Expense – This recognizes the costs of leased property/equipment under GASB 87. Under this rule, the District calculates present value of the future lease payments and recognizes each year portion of the cost, including interest.

	Direct	Meters (Alloc)	Lease Expense	Total
Water Fund	5,798,640	286,584	9,186	6,094,410
Wastewater:				
Cape Elizabeth	278,716	11,839	4,795	295,350
Cumberland	297,809	5,769	-	303,578
Falmouth	292,520	-	-	292,520
Gorham	369,425	9,116	-	378,541
Portland	2,418,146	89,089	-	2,507,235
Westbrook	600,559	22,394	-	622,953
Windham	139,616	359	-	139,975
Sub-Total Wastewater	4,396,791	138,566	4,795	4,540,152
Contracted Services:				
Scarborough	-	4,902	-	4,902
South Portland	-	39,088	-	39,088
Sub-Total Contracted	-	43,990	-	43,990
Total Water/WW Funds	10,195,431	469,140	13,981	10,678,552
Watershed Protection	39,791	-	-	39,791
	10,235,222	469,140	13,981	10,718,343

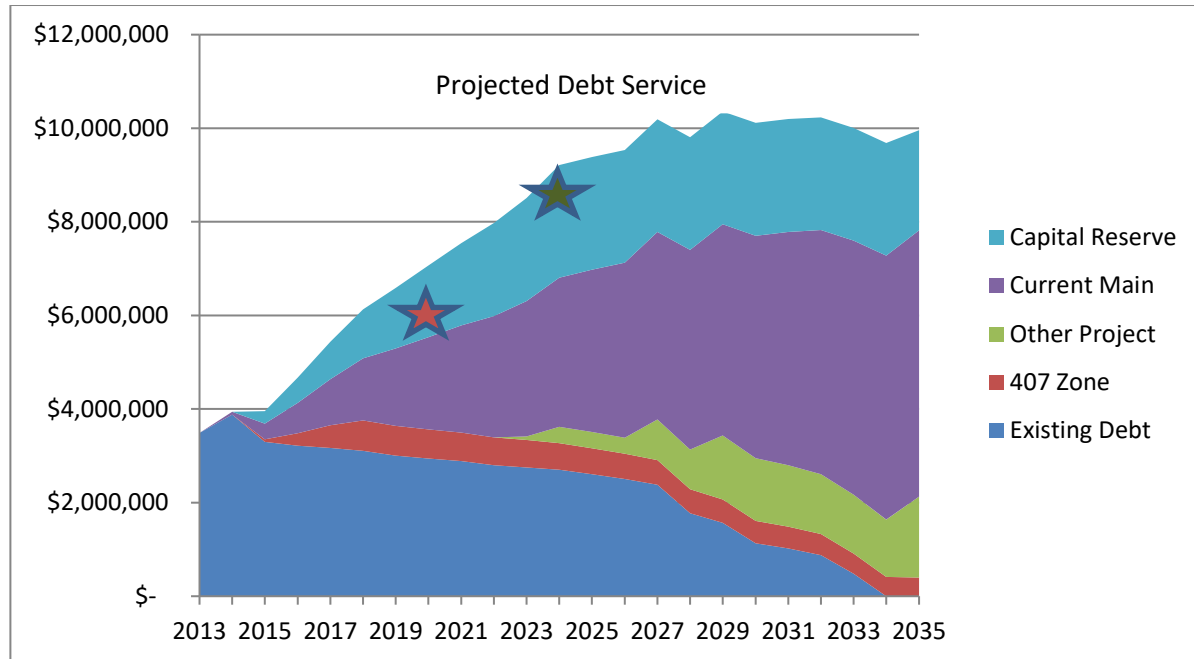
Long-Term Water Fund Target

The long-term water fund target was established in 2013. Projected 2020-2024 is below the established target at 22-27% in those years.



Projected Water Debt

The Water Fund has significant future bond financing needs including completing the 407 zone system upgrade and main renewals. In 2011, the Board adopted the policy to double the investment in main renewal by incrementally increasing the amount spent by \$500,000 until reaching an annual level of \$4 million in 2016. Starting in 2014, an additional annual investment of \$2 million was bonded to pay for main renewal and funded through the capital reserve. Other major projects include the installation of a new meter reading system and transmission line projects.

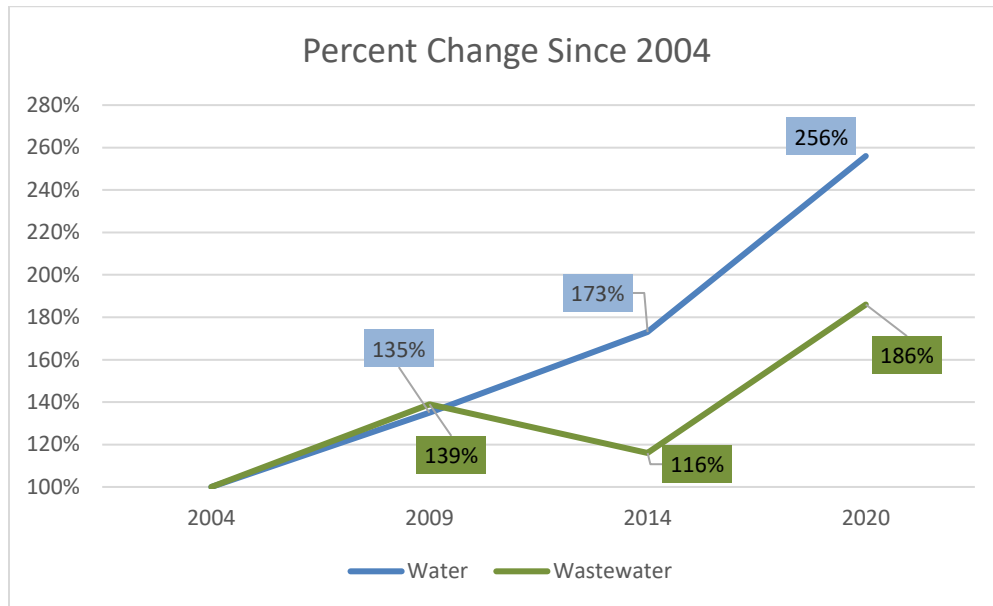


★ The 2020 Budget requests \$6.1 million of debt service, below the long-term plan

★ The updated multi-year projection indicates debt service payments will be \$9.2 million in 2023, \$200,000 below 2013 target.

Outstanding Debt by Fund Trends

The proposed 2020 budget results in outstanding debt increasing by 256% and 186% higher than 2004 for the water and wastewater funds, respectively. Between 2004 and 2009, significant bonded capital projects including the connecting the Little Falls area in Windham and Gorham to the Westbrook Regional Treatment facility and upgrades at the treatment facilities. Investments in water main renewal, water 407 zone and water and wastewater treatment plants & pump stations are driving the more recent increase.



Outstanding Debt By Fund

	2004	2009	2014	2020
Water	\$22,940,000	\$30,950,023	\$39,645,214	\$58,814,558
WW- Cape Elizabeth	839,000	159,250	2,276,000	4,251,950
WW- Cumberland	147,600	130,850	75,000	37,500
WW- Falmouth	0	0	0	3,846,000
WW- Gorham	590,081	5,552,894	4,042,816	3,007,525
WW- Portland	19,914,857	19,263,106	15,517,561	24,623,670
WW- Westbrook	1,792,859	5,325,885	3,645,084	6,326,869
WW- Windham	37,736	1,925,071	1,414,740	1,221,843
Total	\$ 46,262,133	\$ 63,307,079	\$ 66,616,415	\$ 102,129,915

Water Funds Long-Term Debt

Long-Term Debt Detail

The table below is a list of all outstanding water fund bonds (significant amounts of debt will be paid off in the current year and will mitigate the debt service of the new bonds scheduled to be issued).

2019 bond issues may appear in the proposed section if the target issue date is after the publication date of the 2020 budget.

Issue Date	Bond ID	Purpose	Maturity	Rate of Interest	Original Issue Principal	Yr End 2019 Balance	2020 Principal	Yr End 2020 Balance	2020 Interest Exp	M&B/DEP Admin Fee	Issue Cost	PUC Document
Existing Debt Water General LTD												
10/27/2005	WTR05-02	General Assets	2025	3.0000% - 5.0000%	\$500,000	\$270,000	\$45,000	\$225,000	\$5,869			2005-488
10/28/2006	WTR06-01	General Assets	2026	3.0000% - 4.0000%	\$1,500,000	\$525,000	\$75,000	\$450,000	\$9,224			2006-510
10/30/2008	WTR08-01	General Assets	2028	5.5750% - 5.7500%	\$1,500,000	\$875,000	\$75,000	\$800,000	\$3,761			2008-380
04/01/2009	WTR09-01	General Assets (407 Zone)	2028	1.0500% - 1.0500%	\$1,598,500	\$719,325	\$79,925	\$639,400	\$7,413	\$4,374		2008-360 AMENDED
08/28/2009	WTR09-04	General Assets (ARRA)	2029	0.0000% - 0.0000%	\$2,391,066	\$1,495,333	\$149,553	\$1,345,780	\$0	\$7,478		2009-128
08/28/2009	WTR09-05	General Assets (ARRA)	2029	0.0000% - 0.0000%	\$163,853	\$81,376	\$8,198	\$73,179	\$0	\$410		2009-128
08/28/2009	WTR10-02	General Assets (RZEDB)	2029	0.0000% - 0.0000%	\$400,000	\$275,000	\$45,125	\$230,000	\$8,145			2010-42
05/07/2010	WTR10-03	General Assets (DWSRF)	2030	4.7200% - 5.7400%	\$902,500	\$498,375	\$115,000	\$383,375	\$31,529	\$2,504		2011-266
11/01/2010	WTR11-01	General Assets	2031	1.0000% - 1.0000%	\$2,300,000	\$1,380,000	\$66,500	\$1,313,500	\$6,968	\$3,178		2011-266
10/27/2011	WTR11-01	Ozone UV Design & Forest Ave (DWSRF)	2032	1.0000% - 1.0000%	\$1,130,000	\$734,500	\$100,000	\$634,500	\$8,456			2012-357
05/01/2012	WTR12-03	General Assets	2032	1.9400% - 3.7080%	\$2,000,000	\$1,300,000	\$150,000	\$1,150,000	\$19,250	\$8,475		2011-266
10/25/2012	WTR12-01	General Assets	2032	1.0000% - 1.0000%	\$2,850,000	\$1,850,000	\$210,000	\$1,640,000	\$29,728			2013-00167
05/01/2013	WTR13-01	Ozone-UV Construction Phase 1 (DWSRF)	2033	1.8300% - 3.7000%	\$1,426,000	\$993,600	\$71,400	\$922,200	\$26,000			2011-266
05/23/2013	WTR13-04	General Assets	2034	3.0000% - 4.2500%	\$8,000,000	\$6,000,000	\$400,000	\$5,600,000	\$7,934	\$3,061		2013-00167
11/04/2013	WTR13-06	Ozone-UV Construction Phase 2	2033	1.0700% - 1.0700%	\$750,400	\$489,400	\$53,000	\$436,400	\$7,934			2013-00167
11/16/2013	WTR13-05	General Assets (DWSRF)	2033	1.0000% - 3.0000%	\$2,541,000	\$1,890,000	\$130,000	\$1,760,000	\$49,777			2014-00093
09/30/2014	WTR14-01	General Assets	2034	0.1500% - 0.1500%	\$459,000	\$345,537	\$22,785	\$322,752	\$507	\$1,186		2014-38
05/14/2015	WTR15-01	General Assets (DWSRF) Scott Dyer Rd	2035	3.0000% - 3.2500%	\$3,200,000	\$2,570,000	\$165,000	\$2,405,000	\$78,275			2015-00051
06/25/2015	WTR15-04	General Assets - Water Main Renewal	2035	3.0000% - 3.2500%	\$500,000	\$400,000	\$25,000	\$375,000	\$12,188			2015-00051
06/25/2015	WTR15-05	General Assets - Ozone Destruct	2035	3.0000% - 3.2500%	\$500,000	\$400,000	\$25,000	\$375,000	\$12,188			2015-00051
12/04/2015	WTR15-06	Water Main Renewal - Gray Road	2035	1.0000% - 1.0000%	\$385,000	\$325,000	\$20,000	\$305,000	\$11,067			2015-00051
06/20/2016	WTR16-04	General Assets - Water Main Renewal	2036	3.0000% - 4.0000%	\$1,630,000	\$1,216,000	\$95,000	\$1,121,000	\$32,867			2015-00051
06/20/2016	WTR16-06	407 Zone Design	2036	3.0000% - 4.0000%	\$3,034,938	\$2,338,750	\$330,750	\$2,008,000	\$77,841			2015-00051
06/20/2016	WTR16-09	General Assets 2007 Refi	2027	3.0000% - 4.0000%	\$1,126,979	\$699,488	\$54,230	\$645,258	\$9,769	\$3,211		2015-00051
09/28/2016	WTR16-10	General Assets - Thornton Heights Phase 3	2036	1.0000% - 1.0000%	\$586,382	\$488,423	\$26,501	\$461,922	\$4,730	\$1,533		2015-00051
09/28/2016	WTR16-11	General Assets Westbrook St DWSRF	2037	3.0000% - 5.0000%	\$1,725,000	\$3,350,000	\$187,500	\$3,162,500	\$116,250			2015-00051
07/16/2017	WTR17-05	General Assets - Water Main Renewal	2037	3.0000% - 5.0000%	\$1,900,000	\$1,795,264	\$99,736	\$1,695,528	\$17,766	\$5,884		2015-00051
03/02/2018	WTR18-01	Ward's Hill PS (407 Zone Improvement) SRF	2038	5.0000% - 5.0000%	\$1,000,000	\$800,000	\$100,000	\$700,000	\$44,167			2015-00051
08/01/2018	WTR18-04	Asset, Billing, Customer Relations System	2038	5.0000% - 5.0000%	\$900,000	\$855,000	\$45,000	\$810,000	\$33,936			2015-00051
08/01/2018	WTR18-05	General Assets - Water Main Renewal	2038	3.0000% - 5.0000%	\$3,000,000	\$2,650,000	\$150,000	\$2,500,000	\$28,250	\$8,925		2015-00051
11/30/2018	WTR18-08	Pleasantdale/Broadway Main Renewal SRF	2038	1.0000% - 1.0000%	\$3,000,000	\$4,500,000	\$225,000	\$4,275,000	\$20,250			2015-00051
08/01/2019	WTR19-02	General Assets - Water Main Renewal	2039	2.0000% - 5.0000%	\$4,500,000	\$4,022,171	\$3,139,313	\$39,862,858	\$1,176,152	\$51,032		2015-00051
Total Existing Debt Water General LTD												
Proposed Water General LTD												
11/01/2019	WT_LandFund_Tiger_1	Tiger Hill Conservation Easement (SRF)	2029	1.0000% - 1.0000%	\$345,000	\$345,000	\$34,500	\$310,500	\$3,453	\$1,898		2014-00093
11/01/2019	WT_Mains_4_1	General Assets - Water Mains (SRF)	2039	1.0000% - 1.0000%	\$266,000	\$266,000	\$26,600	\$239,400	\$2,660	\$798		2014-00093
11/01/2019	WT_Ward Hill Tank_1	Ward's Hill Tank (SRF)	2039	1.0000% - 1.0000%	\$400,000	\$400,000	\$40,000	\$360,000	\$3,600	\$1,200		2014-00093
11/01/2020	WT_2020_Gen_1	General Assets - Water Mains	2040	2.5000% - 2.5000%	\$4,000,000	\$0	\$0	\$4,000,000	\$16,000		\$40,000	2015-00051
11/01/2020	WT_407_2020_1	407 Zone North Transmission	2040	2.5000% - 2.5000%	\$1,000,000	\$0	\$0	\$1,000,000	\$4,167		\$10,000	2015-00051
Total Proposed Debt Water General LTD												
Total Existing and Proposed Debt Water General LTD												
Existing Debt Water Capital Reserve												
06/30/2014	WTR14-02	Water Assets - Capital Reserve	2024	3.0000% - 3.0000%	\$2,000,000	\$1,000,000	\$200,000	\$800,000	\$39,179			2014-00093
06/25/2015	WTR15-03	Water Assets - Capital Reserve	2025	3.0000% - 3.0000%	\$2,000,000	\$1,200,000	\$200,000	\$1,000,000	\$35,000			2015-00051

Water Funds Long-Term Debt

(continued)

Long-Term Debt Detail

(continued)

The table below is a list of all outstanding water fund bonds/significant amounts of debt will be paid off in the current year and will mitigate the debt service of the new bonds scheduled to be issued

2019 bond issues may appear in the proposed section if the target issue date is after the publication date of 2020 budget

Issue Date	Bond ID	Purpose	Maturity	Range of Interest	Original Issue Principal	Yr End 2019 Balance	2020 Principal	Yr End 2020 Balance	2020 Interest Exp	MMB/DEP Admin Fee	Issue Cost	PUC Docket#
06/20/2016	WTR16-05	Water Assets - Capital Reserve	2026	3.0000% - 4.0000%	\$1,830,000	\$1,275,000	\$185,000	\$1,090,000	\$42,467			
07/15/2017	WTR17-08	Water Assets - Capital Reserve	2027	3.0000% - 5.0000%	\$1,875,000	\$1,500,000	\$187,500	\$1,312,500	\$58,438			
06/07/2018	WTR18-06	Water Assets - Capital Reserve	2028	5.0000% - 5.0000%	\$2,000,000	\$1,800,000	\$200,000	\$1,800,000	\$88,333			
08/01/2019	WTR19-03	Water Assets - Capital Reserve	2029	2.0000% - 5.0000%	\$2,000,000	\$2,000,000	\$200,000	\$1,800,000	\$108,000			
Total Existing Debt Water Capital Reserve												
						\$5,775,000	\$1,172,500	\$7,602,500	\$371,417			
Proposed Water Capital Reserve												
11/01/2020	WT_20_Rus_1					\$0	\$0	\$2,000,000	\$6,667		\$20,000	
Total Proposed Debt Water Capital Reserve												
						\$0	\$0	\$2,000,000	\$6,667	\$0	\$20,000	
Total Existing and Proposed Debt Water Capital Reserve												
						\$5,775,000	\$1,172,500	\$9,602,500	\$378,083	\$0	\$20,000	
Existing Debt Meters Allocated												
05/28/2009	WTR09-02	Meters	2029	2.0800% - 5.5800%	\$4,519,800	\$2,259,900	\$225,900	\$2,033,910	\$2,008			2006-403
05/28/2009	WTR09-03	Sub-Meters	2029	2.0800% - 5.5800%	\$180,200	\$80,100	\$9,010	\$81,090	\$0			2006-403
06/20/2016	WTR16-07	Meters 2007 Refi	2027	3.0000% - 4.0000%	\$1,734,250	\$1,337,000	\$169,000	\$1,148,000	\$44,538			
06/20/2016	WTR16-08	Submeters 2007 Refi	2027	3.0000% - 4.0000%	\$165,813	\$143,250	\$20,250	\$123,000	\$4,772			
Total Existing Debt Meters Allocated												
						\$3,630,250	\$444,250	\$3,386,000	\$51,318			
Total Existing and Proposed Water Debt												
						\$56,638,421	\$4,873,863	\$58,814,558	\$1,836,383	\$54,628	\$70,000	

Wastewater Funds Long-Term Debt

Long-Term Debt Detail

The tables below contain a list of all outstanding debt for Cape Elizabeth, Falmouth, Gorham and Portland Wastewater Fund/Debt for the Westbrook Regional Wastewater Treatment Plant and related interception assets are proportionately split between Westbrook and Gorham.

2019 bond issues may appear in the proposed section if the Hargett issue date is after the publication date of the 2020 budget.

Issue Date	Bond ID	Purpose	Maturity	Range of Interest	Original Issue Principal	Yr End 2019 Balance	2020 Principal	Yr End 2020		Accrued 2020 Interest & Fees		MMB/DEP Admin Fee	Issue Cost
								Balance	Principal	Interest Exp	DEP Mgt Fee		
Existing Debt Cape Elizabeth													
10/30/2008	WW08-03	Cape - Generators	2028	5.5750% - 5.5750%	\$95,000	\$42,750	\$4,750	\$38,000	\$2,138	\$0	\$2,138		
12/16/2011	WW11-01	CESO Treatment / Sporwink (SRF)	2031	1.0000% - 1.0000%	\$2,430,000	\$1,458,000	\$121,500	\$1,336,500	\$14,378	\$0	\$14,378	\$9,604	
10/25/2012	WW12-03	Cape Olinwa Rd CSO Studies / Treatment	2032	1.9900% - 3.7060%	\$160,000	\$104,000	\$8,000	\$96,000	\$3,077	\$0	\$3,077		
05/28/2015	WW15-02	Wastewater CE Garden Lane	2035	1.8700% - 3.8900%	\$240,000	\$182,000	\$12,000	\$170,000	\$6,033	\$0	\$6,033		
05/25/2017	WW17-03	Cape Elizabeth WW Projects	2037	1.5900% - 3.9180%	\$315,000	\$283,500	\$15,750	\$267,750	\$8,429	\$0	\$8,429		
11/02/2017	WW17-07	CE Village PS Upgrade	2037	1.5900% - 4.0950%	\$72,000	\$64,800	\$3,600	\$61,200	\$1,870	\$0	\$1,870		
06/03/2019	WW19-01	Cape Elizabeth UV Treatment Upgrades SRF	2039	1.0000% - 1.0000%	\$875,000	\$875,000	\$43,750	\$831,250	\$8,677	\$0	\$8,677	\$2,625	
Total Existing Debt Cape Elizabeth							\$209,350	\$44,802	\$0	\$44,802	\$9,429		
Proposed Debt Cape Elizabeth													
11/01/2019	WW_Cape_TP_UV_1	Treatment Plant UV Disinfection (SRF)	2039	1.0000% - 1.0000%	\$175,000	\$175,000	\$8,750	\$166,250	\$1,735	\$0	\$1,735	\$525	
11/01/2020	WW_Cape_TP_HVAC_1	Treatment Plant HVAC (SRF)	2040	1.0000% - 1.0000%	\$375,000	\$0	\$0	\$375,000	\$625	\$0	\$625	\$800	
11/01/2020	WW_CE_Fam Field_1	Family Field Pump Station (SRF)	2040	1.0000% - 1.0000%	\$900,000	\$0	\$0	\$900,000	\$1,500	\$0	\$1,500	\$1,400	
Total Proposed Debt Cape Elizabeth						\$175,000	\$8,750	\$1,441,250	\$3,860	\$0	\$3,860	\$525	\$2,200
Total Existing and Proposed Debt Cape Elizabeth						\$3,195,050	\$218,100	\$4,251,950	\$48,463	\$0	\$48,463	\$9,954	\$2,200
Existing Debt Cumberland													
12/22/2006	WW06-01	Cumberland - Tuttle Pump Station (SRF)	2026	1.4200% - 1.4200%	\$125,000	\$43,750	\$6,250	\$37,500	\$614	\$0	\$614	\$344	
Total Existing Debt Cumberland						\$43,750	\$6,250	\$37,500	\$614	\$0	\$614	\$344	
Existing Debt Falmouth													
05/01/2016	WW16-03	Mill Creek PS SRF	2036	1.0000% - 1.0000%	\$4,000,000	\$3,400,000	\$200,000	\$3,200,000	\$34,000	\$0	\$34,000	\$11,700	
03/21/2017	WW17-02	Falmouth Mill Creek PS Phase 2 SRF	2037	1.0000% - 1.0000%	\$780,000	\$684,000	\$35,000	\$649,000	\$6,587	\$0	\$6,587	\$2,233	
Total Existing Debt Falmouth						\$4,084,000	\$235,000	\$3,846,000	\$40,587	\$0	\$40,587	\$13,933	
Existing Debt Gorham													
04/01/2003	WW03-03	Westbrook Treatment Dewatering (SRF)	2023	0.0000% - 4.2030%	\$78,120	\$11,193	\$3,804	\$7,389	\$74	\$0	\$74	\$91	
11/13/2003	WW03-14	Westbrook Treatment Headworks Upgrade (SRF)	2023	0.0000% - 4.4930%	\$73,185	\$14,483	\$3,658	\$10,825	\$106	\$0	\$106	\$136	
12/01/2005	WW05-02	WB Cottage Place/ E. Bridge PS Upgrades (SRF)	2025	1.6300% - 1.6300%	\$252,000	\$75,600	\$12,600	\$63,000	\$1,215	\$0	\$1,215	\$692	
05/15/2008	WW08-01	WB Treatment Generator / Electrical Upgrades SRF	2028	2.2000% - 5.5900%	\$50,400	\$22,680	\$2,520	\$20,160	\$791	\$0	\$791	\$791	

Wastewater Funds Long-Term Debt

Long-Term Debt Detail

(continued)

(continued)

The tables below contain a list of all outstanding debt for Cape Elizabeth, Falmouth, Gorham and Portland wastewater funds for the Westbrooke Regional Wastewater Treatment Plant and related interception assets are proportionately split between Westbrook, Windham and Gorham.

2019 bond issues may appear in the proposed section if the target issue date is after the publication date of the 2020 budget.

Issue Date	Bond ID	Purpose	Maturity	Rate of Interest	Original Issue Principal	Yr End 2019 Balance	2020 Principal	Yr End 2020 Balance	Accrued 2020 Interest & Fees				MMBIDEP Admin Fee	Issue Cost
									Interest Exp	DEP Mnt Fee	Interest Expense			
10/30/2008	WM08-02	Westbrook Collage Parcel E Bridge PS Screens SRF	2029	5.750% - 5.750%	\$474,672	\$237,336	\$23,734	\$213,602	\$12,007	\$0	\$12,007			
01/15/2009	WM09-01	Lille Falls Conveyance (SRF)	2029	1.4000% - 1.4000%	\$4,258,206	\$1,935,549	\$215,061	\$1,720,488	\$27,088	\$0	\$27,088	\$12,147		
02/27/2009	WM09-02	WB Headworks/Collage Parcel E Bridge (SRF)	2029	1.0000% - 1.0000%	\$253,475	\$114,054	\$12,674	\$101,380	\$1,109	\$0	\$1,109	\$691		
05/25/2009	WM09-04	Lille Falls Conveyance	2029	2.0000% - 5.3000%	\$233,984	\$116,977	\$11,698	\$105,279	\$200	\$0	\$200	\$200		
11/01/2010	WM10-04	Westbrook Treatment Misc Upgrades (SRF)	2030	1.0000% - 1.0000%	\$52,390	\$28,798	\$2,618	\$26,180	\$284	\$0	\$284	\$145		
03/02/2018	WM18-02	Westbrook Sludge Dewatering Upgrade SRF	2038	1.0000% - 1.0000%	\$308,000	\$292,600	\$15,400	\$277,200	\$2,900	\$0	\$2,900	\$918		
Total Existing Debt Gorham														
						\$2,849,281	\$303,766	\$2,545,515	\$45,783	\$0	\$45,783	\$14,788		
Proposed Gorham														
05/01/2020	WM19-01	Westbrook Treatment Plant Sludge Storage Design (SRF)	2040	2.5000% - 2.5000%	\$231,000	\$0	\$0	\$231,000	\$3,850	\$0	\$3,850	\$462		
11/01/2020	WM19-02	Westbrook Aeration/Clarifier Design (SRF)	2040	1.0000% - 1.0000%	\$231,010	\$0	\$0	\$231,010	\$385	\$0	\$385	\$381		
Total Proposed Debt Gorham														
						\$0	\$0	\$462,010	\$4,235	\$0	\$4,235	\$853		
Total Existing and Proposed Debt Gorham														
						\$2,849,281	\$303,766	\$3,007,525	\$50,018	\$0	\$50,018	\$14,788		
Existing Debt Portland														
10/26/2001	WM01-01	Peaks Ryefield / Seashore Upgrades (SRF)	2021	2.1000% - 2.1000%	\$2,785,000	\$278,500	\$139,250	\$139,250	\$5,381	\$0	\$5,381	\$2,178		
11/01/2001	WM01-02	EETreatment Clarifiers/Screens/Grit Upgrades (SRF)	2021	2.1000% - 2.1000%	\$1,250,000	\$125,000	\$62,500	\$62,500	\$2,406	\$0	\$2,406	\$977		
04/01/2003	WM03-01	Riskind Issue EETF Clarifiers/Screens/Grit (SRF)	2020	0.0000% - 4.0500%	\$1,615,500	\$96,452	\$96,452	\$0	\$373	\$0	\$373	\$1,363		
04/01/2003	WM03-02	Portland Treatment Odor Control (SRF)	2022	0.0000% - 4.2000%	\$5,200,000	\$745,077	\$253,221	\$491,856	\$4,936	\$0	\$4,936	\$4,067		
11/15/2003	WM03-12	EETF Dewatering/Clarifiers/Screens/Grit (SRF)	2023	0.0000% - 4.4900%	\$1,200,000	\$238,743	\$80,244	\$178,499	\$1,786	\$0	\$1,786	\$2,289		
11/15/2003	WM03-13	EE Treatment Primary Sedimentation & Odor (SRF)	2023	0.0000% - 4.4900%	\$2,000,000	\$398,721	\$100,000	\$298,721	\$4,098	\$0	\$4,098	\$3,722		
12/03/2004	WM04-01	EE Treatment Odor Control (SRF)	2024	1.3000% - 1.3000%	\$375,000	\$93,750	\$18,750	\$75,000	\$1,465	\$0	\$1,465	\$700		
12/03/2004	WM04-02	EE Treatment Dewatering (SRF)	2024	1.3000% - 1.3000%	\$1,740,000	\$435,000	\$87,000	\$348,000	\$5,496	\$0	\$5,496	\$3,246		
12/01/2005	WM05-01	EE Treatment Hypochlorite Upgrade (SRF)	2025	1.6000% - 1.6000%	\$1,900,000	\$570,000	\$95,000	\$475,000	\$9,162	\$0	\$9,162	\$5,215		
04/01/2009	WM09-03	Portland India Pump Station Upgrade (SRF)	2028	1.4700% - 1.4700%	\$5,700,000	\$2,528,446	\$280,994	\$2,247,452	\$36,487	\$0	\$36,487	\$15,908		
11/01/2010	WM10-03	Portland Northeast & Pump Station Upgrades (SRF)	2030	1.0000% - 1.0000%	\$752,200	\$413,710	\$37,810	\$376,100	\$4,074	\$0	\$4,074	\$2,087		
10/27/2011	WM11-02	Portland Pump Station Upgrades	2031	0.5000% - 5.5000%	\$400,000	\$240,000	\$20,000	\$220,000	\$5,453	\$0	\$5,453	\$1,463		
11/04/2013	WM13-02	Peaks Island Sewer Extension	2035	4.0000% - 4.0000%	\$3,000,000	\$2,100,000	\$150,000	\$1,950,000	\$83,000	\$0	\$83,000	\$5,800		
12/04/2015	WM15-07	EEWWTF Aeration Upgrade SRF	2036	1.0000% - 1.0000%	\$2,000,000	\$1,600,000	\$100,000	\$1,500,000	\$15,750	\$0	\$15,750	\$20,475		
07/06/2016	WM16-01	EEWWTF Aeration Phase 2 SRF	2036	1.0000% - 1.0000%	\$7,000,000	\$5,950,000	\$350,000	\$5,600,000	\$58,917	\$0	\$58,917	\$20,510		
07/06/2016	WM16-02	Fore River PS SRF	2036	1.0000% - 1.0000%	\$1,200,000	\$1,020,000	\$80,000	\$940,000	\$10,100	\$0	\$10,100	\$3,510		
05/03/2017	WM17-01	EEWWTF Aeration Phase 3 SRF	2038	1.0000% - 1.0000%	\$1,900,000	\$1,495,528	\$99,735	\$1,395,792	\$16,769	\$0	\$16,769	\$5,835		
05/24/2018	WM18-03	Northeast Pump Station Odor Control	2038	2.1500% - 4.0420%	\$500,000	\$475,000	\$25,000	\$450,000	\$15,034	\$0	\$15,034	\$1,034		
Total Existing Debt Portland														
						\$18,994,427	\$2,025,757	\$16,968,670	\$200,435	\$0	\$200,435	\$77,371		

Wastewater Funds Long-Term Debt

(continued)

Long-Term Debt Detail

(continued)

The tables below contain a list of all outstanding debt for Cape Elizabeth, Falmouth, Gorham and Portland wastewater fundbonds for the Westbrook Regional Wastewater Treatment Plant and related interception assets are proportionately split between Westbrook, Falmouth and Gorham.

2019 bond issues may appear in the proposed section if the target issue date is after the publication date of the 2020 budget

Issue Date	Bond ID	Purpose	Maturity	Rate of Interest	Original Issue Principal	Yr End 2019		2020		Accrued 2020 Interest & Fees				MMB/DERP Admin Fee	Issue Cost
						Balance	Principal	Interest Exp	DEP Mgt Fee	Interest Expense					
Proposed Portland															
05/01/2020	WW_Po_EE_Clarifier_1	East End Primary Clarifiers	2040	2.5000% - 2.5000%	\$750,000	\$0	\$0	\$750,000	\$12,500	\$0	\$12,500			\$1,200	
05/01/2020	WW_Po_India_Galle_1	India Street PS Tide Gate	2040	2.5000% - 2.5000%	\$420,000	\$0	\$0	\$420,000	\$7,000	\$0	\$7,000			\$800	
11/01/2020	WW_Po_ABC_1	Asset Billing Cust Relations Sys (SRF)	2030	1.0000% - 1.0000%	\$1,500,000	\$0	\$0	\$1,500,000	\$2,500	\$0	\$2,500			\$2,200	
11/01/2020	WW_Po_EE_Upgrades_1	East End Inflow Screen & Tank Pipe	2040	2.5000% - 2.5000%	\$950,000	\$0	\$0	\$950,000	\$4,000	\$0	\$4,000			\$1,400	
11/01/2020	WW_Po_Fore_P2_1	Fore River Pump Station Ph2 (SRF)	2040	1.0000% - 1.0000%	\$3,500,000	\$0	\$0	\$3,500,000	\$5,833	\$0	\$5,833			\$4,375	
11/01/2020	WW_Po_TP_HVAC2_1	Treat Plant HVAC Dewatering (SRF)	2040	1.0000% - 1.0000%	\$525,000	\$0	\$0	\$525,000	\$875	\$0	\$875			\$900	
Total Proposed Debt Portland						\$0	\$0	\$7,655,000	\$32,708	\$0	\$32,708			\$10,875	
Total Existing and Proposed Debt Portland						\$18,994,427	\$2,025,757	\$24,823,670	\$313,143	\$0	\$313,143		\$77,371	\$10,875	

Wastewater Funds Longterm Debt

(continued):

Long-Term Debt Detail

(continued)

The tables below contain a list of all outstanding debt for the Westbrooke wastewater funds for the Westbrooke Regional Wastewater Treatment Plant and related interception assets are proportionately split between Westbrooke Windham and Gorham.

2019 Bond issues may appear in the proposed section if the target issue date is after the publication date of the 2020 budget.

Issue Date	Bond ID	Purpose	Maturity	Range of Interest	Original Issue		Yr End 2019		2020 Principal	Yr End 2020 Balance	Accrued 2020 Interest & Fees				MMBDEP Admin Fee	Issue Cost
					Principal	Balance	Interest Exp	DEP Mat Fee			Interest Expense					
Existing Debt Westbrook																
04/01/2003	WM03-03	Westbrook Treatment Dewatering (SRF)	2022	0.0000% - 4.2000%	\$284,208	\$40,722	\$13,840	\$38,883	\$270	\$0	\$270	\$222				
11/13/2003	WM03-14	Westbrook Treatment Headworks Upgrade (SRF)	2023	0.0000% - 4.8500%	\$288,254	\$52,692	\$13,308	\$39,384	\$385	\$0	\$385	\$485				
12/01/2005	WM05-02	WB Cottage Place/ E. Bridge PS Upgrades (SRF)	2025	1.8000% - 1.8000%	\$1,318,800	\$395,840	\$65,840	\$329,200	\$6,350	\$0	\$6,350	\$3,614				
05/15/2008	WM08-01	WB Treatment Generator / Electrical Upgrades SRF	2028	2.2000% - 5.5000%	\$181,360	\$82,512	\$9,168	\$73,344	\$2,877	\$0	\$2,877					
10/30/2008	WM08-02	Westbrook Cottage Place/ E. Bridge PS Screens SRF	2029	5.5750% - 5.5750%	\$2,384,841	\$1,192,321	\$119,232	\$1,073,088	\$60,319	\$0	\$60,319					
02/27/2009	WM09-02	WB Headworks/Cottage Place/ E Bridge (SRF)	2028	1.0000% - 1.0000%	\$974,925	\$438,716	\$48,746	\$399,970	\$4,285	\$0	\$4,285	\$2,857				
11/01/2010	WM10-04	Westbrook Treatment Misc Upgrades (SRF)	2020	1.0000% - 1.0000%	\$113,220	\$82,271	\$5,861	\$56,610	\$813	\$0	\$813	\$314				
12/04/2015	WM15-08	Westbrook CSO Upgrade SRF	2035	1.0000% - 1.0000%	\$1,000,000	\$800,000	\$50,000	\$750,000	\$7,875	\$0	\$7,875	\$2,900				
03/02/2018	WM18-02	Westbrook Sludge Dewatering Upgrade SRF	2038	1.0000% - 1.0000%	\$668,000	\$832,700	\$13,300	\$589,400	\$6,272	\$0	\$6,272	\$1,981				
09/01/2018	WM18-07	Dana Court PS Upgrades SRF	2039	1.0000% - 1.0000%	\$2,200,000	\$2,200,000	\$110,000	\$2,090,000	\$24,954	\$0	\$24,954	\$7,678				
Total Existing Debt Westbrook						\$5,856,574	\$489,095	\$5,427,879	\$114,179	\$0	\$114,179	\$18,859				
Proposed Westbrook																
05/01/2020	WW_Vw_Sludge_1	Westbrook Treatment Plant Sludge Storage	2040	2.5000% - 2.5000%	\$499,500	\$0	\$0	\$499,500	\$9,325	\$0	\$9,325				\$999	
11/01/2020	WW_WE_Clarifier_1	Westbrook Aeration/Clarifier Design (SRF)	2040	1.0000% - 1.0000%	\$399,480	\$0	\$0	\$399,480	\$666	\$0	\$666				\$678	
Total Proposed Debt Westbrook						\$0	\$0	\$888,980	\$5,991	\$0	\$5,991	\$0.00			\$1,675	
Total Existing and Proposed Debt Westbrook						\$5,886,574	\$489,095	\$6,326,859	\$123,170	\$0	\$123,170	\$19,459			\$1,675	

Wastewater Funds Long-Term Debt

(continued):

Long-Term Debt Detail

(continued)

The tables below contain a list of all outstanding debt for the Windham wastewater bonds for the Westbrooke Regional Wastewater Treatment Plant and related interception assets are proportionately split between Westbrooke Windham and Gorham.

2019 Bond issues may appear in the proposed section if the target issue date is after the publication date of the 2020 budget.

Issue Date	Bond ID	Purpose	Maturity	Range of Interest	Original Issue		Yr End 2019		2020		Accrued 2020 Interest & Fees			MMBBQSP Admin Fee	Issue Cost
					Principal	Balance	Principal	Balance	Interest Exp	DEP Mgt Fee	Interest Expense				
Existing Debt Windham															
04/01/2003	WM03-03	Westbrook Treatment Dewatering (SRF)	2022	0.0000% - 4.2000%	\$9,672	\$1,395	\$471	\$915	\$9	\$0	\$9	\$9			
11/13/2003	WM03-14	Westbrook Treatment Headworks Upgrade (SRF)	2023	0.0000% - 4.4800%	\$9,061	\$1,793	\$453	\$1,340	\$13	\$0	\$13	\$17			
12/01/2005	WM05-02	WB Collage Place/ E. Bridge PS Upgrades (SRF)	2025	1.6300% - 1.6300%	\$31,200	\$9,360	\$1,860	\$1,560	\$150	\$0	\$150	\$86			
05/15/2008	WM08-01	WB Treatment Generator / Electrical Upgrades SRF	2028	2.2000% - 5.5000%	\$8,240	\$2,868	\$312	\$2,468	\$98	\$0	\$98				
10/30/2008	WM08-02	Westbrook Collage Place/ E. Bridge PS Screens SRF	2029	5.5750% - 5.5750%	\$40,687	\$20,344	\$2,034	\$19,309	\$1,029	\$0	\$1,029				
01/15/2009	WM09-01	Little Falls Conveyance (SRF)	2028	1.4400% - 1.4400%	\$1,881,792	\$764,451	\$84,936	\$679,512	\$10,702	\$0	\$10,702	\$4,707			
02/27/2009	WM09-02	WB Headworks/Collage Place/ E Bridge (SRF)	2028	1.0000% - 1.0000%	\$21,600	\$9,720	\$1,080	\$8,640	\$95	\$0	\$95	\$99			
05/28/2009	WM09-04	Little Falls Conveyance	2029	2.0800% - 5.5800%	\$196,046	\$98,023	\$9,602	\$86,221	\$168	\$0	\$168				
11/01/2010	WM10-04	Westbrook Treatment Misc Upgrades (SRF)	2030	1.0000% - 1.0000%	\$4,420	\$2,431	\$221	\$2,210	\$24	\$0	\$24	\$12			
03/02/2018	WM18-02	Westbrook Sludge Dewatering Upgrade SRF	2038	1.0000% - 1.0000%	\$26,000	\$24,700	\$1,300	\$23,400	\$245	\$0	\$245	\$77			
Total Existing Debt Windham						\$935,015	\$102,173	\$832,843	\$17,533	\$0	\$17,533	\$5,056			
Proposed Windham															
05/01/2020	WW_WW_Sludge_1	Westbrook Treatment Plant Sludge Storage	2040	2.6000% - 2.5000%	\$19,500	\$0	\$0	\$19,500	\$325	\$0	\$325	\$39			
11/01/2020	WW_WW_Clarifier_1	Westbrook Aeration/Clarifier Design (SRF)	2040	1.0000% - 1.0000%	\$19,500	\$0	\$0	\$19,500	\$33	\$0	\$33	\$33			
11/01/2020	WW_WW_Depot_1	Depot Street - PWD Share	2040	1.0000% - 1.0000%	\$350,000	\$0	\$0	\$350,000	\$583	\$0	\$583	\$800			
Total Proposed Debt Windham						\$0	\$0	\$389,000	\$941	\$0	\$941	\$872			
Total Existing and Proposed Debt Windham						\$935,015	\$102,173	\$1,221,843	\$15,474	\$0	\$15,474	\$5,056	\$872		

Capital Reserve – Water

In 2013, a new state law (35-A M.R.S. 6107-A, Funding for Infrastructure Improvements for Water Utilities) was enacted. The law allows a water utility to fund future infrastructure improvements through recovery in rates. As required by the law, the Maine Public Utilities Commission adopted a rule (Chapter 675 – Infrastructure Surcharge and Capital Reserve Accounts) that outlines the maximum amount of funds the may be recovered through rates, use of those funds, and reporting requirements.

The maximum dollar amount of funds that may be recovered through rates depends on the size of the utility. Portland Water District is considered a large utility (utilities with revenues greater than \$750,000 are considered large) and therefore the amount of revenue requirement attributed to funding a capital reserve should not exceed either of the following:

1% of Gross Plant (as of 12/31/2018)	\$ 3,264,964
10% of Revenue Requirement (2020 Budget)	\$ 2,568,489

The capital reserve can only be used to pay for the costs of construction associated with the projects identified in the utility's System Infrastructure Assessment Report (SIA) and are related to transmission, distribution, and treatment of water. The District submitted a SIA that identified water mains that need to be replaced due to age or type of material.

SIA Program	Main to be replaced (ft)	Cost per foot	Miles of pipe	Program Cost
A (Cast Iron pipe >100 years old)	559,680	\$225	106 miles	\$126 million
B (Cast Iron pipe 75-100 years old)	443,520	\$225	84 miles	\$100 million
C (Galvanized Iron pipe)	59,136	\$200	11 miles	\$12 million
D (2 ½" diameter Cast Iron pipe)	84,480	\$200	16 miles	\$17 million
Totals			217 miles	\$255 million

The District has chosen to increase each year an additional 1% for 10 years with the revenue reserved to pay the debt service costs of issuing a \$2 million bond each year. The bond proceeds will be used to replace water mains identified in the SIA.

The 2020 budget assumes 1% of the proposed water rate adjustment be dedicated to the capital reserve. Starting in 2014, 1% of the rate adjustments has been dedicated to the reserve.

	2019 Budget	2019 Projected	2020 Budget
Revenue	1,402,364	1,402,364	1,704,558
Expense	1,274,526	1,274,526	1,424,631
Annual Charge	127,838	127,838	279,927
Carry Forward	551,397	575,547	703,385
	679,235	703,385	983,312

Renewal & Replacement

Each fund contributes to a renewal and replacement (R&R) fund. These funds are used to pay for smaller capital projects as an alternative to issuing long-term debt. Each fund maintains a R&R fund for assets owned by that fund. In addition, R&R balances are maintained for other groups of assets that, while owned by the Water fund, serve the needs of all District funds. These other R&R balances are:

Douglass St – This fund is for the building and grounds that serve as the District’s main headquarters.

Meters – Water meters measure water flow but provide data used in both water and wastewater billing.

Technology – This category includes both computer hardware and software systems that serve all District funds.

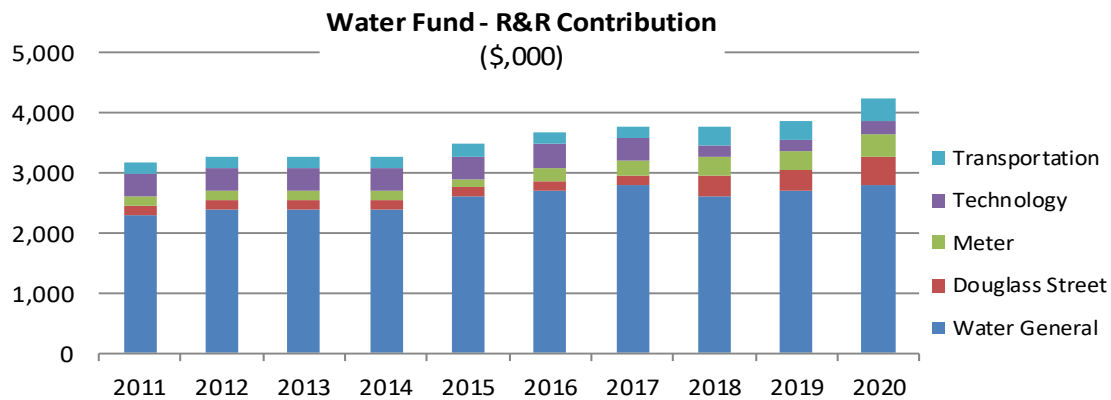
Transportation – These assets are used by all District funds. The charge for the R&R funding is part of the hourly rate of each vehicle (an internal line item).

2020 Contributions:

	Fund	Douglass St	Meters	Technology	Combined*	Total
Water	\$2,800,000	\$294,308	\$255,372	\$112,100	\$661,780	\$3,461,780
Wastewater:						
Cape Elizabeth	120,700	14,766	6,825	7,320	28,911	149,611
Cumberland	40,000	7,360	3,744	4,340	15,444	55,444
Gorham	90,800	11,178	6,084	5,320	22,582	113,382
Portland	1,090,000	102,994	67,119	56,900	227,013	1,317,013
Westbrook	300,000	22,310	16,497	12,260	51,067	351,067
Windham	35,849	2,990	312	1,760	5,062	40,911
Contracted Services:						
Falmouth	-	-	-	-	-	-
Scarborough	-	46	4,368	-	4,414	4,414
South Portland	-	4,048	29,679	-	33,727	33,727
R&R - Funds	\$4,477,349	460,000	390,000	200,000	1,050,000	\$5,527,349
R&R - Transportation						400,000
R&R - Total						5,927,349
*Combined = Douglass St + Meters + Technology						

Water Fund - Renewal & Replacement Fund

The District will contribute a total of \$4,250,000 to the renewal and replacement fund in 2020. Similar to the debt service costs, renewal and replacement reserve is directly received from the fund or indirectly through the appropriate allocation method from all funds. The Water renewal and replacement contribution is capped at approximately \$4,400,000, which is the estimated depreciation of all water assets, per Maine Public Utility Commission rules. Starting in 2011, the District began to track and reserve balances by different categories of renewal & replacement with part of the general surplus designated to the transportation, technology, meter and Douglass Street building reserves.



	Water General	Douglass Street	Water Meters	Technology	Transportation	Total
Balance 12/31/17	4,738,462	115,651	(211,304)	431,137	566,854	5,640,800
Contribution - 2018	2,600,000	360,000	290,000	200,000	320,000	3,770,000
Expenditure	(568,288)	(390,661)	(366,589)	(376,137)	(495,094)	(2,196,769)
Balance 12/31/18	6,770,174	84,990	(287,893)	255,000	391,760	7,214,031
Contribution - 2019	2,750,000	360,000	290,000	200,000	320,000	3,920,000
Expenditure (Est'd)	(3,641,616)	(325,000)	(300,000)	(216,171)	(394,542)	(4,877,329)
Balance 12/31/19 (Est'd)	5,878,558	119,990	(297,893)	238,829	317,218	6,256,702
Contribution - 2020	2,800,000	460,000	390,000	200,000	400,000	4,250,000
Expenditure (Est'd)	(2,506,000)	(450,000)	(390,000)	(200,000)	(400,000)	(3,946,000)
Balance 12/31/20 (Est'd)	6,172,558	129,990	(297,893)	238,829	317,218	6,560,702
Target R&R Balance (1% of Gross Fixed Asset Cost)						\$3,218,000

Wastewater Funds - Renewal & Replacement Funds

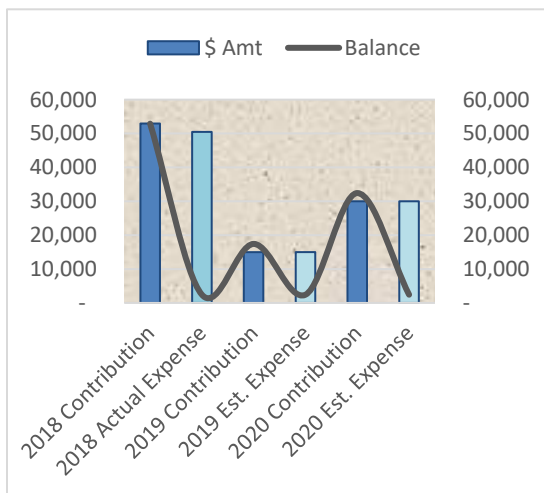
Each wastewater fund includes an annual contribution to the renewal and replacement (R&R) reserve to finance capital additions or replacements. At the end of 2018, Portland's operating surplus of \$301,066 was transferred to Portland's R&R reserve. Unlike the prior year, no other funds had incoming transfers at the end of 2018.

In 2020, R&R contributions decreased for Cape Elizabeth (\$125,000 to \$120,700), Cumberland (\$54,700 to \$40,000) and Gorham (\$100,000 to \$90,800). Contributions for Portland (\$900,000 to \$1,090,000) and Windham (\$25,849 to \$35,849) increased. Westbrook remained the same at \$300,000.

Portland R&R is increased by a \$125,000 contribution made by CMP for the use of land for a substation.

The estimated 2020 expenditures from the R&R funds are based on the 2020 Capital Improvements Budget as outlined in the Capital Expenditure section.

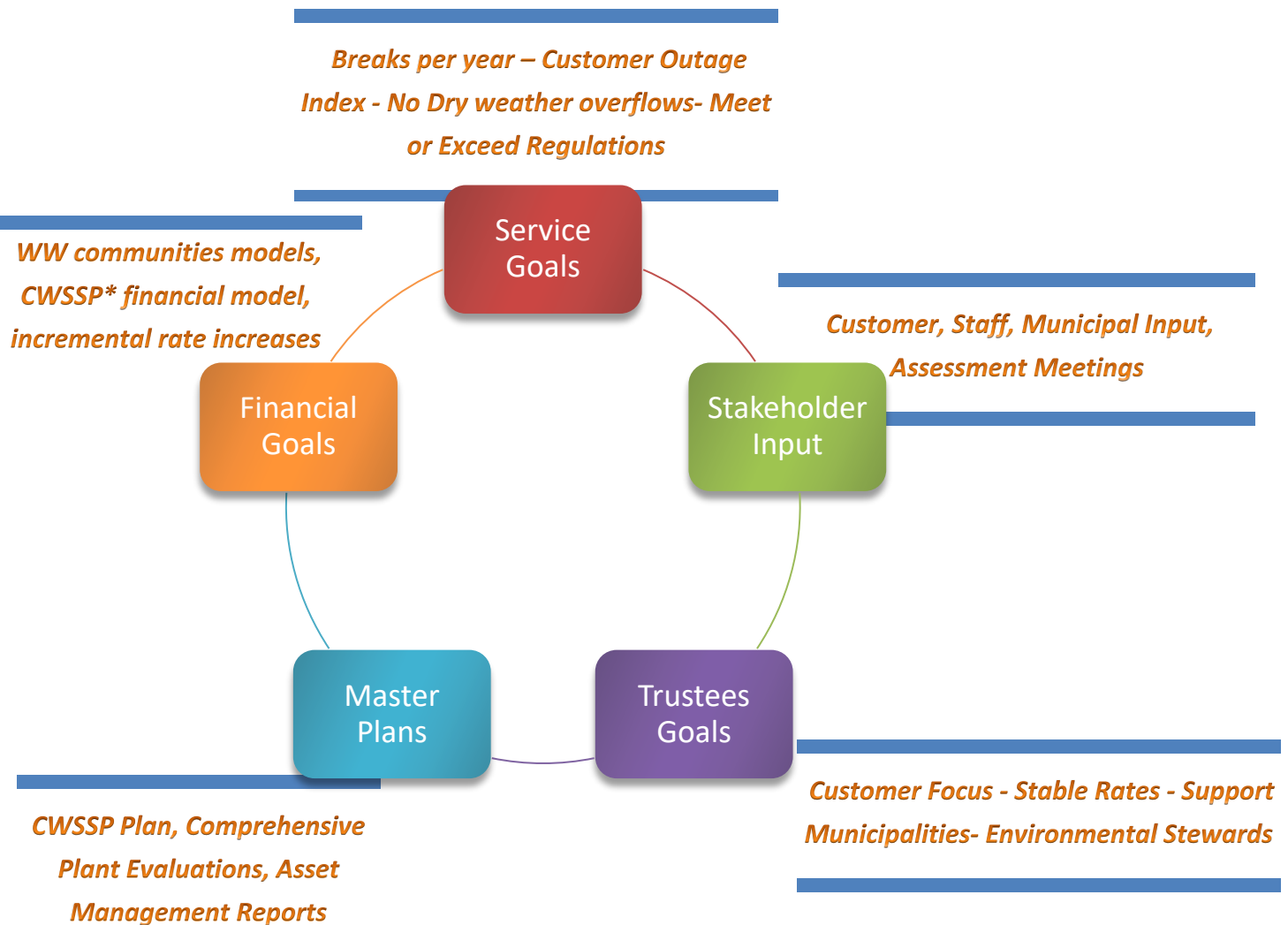
	CAPE					
	ELIZABETH	CUMBERLAND	GORHAM	PORTLAND	WESTBROOK	WINDHAM
Balance 12/31/17	208,371	247,816	939,593	4,065,613	3,241,557	338,538
Contribution - 2018	100,000	72,538	86,690	720,000	370,574	35,849
Operating Surplus Transfer	32,896	32,270	8,131	381,289	40,323	19,935
<u>Expenditure</u>	<u>(29,943)</u>	<u>(4,901)</u>	<u>(25,911)</u>	<u>(572,168)</u>	<u>(141,289)</u>	<u>(10,099)</u>
Balance 12/31/18 Estimated	311,324	347,723	1,008,503	4,594,734	3,511,165	384,223
Contribution - 2019	125,000	54,700	100,000	900,000	300,000	25,849
Operating Surplus Transfer	-	-	-	301,066	-	-
<u>Expenditure (Est'd)</u>	<u>(175,236)</u>	<u>(20,000)</u>	<u>(182,730)</u>	<u>(1,713,591)</u>	<u>(496,622)</u>	<u>(34,553)</u>
Balance 12/31/19 Estimated	261,088	382,422	925,773	4,082,209	3,314,543	375,519
Contribution - 2020	120,700	40,000	90,800	1,090,000	300,000	35,849
Operating Surplus Transfer	-	-	-	125,000	-	-
<u>Expenditure (Est'd)</u>	<u>(100,000)</u>	<u>(152,650)</u>	<u>(384,150)</u>	<u>(854,450)</u>	<u>(116,100)</u>	<u>(142,650)</u>
Balance 12/31/20 Estimated	281,788	269,772	632,423	4,442,759	3,498,443	268,718
Target Renew al & Replacement (5% of Gross Capital Assets)	\$824,000	\$392,000	\$892,000	\$5,673,000	\$1,025,000	\$151,000



The Cumberland fund has a separate contracted R&R reserve that is used to pay its share of capital expenses to the Town of Falmouth. Falmouth operates the facilities and manages the capital projects. They then bill the Cumberland fund for a portion of those capital expenditures because those Falmouth facilities are also used to provide wastewater services to Cumberland. The contracted R&R reserve started in 2018 with a contribution of \$52,910. Contributions are \$15,000 and \$30,000 for 2019 and 2020, respectively. The projected 2020 end of year balance is \$2,426.

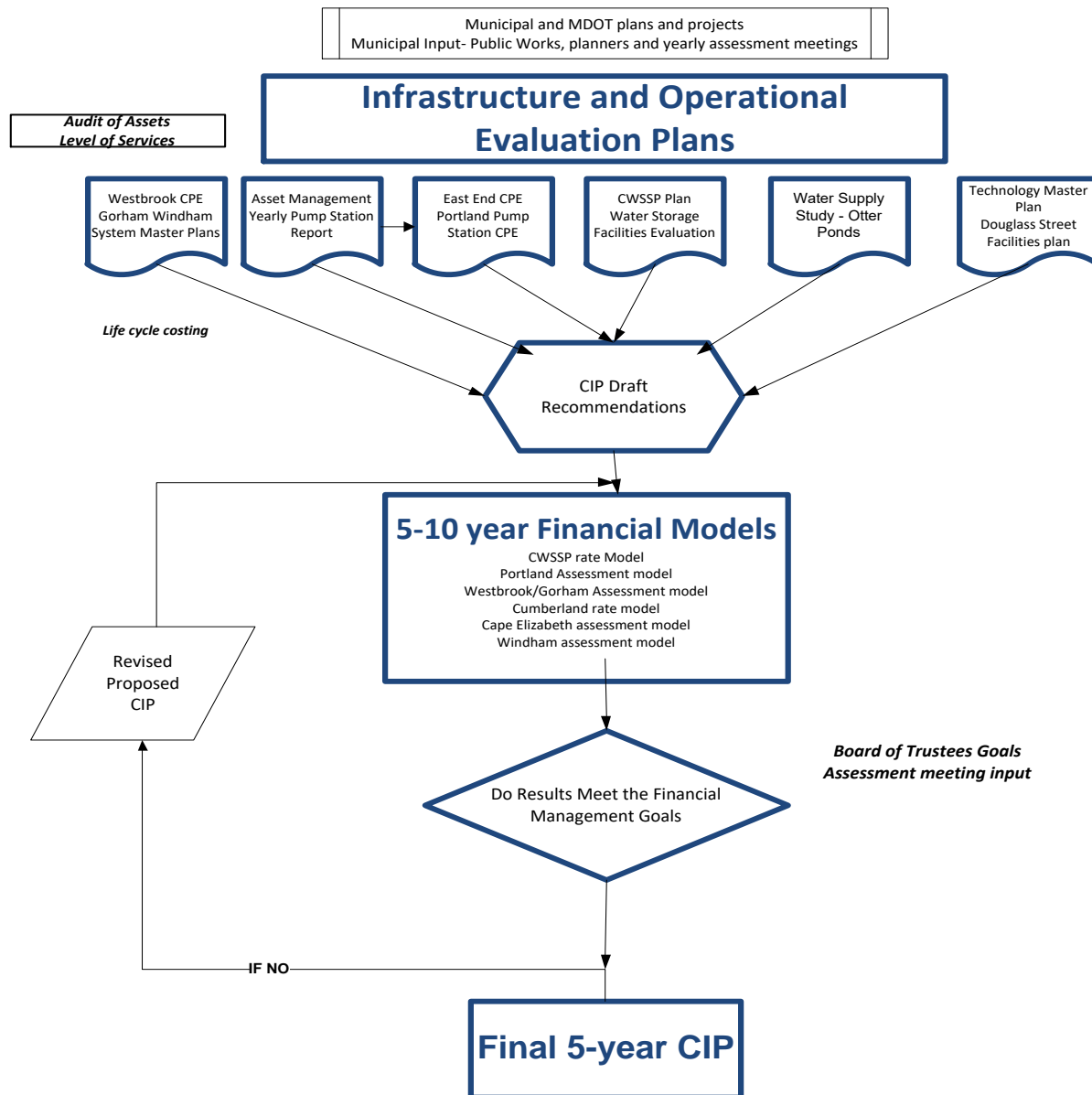
Introduction

A five-year capital improvement plan is developed each year taking into consideration various factors including Infrastructure and Operational Evaluation Plans, Strategic/Tactical Goals and Benchmarks, Multi-year Financial Projections and Board Established Budget Guidelines (described in the Introduction Section). The plan is developed with much of our stakeholder's input, including input from customers, municipalities, regulators and staff. Staff recommends the Board of Trustees authorize the projects for the first year of the plan to be completed. Capital Expenditures are for a physical asset that exceeds \$10,000 and has a useful life of greater than 5 years or extends the useful life of an existing asset for more than 5 years.



*CWSSP – Comprehensive Water System Strategic Plan

Capital Improvement Program Process



Infrastructure and Operational Evaluation Plans

The water and wastewater industry is an infrastructure-oriented industry. Approximately 95% of the District's total assets are infrastructure assets and capital-financing costs related to those assets are 30% of the annual budget. As the chart above indicates, a number of studies have been conducted to provide an assessment of those assets and is the basis for the capital improvement plan. Some of the studies are discussed in future pages by fund.

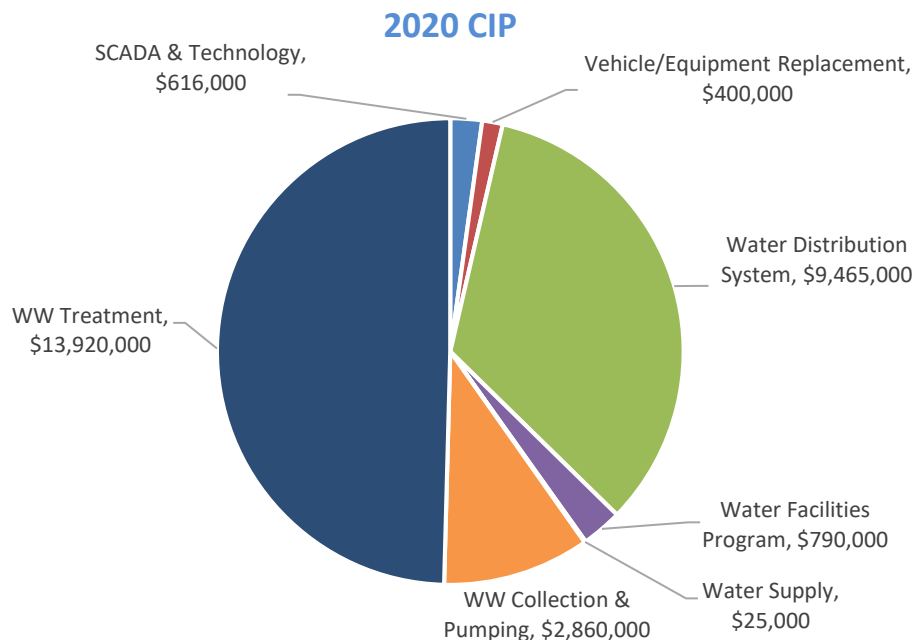
Program Summary and Board of Trustees Approval Order

Program	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Comprehensive Planning		\$750,000				\$750,000
SCADA & Technology	\$616,000	\$600,000	\$250,000	\$250,000	\$250,000	\$1,966,000
Vehicle/Equipment Replacement	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$2,000,000
Water Distribution System	\$9,465,000	\$8,475,000	\$10,675,000	\$16,475,000	\$9,475,000	\$54,565,000
Water Facilities Program	\$790,000	\$4,825,000	\$1,050,000	\$925,000	\$2,025,000	\$9,615,000
Water Supply	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000
WW Collection & Pumping	\$2,860,000	\$1,660,000	\$635,000	\$1,320,000	\$2,155,000	\$8,630,000
WW Treatment	\$13,920,000	\$3,840,000	\$2,620,000	\$6,620,000	\$6,070,000	\$33,070,000
Grand Total	\$28,076,000	\$20,575,000	\$15,655,000	\$26,015,000	\$20,400,000	\$110,721,000

Proposed Board Action:

ORDERED: that the 2020-2024 Capital Improvement Plan is hereby adopted and the General Manager is authorized to solicit bids or proposals for the year 2020 projects, and to authorize the General Manager to award contracts for approved projects to the lowest bidder if the bid is within the project budget.


BE IT FURTHER ORDERED: that the General Manager shall solicit bids or proposals and to partner with Municipalities, MDOT and Developers for the year 2019 for the replacement and extension of water mains, services, valves and hydrants as outlined in the Water Distribution Systems Program and to authorize the General Manager to award and enter into contracts if the bid or partnering proposals are within the overall program budget.



Program Summary by Fund

Capital projects are recorded into the appropriate Water or Wastewater fund. The table summarizes the proposed 2020 Capital Improvement Plan by fund with a page reference where more details are provided on the projects. Gorham, Westbrook and Windham Wastewater system has a jointly used treatment plant located in Portland. Those costs are allocated between the municipalities – see the financial policies section for more information.

Program Summary

Fund(s)	 -2020-	Page Reference Introduction	Page Reference Project Listing
Water	\$9,506,000	290	293
SCADA & Technology	\$66,000		
Water Distribution System	\$9,075,000		
Water Facilities Program	\$340,000		
Water Supply	\$25,000		
Cape Elizabeth Wastewater	\$530,000	311	312
WW Collection & Pumping	\$455,000		
WW Treatment	\$75,000		
Cumberland Wastewater	\$20,000	316	317
WW Collection & Pumping	\$20,000		
Gorham Wastewater	\$20,000	290	292
WW Collection & Pumping	\$20,000		
Westbrook Wastewater	\$45,000		
WW Collection & Pumping	\$45,000	320	323
Windham Wastewater	\$20,000		
WW Collection & Pumping	\$20,000	320	323
Gorham/Westbrook/Windham Wastewater	\$11,300,000		
WW Treatment	\$11,300,000	320	323
Gorham/Windham Wastewater	\$300,000		
WW Collection & Pumping	\$300,000	320	323
Portland Wastewater	\$4,545,000		
WW Collection & Pumping	\$2,000,000	333	335
WW Treatment	\$2,545,000		
Wastewater-All	\$350,000	342	343
SCADA & Technology	\$350,000		
Water and Wastewater	\$1,440,000	345	345
Comprehensive Planning			
SCADA & Technology	\$200,000		
Vehicle/Equipment Replacement	\$400,000		
Water Distribution System	\$390,000		
Water Facilities Program	\$450,000		
Grand Total	\$28,076,000		

Financing Summary of 2020 Capital Improvement Plan

Capital projects are financed through the issuance of bonds – general market bonds or low-interest rate state revolving loan program bonds – or drawdowns from the renewal and replacement funds. The Capital Financing section contains more information.

	Bond General Program	Bond State Revolving Loan	Renewal and Replacement	Grand Total
Water	\$7,000,000		\$2,506,000	\$9,506,000
SCADA & Technology			\$66,000	\$66,000
Water Distribution System	\$7,000,000		\$2,075,000	\$9,075,000
Water Facilities Program			\$340,000	\$340,000
Water Supply			\$25,000	\$25,000
Cape Elizabeth Wastewater	\$430,000		\$100,000	\$530,000
WW Collection & Pumping	\$430,000		\$25,000	\$455,000
WW Treatment			\$75,000	\$75,000
Cumberland Wastewater			\$20,000	\$20,000
WW Collection & Pumping			\$20,000	\$20,000
Portland Wastewater		\$3,700,000	\$845,000	\$4,545,000
WW Collection & Pumping		\$1,950,000	\$50,000	\$2,000,000
WW Treatment		\$1,750,000	\$795,000	\$2,545,000
Gorham Wastewater			\$20,000	\$20,000
WW Collection & Pumping			\$20,000	\$20,000
Westbrook Wastewater			\$45,000	\$45,000
WW Collection & Pumping			\$45,000	\$45,000
Windham Wastewater			\$20,000	\$20,000
WW Collection & Pumping			\$20,000	\$20,000
Gorham/Westbrook/Windham Wastewater		\$11,250,000	\$50,000	\$11,300,000
WW Treatment		\$11,250,000	\$50,000	\$11,300,000
Gorham/Windham Wastewater			\$300,000	\$300,000
WW Collection & Pumping			\$300,000	\$300,000
Wastewater-All			\$350,000	\$350,000
SCADA & Technology			\$350,000	\$350,000
Water and Wastewater			\$1,440,000	\$1,440,000
SCADA & Technology			\$200,000	\$200,000
Vehicle/Equipment Replacement			\$400,000	\$400,000
Water Distribution System			\$390,000	\$390,000
Water Facilities Program			\$450,000	\$450,000
Grand Total	\$7,430,000	\$14,950,000	\$5,696,000	\$28,076,000

Five-Year Capital Improvement Plan

In addition to planning the capital projects for the upcoming year, a five-year plan has been developed to assist us in managing our staff, communicating to our external partners to improve coordination and developing financial projections to set expectations of future water rate and wastewater assessments adjustments.

The table below summarizes the planned capital projects in the upcoming year. Additional details on each program are provided on the following pages.

Program Summary

Fund(s)	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Water	\$9,506,000	\$12,225,000	\$10,800,000	\$16,300,000	\$9,650,000	\$58,481,000
SCADA & Technology	\$66,000	\$50,000	\$50,000	\$50,000	\$50,000	\$266,000
Water Distribution System	\$9,075,000	\$8,075,000	\$10,275,000	\$16,075,000	\$9,075,000	\$52,575,000
Water Facilities Program	\$340,000	\$4,075,000	\$450,000	\$150,000	\$500,000	\$5,515,000
Water Supply	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000
Cape Elizabeth Wastewater	\$530,000	\$330,000	\$150,000	\$415,000	\$325,000	\$1,750,000
WW Collection & Pumping	\$455,000	\$305,000	\$25,000	\$340,000	\$25,000	\$1,150,000
WW Treatment	\$75,000	\$25,000	\$125,000	\$75,000	\$300,000	\$600,000
Cumberland Wastewater	\$20,000	\$420,000	\$20,000	\$20,000	\$20,000	\$500,000
WW Collection & Pumping	\$20,000	\$420,000	\$20,000	\$20,000	\$20,000	\$500,000
Portland Wastewater	\$4,545,000	\$3,865,000	\$2,470,000	\$6,895,000	\$6,870,000	\$24,645,000
WW Collection & Pumping	\$2,000,000	\$800,000	\$200,000	\$400,000	\$2,050,000	\$5,450,000
WW Treatment	\$2,545,000	\$3,065,000	\$2,270,000	\$6,495,000	\$4,820,000	\$19,195,000
Gorham Wastewater	\$20,000	\$20,000	\$350,000	\$20,000	\$20,000	\$430,000
WW Collection & Pumping	\$20,000	\$20,000	\$350,000	\$20,000	\$20,000	\$430,000
Westbrook Wastewater	\$45,000	\$95,000	\$20,000	\$20,000	\$20,000	\$200,000
WW Collection & Pumping	\$45,000	\$95,000	\$20,000	\$20,000	\$20,000	\$200,000
Windham Wastewater	\$20,000	\$20,000	\$20,000	\$520,000	\$20,000	\$600,000
WW Collection & Pumping	\$20,000	\$20,000	\$20,000	\$520,000	\$20,000	\$600,000
Gorham/Westbrook/Windham WW	\$11,300,000	\$750,000	\$225,000	\$50,000	\$950,000	\$13,275,000
WW Treatment	\$11,300,000	\$750,000	\$225,000	\$50,000	\$950,000	\$13,275,000
Gorham/Windham Wastewater	\$300,000					\$300,000
WW Collection & Pumping	\$300,000					\$300,000
Wastewater-All	\$350,000	\$350,000				\$700,000
SCADA & Technology	\$350,000	\$350,000				\$700,000
Water and Wastewater	\$1,440,000	\$2,500,000	\$1,600,000	\$1,775,000	\$2,525,000	\$9,840,000
Comprehensive Planning		\$750,000				\$750,000
SCADA & Technology	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,000,000
Vehicle/Equipment Replacement	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$2,000,000
Water Distribution System	\$390,000	\$400,000	\$400,000	\$400,000	\$400,000	\$1,990,000
Water Facilities Program	\$450,000	\$750,000	\$600,000	\$775,000	\$1,525,000	\$4,100,000
Grand Total	\$28,076,000	\$20,575,000	\$15,655,000	\$26,015,000	\$20,400,000	\$110,721,000

Five-Year Capital Improvement Plan Impact on the Operating Budget

The proposed Capital Improvement Plan impacts the Operating results of the fund due to changes in on-going operating costs and debt service payments for those projects being bonded. The Operating results impact is included in the 5-year projections in the Budget by Fund section. The Capital Financing section includes more information on the debt service payment impact. The table below indicates the impact on operating expenses for the 2020 CIP only.

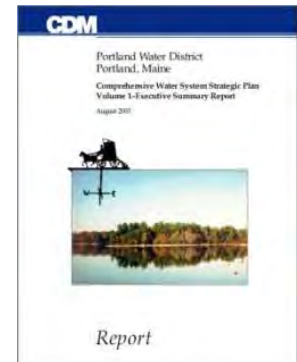
Operating Expense Impact of Proposed CIP

Fund(s)	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Water						
SCADA & Technology	\$0	\$0	\$0	\$0	\$0	\$0
Water Distribution System	\$97,501	\$615,000	\$604,750	\$594,500	\$584,250	\$2,496,001
Water Facilities Program	\$0	\$0	\$0	\$0	\$0	\$0
Water Supply	\$0	\$0	\$0	\$0	\$0	\$0
Cape Elizabeth Wastewater						
WW Collection & Pumping	\$0	\$1,100	\$33,325	\$32,734	\$32,143	\$99,302
WW Treatment	\$0	\$0	\$0	\$0	\$0	\$0
Cumberland Wastewater						
WW Collection & Pumping	\$0	\$0	\$0	\$0	\$0	\$0
Portland Wastewater						
WW Collection & Pumping	\$0	\$2,000	\$138,600	\$137,445	\$136,290	\$414,335
WW Treatment	\$0	\$2,800	\$126,000	\$124,950	\$123,900	\$377,650
Gorham Wastewater						
WW Collection & Pumping	\$0	\$0	\$0	\$0	\$0	\$0
Westbrook Wastewater						
WW Collection & Pumping	\$0	\$0	\$0	\$0	\$0	\$0
Windham Wastewater						
WW Collection & Pumping	\$0	\$0	\$0	\$0	\$0	\$0
Gorham/Westbrook/Windham WW						
WW Treatment	\$0	\$15,000	\$708,750	\$702,844	\$699,938	\$2,126,532
Gorham/Windham Wastewater						
WW Collection & Pumping	\$0	\$0	\$0	\$0	\$0	\$0
Wastewater-All						
SCADA & Technology	\$0	\$0	\$0	\$0	\$0	\$0
Water and Wastewater						
Comprehensive Planning	\$0	\$750,000	\$0	\$0	\$0	\$750,000
SCADA & Technology	\$0	\$0	\$0	\$0	\$0	\$0
Vehicle/Equipment Replacement	\$0	\$0	\$0	\$0	\$0	\$0
Water Distribution System	\$0	\$0	\$0	\$0	\$0	\$0
Water Facilities Program	\$0	\$0	\$0	\$0	\$0	\$0
Grand Total	\$97,501	\$1,385,900	\$1,611,425	\$1,592,473	\$1,576,521	\$6,263,820

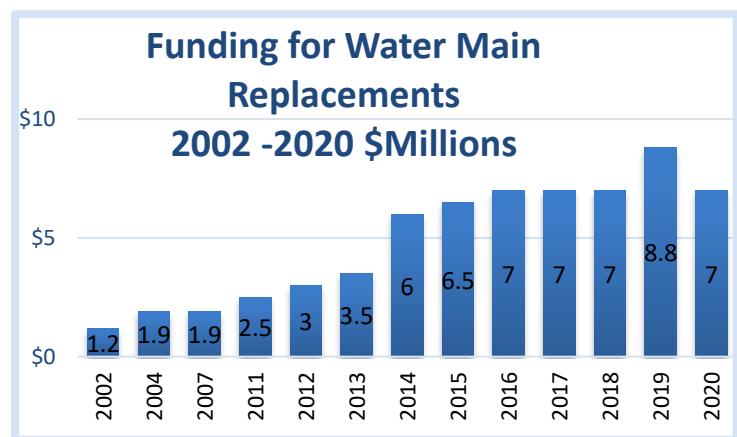
Water Fund

Comprehensive Water System Strategic Plan (CWSSP) - March 2003

Camp Dresser & McKee, engineering consultants, completed the master plan of the distribution system in March of 2003. The plan was prepared to guide the development, operations and financing of the water system through year 2020. The first 7- year planning cycle (priority - 1 projects 2003-2010) included an investment increase in the water main renewal program (see chart below). Along with the increase in water main renewals, the District also undertook the replacement of our existing water meters with new radio read meters. The project was completed in 2009 as recommended in the plan.



CWSSP also recommended removal or rehabilitation of existing water storage tanks. The District has removed three tanks from the system – Munjoy Hill reservoir, Shore Acres and Oak Hill. In 2008, the District rehabilitated 2-tanks, Steep Falls and Gowen. In 2009, the Standish Tank was rehabilitated and a bulk mixer added. In 2012, modifications were made to the concrete tanks to comply with OSHA fall protection standards.



In the plan, system deficiencies and recommended actions were identified. The most significant project identified from the priority - 1 projects was inadequacies associated with service from the Elevation 407 zone. CWSSP recommended the combining of the 407-north zone with the south zone. Many projects have been completed to that end. This included transmission main piping in the MDOT Rte. 202/Presumpscot River Bridge project, installation of 8,000 feet of trunk main on Fort Hill road along with several upgrades in the Little Falls area of Gorham and Windham as part of the Little Falls Conveyance Project. In 2008, 4,000 feet of transmission main was extended to the new pump station location on Ward's Hill road. In 2009, the transmission main was extended from the end of the Fort Hill main along Huston Road to the proposed pump station location. In 2016 the District completed the Transmission portion of the north 407 zone by extending 24" main from the pump station site 6,500 feet down Dyer Road and Huston Road to Rte. 202 connecting into the 2008 upgrades. This project provided an increase in pressure to approximately 150 customers that had substandard pressure and increased fire protection to the area.

A hydraulic analysis of the combined system and final design of the new 407 zone pump station (Wards Hill) was completed in 2017. The pump station construction started in 2017 (CIP #307) and was on-line in September 2018. Land acquisition and design for a new storage facility to replace the Windham Center Tank is underway and construction of the new tank was funded in the 2019 CIP (CIP #307) with an expected construction start of fall 2020. Proposed in the 2020 CIP is to extend the 407 zone transmission system to connect the south zone to the north zone. (CIP 307/3066).

Water Fund (continued)

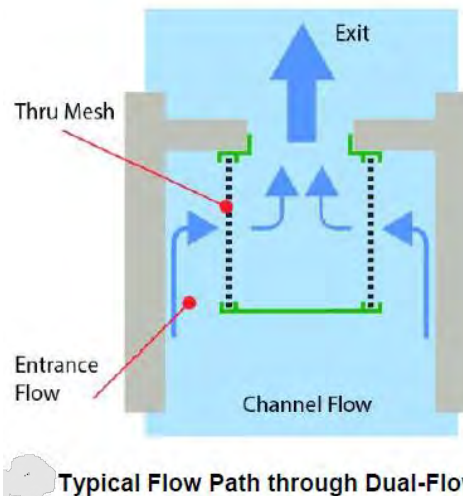
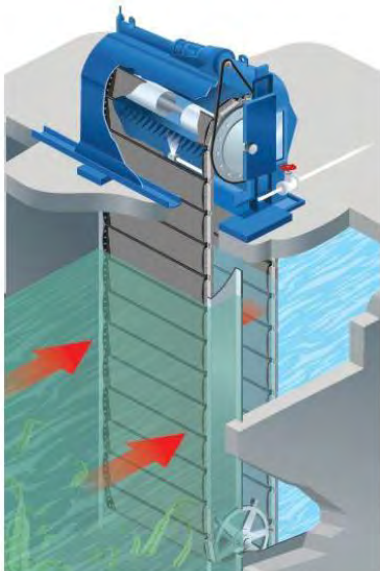
Greater Portland Water System – Water Treatment/Alternate Source – November 2008

Camp Dresser & McKee completed a study of the Sebago Lake Water Treatment Facility (SLWTF) in November of 2008. The primary focus of the study was to evaluate design alternatives for the ultraviolet disinfection process proposed to meet upcoming disinfection requirements and evaluate replacement of the existing 20-year old Ozone equipment. This study also reviewed raw water screening alternatives to replace the existing screening equipment. The third area looked at by this study was to evaluate the potential to connect the well supply that was being investigated in the Otter Ponds Aquifer area to the Sebago Lake Water Treatment Facility (SLWTF) as a backup or supplemental supply.

The report recommended conducting a pilot study of ultraviolet disinfection to evaluate the potential of fouling on the ultraviolet disinfection equipment and to help guide the choice of location and technology. The pilot work was completed in 2011. Final design of the UV facility and Ozone replacement equipment commenced in 2011 and was completed in May 2012. Construction of the \$12 million project was completed and the new system was on-line in April of 2014.

The final hydrogeological study of the Otter Ponds Aquifer well was completed. A production well was developed, tested and is licensed for an emergency supply that could supply Standish, Gorham and Windham if needed. Raw water screening for SLWTF was evaluated as part of this project. The current screens at the intake buildings are 70 years old and are in need of replacement. This project is under design and construction is expected to start in 2021(CIP #18 SLWTF intakes).

Proposed 2021 CIP #18, Project 3007 – Replace Mechanical Screens



1: Image of a Typical Thru-Flow Traveling Water Screen

Water Fund (continued)

Southern Maine Regional Water Council – Water Master Plan Study – October 2008 (Updated 2016)

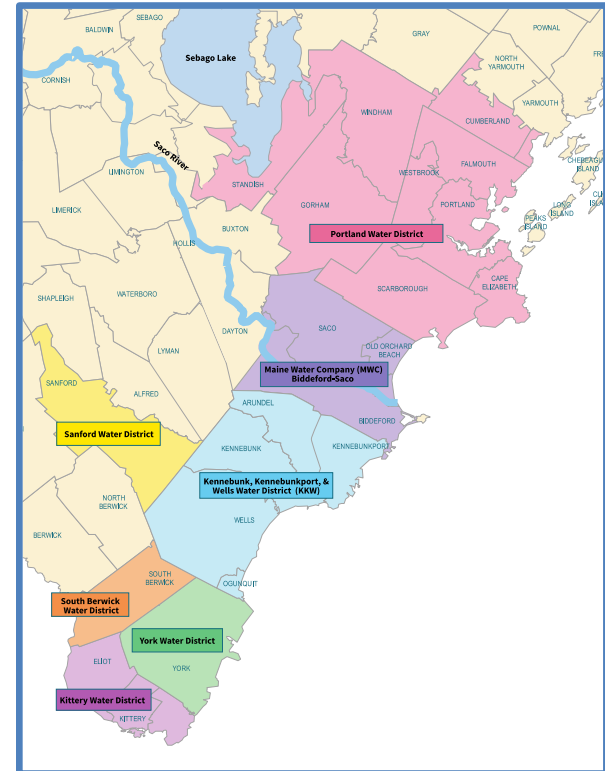


The Southern Maine Regional Water Council, made up of the 7 major water utilities of Cumberland and York County, completed a master plan in October of 2008. This document provides the southern Maine region with a planning tool for regional solutions to sustainable water resources and infrastructure for the foreseeable future. This study attained the following goals:

- Identified existing and potential sources of supply in the region and established the present and projected water needs in the region. Also, identified the limitations and risks of the existing and future supplies.
- Explored the logistics, benefits and impediments of creating an integrated, regional water supply system.
- Detailed the hydraulic considerations and infrastructure required to supply water over a large geographical area and evaluated potential water quality issues associated with blending various supplies and considered existing and future interconnections between systems.
- Developed short-term strategies for mutual-aid and sharing of resources between member utilities and developed an action plan to protect identified resources for future generations.
- Developed an integrated water supply plan for the entire region.
- Considered potential governance models for a regional supply organization.

The Council has continued to collaborate on regional utility planning and purchasing efforts. In 2016, the Council completed an update to the 2008 Regional Plan. The updated plan created a regional hydraulic model, explored in detail individual interconnections between all the utilities, identified and reviewed the following:

- existing capabilities for each system
- hydraulic limitations
- available water from neighboring systems
- water quality compatibility issues



Water Fund (continued)

Program Summary

Fund(s)	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Water						
SCADA & Technology	\$66,000	\$50,000	\$50,000	\$50,000	\$50,000	\$266,000
Water Distribution System	\$9,075,000	\$8,075,000	\$10,275,000	\$16,075,000	\$9,075,000	\$52,575,000
Water Facilities Program	\$340,000	\$4,075,000	\$450,000	\$150,000	\$500,000	\$5,515,000
Water Supply	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000
Water Total	\$9,506,000	\$12,225,000	\$10,800,000	\$16,300,000	\$9,650,000	\$58,481,000
Grand Total	\$9,506,000	\$12,225,000	\$10,800,000	\$16,300,000	\$9,650,000	\$58,481,000

Project by Program and Subprogram/Project Summary

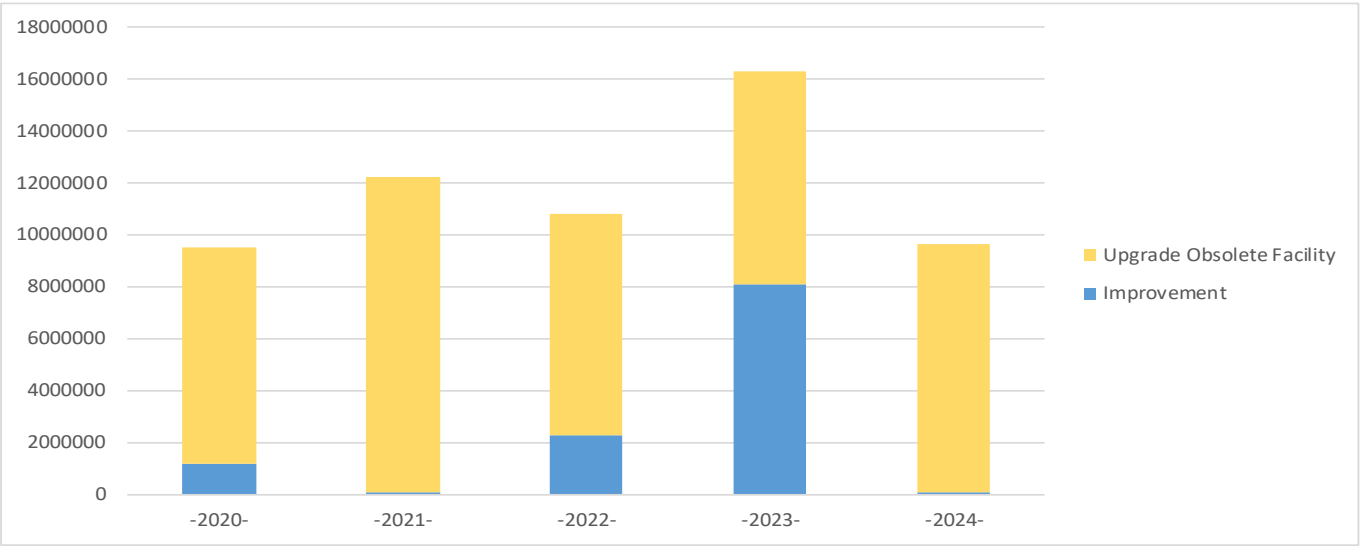
Program	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
SCADA & Technology						
110\3058 Miscellaneous Control Project Upgrades	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000
110\3062 SLWTF SCADA Server Replacement Project	\$16,000					\$16,000
SCADA & Technology Total	\$66,000	\$50,000	\$50,000	\$50,000	\$50,000	\$266,000
Water Distribution System						
262\3069 SLWTF - Emergency Storage/Transmission- Design			\$600,000			\$600,000
262\3070 SLWTF - Emergency Storage/Trans - Construction				\$6,000,000		\$6,000,000
307\3066 407 Zone North Transmission Improvement	\$1,000,000					\$1,000,000
307\3067 407 Zone Reliability Improvements			\$1,600,000			\$1,600,000
307\3068 407 Zone Reliability Improvements				\$2,000,000		\$2,000,000
408\3092 Water System Redundancy (looping), Upsize	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000
43\3121A WMR- Various Main Replacements	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$7,000,000	\$31,000,000
43\3121B WMR- Various Main Replacements	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$5,000,000
53\3087 Water Valve Replacement	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,000,000
56\3077 Water Main Replacement - Seasonal Mains	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000
61\3082 Water Services - Renew Domestic and Fire	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$3,000,000
65\3072 Water Hydrant Replacement	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,000,000
Water Distribution System Total	\$9,075,000	\$8,075,000	\$10,275,000	\$16,075,000	\$9,075,000	\$52,575,000
Water Facilities Program						
122\3008 Steep Falls Finished Water Piping Replace	\$125,000					\$125,000
122\3032 Water Facilities R&R	\$50,000	\$100,000	\$100,000	\$100,000	\$100,000	\$450,000
122\3033 Ozone Generator Cooling - Auto Temp Contr	\$115,000					\$115,000
122\3210 Chemical Storage Facilities Upgrades			\$300,000			\$300,000
122\3211 Windham Pump Upgrades					\$350,000	\$350,000
18\3007 SLWTF Intake Screening Phase 1		\$3,500,000				\$3,500,000
203\3102 Water Storage Facility Maintenance & Upgr	\$50,000	\$25,000	\$50,000	\$50,000	\$50,000	\$225,000
203\3104 Water Tank Maintenance- Gorham Tank Rehab		\$450,000				\$450,000
Water Facilities Program Total	\$340,000	\$4,075,000	\$450,000	\$150,000	\$500,000	\$5,515,000
Water Supply						
46\3097 Water System Security Improvements	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000
Water Supply Total	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000
Grand Total	\$9,506,000	\$12,225,000	\$10,800,000	\$16,300,000	\$9,650,000	\$58,481,000

Water Fund (continued)

Financing Summary (see table on adjacent page for specific project)

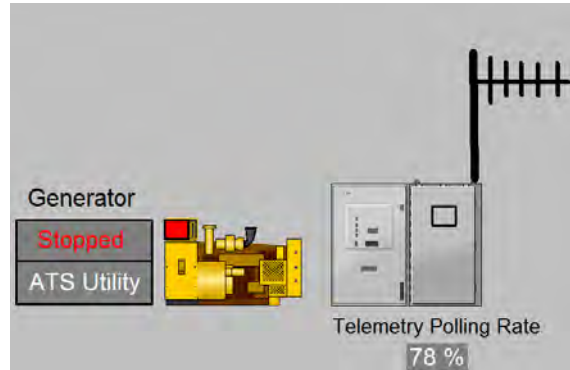
Funding Source	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Bond General Program	\$7,000,000	\$9,500,000	\$8,200,000	\$14,000,000	\$7,000,000	\$45,700,000
Renewal and Replacement	\$2,506,000	\$2,725,000	\$2,600,000	\$2,300,000	\$2,650,000	\$12,781,000
Grand Total	\$9,506,000	\$12,225,000	\$10,800,000	\$16,300,000	\$9,650,000	\$58,481,000

Project Purpose (see table on adjacet page for specific project)



Subprogram # 110**SCADA/Process Control - Water****Division:** Water - General**Manager:** Pellerin, Greg**Funding:** R & R – Water-Div. 20**Priority:** Upgrade obsolete facility**Description:**

The program supports 30 water sites across the District in upgrading and replacing the existing Supervisory Control and Data Acquisition (SCADA) equipment. The work needed is replacement of hardware and software to be compatible to the District SCADA standards and provide for increased automation of the water systems and treatment. Programmable Logic Controllers (PLC) have been replaced across the District to meet the new standards and remove outdated, non-maintainable equipment.

**Justification / Impact:**

The benefit of this program is to increase the automation and reduce the staff hours needed to perform routine activities for the systems and treatment plants across the District.

History:

The District started changing out the system in 2003 by replacing the existing 20 year-old system and installing new SCADA equipment where it did not exist. Most systems have been retrofitted or replaced but more automation of these systems will continue.

Origin of the Subprogram:**Budget Summary:**

Budget year	Project	Budget Year Cost
2020 - R&R	3058 Miscellaneous Control Project Upgrades	\$50,000
2020 - R&R	3062 SLWTF SCADA Server Replacement Project	\$16,000
2021 - R&R	3058 Miscellaneous Control Project Upgrade	\$50,000
2022 - R&R	3058 Micellaneous Control Projects Upgrades	\$50,000
2023 - R&R	3058 Micellaneous Control Projects Upgrades	\$50,000
2024 - R&R	3058 Miscellaneous Control Project Upgrades	\$50,000
Total Cost, All Years:		\$266,000

Previous Years on CIP: 2003**Related Projects:** Subprogram #177

Subprogram # 262 SLWTF - Emergency Storage/60" Transmission Ph. 1

Division: Water - General

Manager: Johnson, Gordon

Funding: Bonds - Water - Div. 20

Priority: Customer driven

Description:

Construct a 7.0 Million Gallon Prestressed Concrete Reservoir near the Sebago Lake Water Treatment Facility (SLWTF).

Justification / Impact:

The purpose is to provide additional storage for partial redundancy of the SLWTF so that it can be shut down for longer periods of time and improve water quality by relying less on system storage.

History:

This project was conceived as part of the Comprehensive Water System Strategic Plan, as a future need and will be assessed further during a future "Water Purification Master Plan."

Origin of the Subprogram:

This is a CWSSP recommendation to improve water quality and backup storage.

Budget Summary:

<u>Budget year</u>		<u>Project</u>	<u>Budget Year Cost</u>
2022 - Bond	3069	SLWTF- Emergency Storage/60" Transmission - Design	\$ 600,000
2023 - Bond	3070	Emergency Storage Tank - 7.0 MG / 60" transmission	\$6,000,000
			Total Cost, All Years: \$6,600,000

Previous Years on CIP:

2004

Related Projects:

CWSSP #267-1150

Procurement Issues:

Standard consulting and/or contractor retention procedures.

Subprogram # 307**Gorham/Windham 407 Zone Improvements****Division:** Water - General**Manager:** Johnson, Gordon**Funding:** Bonds – Water - Div. 20**Priority:** Upgrade obsolete facility**Description:**

Phased design and construction of transmission mains, pumps & water tank for the integration of the 407 Zones (Gorham & Windham).

Justification / Impact:

The growth in these communities requires increased capacity. There are also specific service deficiencies and water quality issues that need to be addressed in the 407 Zones.

History:

The projects listed below were anticipated by the 1989 Master Plan. Further analysis and identification was undertaken as part of the CWSSP study.

Origin of the Subprogram:

Projects identified and proposed phasing outlined in Comprehensive Water System Strategic Plan.

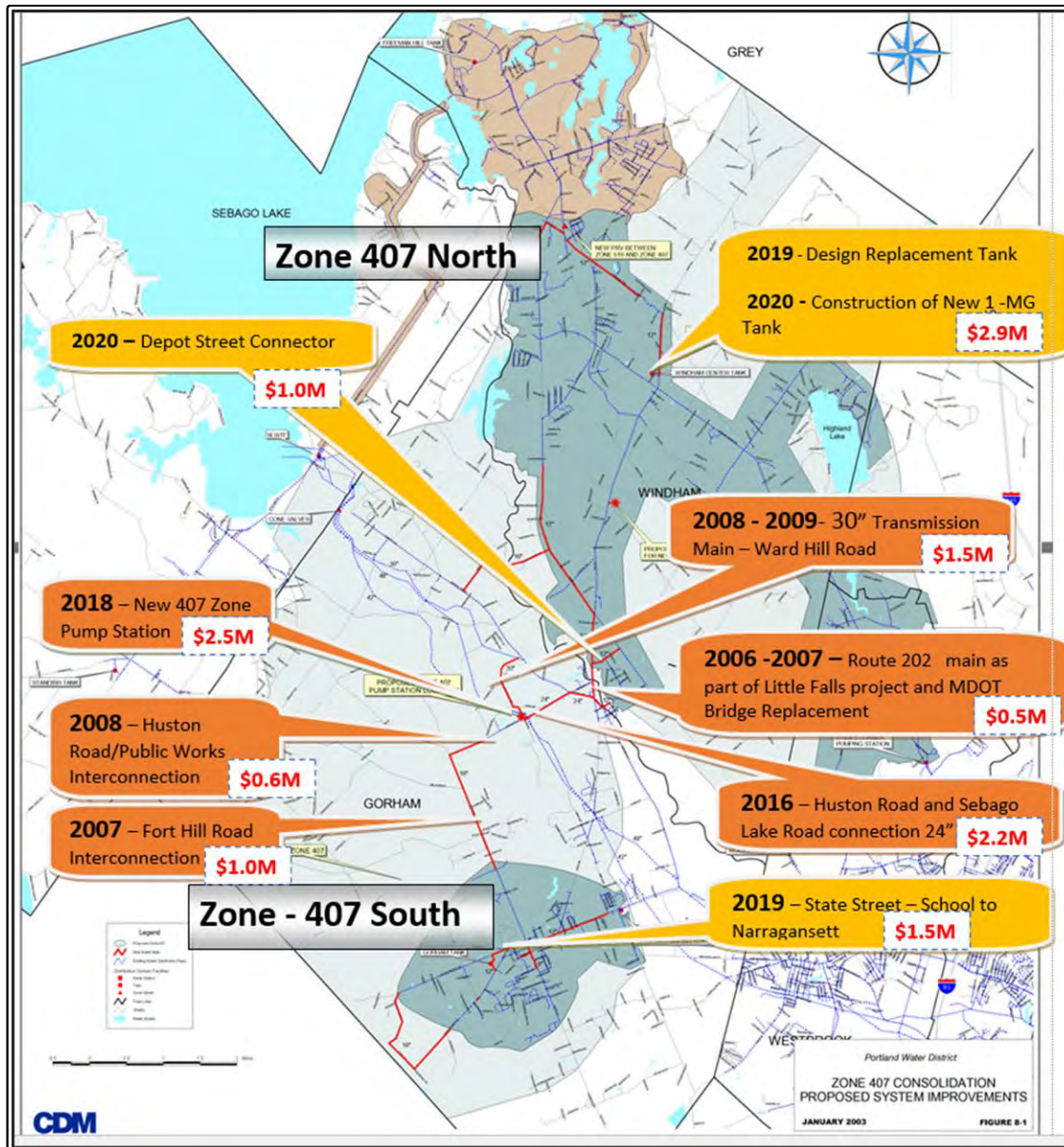


Elevated Storage for 407 zone north. This project will replace an old undersized 1950 Tank (left) with new tank (right) and Land Acquisition.

Budget Summary:

Budget year	Project	Budget Year Cost
2020 - Bond	3066 407 Zone North Transmission Improvements – Depot St. WI	\$1,000,000
2022 - Bond	3067 407 Zone Reliability Improvements	\$1,600,000
2023 - Bond	3068 407 Zone Reliability Improvements II	\$2,000,000
Total Cost, All Years:		\$7,500,000

Previous Years on CIP: 2000**Related Projects:**

Subprogram # 307**Gorham/Windham 407 Zone Improvements****Public Health, System Reliability and Public Safety Benefits**

- Replacement of two obsolete pumping Stations (Gorham- 1898, Prides Corner – 1950) with state of the art single new pump station (Wards Hill)
- Elimination of pressure limitations to approximately 150 customers
- Replacement of old 1950 undersized 0.2 MG Windham Center tank with new 1.0 MG elevated tank
- Improved water quality and water age in entire combined system
- Fire Flow improvements to Gorham Village and Windham

Subprogram # 43 Water Main Replacement

Division: Water - General

Manager: Johnson, Gordon

Funding: Bonds and R&R - Water- Div. 20

Priority: Routine replacement

Description:

Renew, replace, upgrade and loop cast iron water mains using materials and sizing for current and future conditions. Approximately 20,000 feet is scheduled for yearly replacement.

Level of Service – Reliability Performance

Water main break frequency - 10 breaks per 100 miles

Justification / Impact:

This is a cost saving and water quality improvement process.

Mains selected for replacement use the same priority system as the Galvanized Main Renewal Program: water quality complaints, leak frequency data, and municipal/state reconstruction projects.

History:

Cast iron mains in sizes 2 inches and above had been a standard from the late 1800s until the introduction of Ductile Iron pipe in the late 1960s and early 1970s and PVC and HDPE pipe in the 1980s. The rigidity and lack of flexibility of cast iron has been attributed to failures such as frost movement, cross trenches, water hammers, contractor damages, as well as normal deterioration and corrosion through age. A percentage of these mains are unlined causing iron build up resulting in restricted flow and dirty water complaints. The District has a long term program to upgrade these mains.

Origin of the Subprogram:

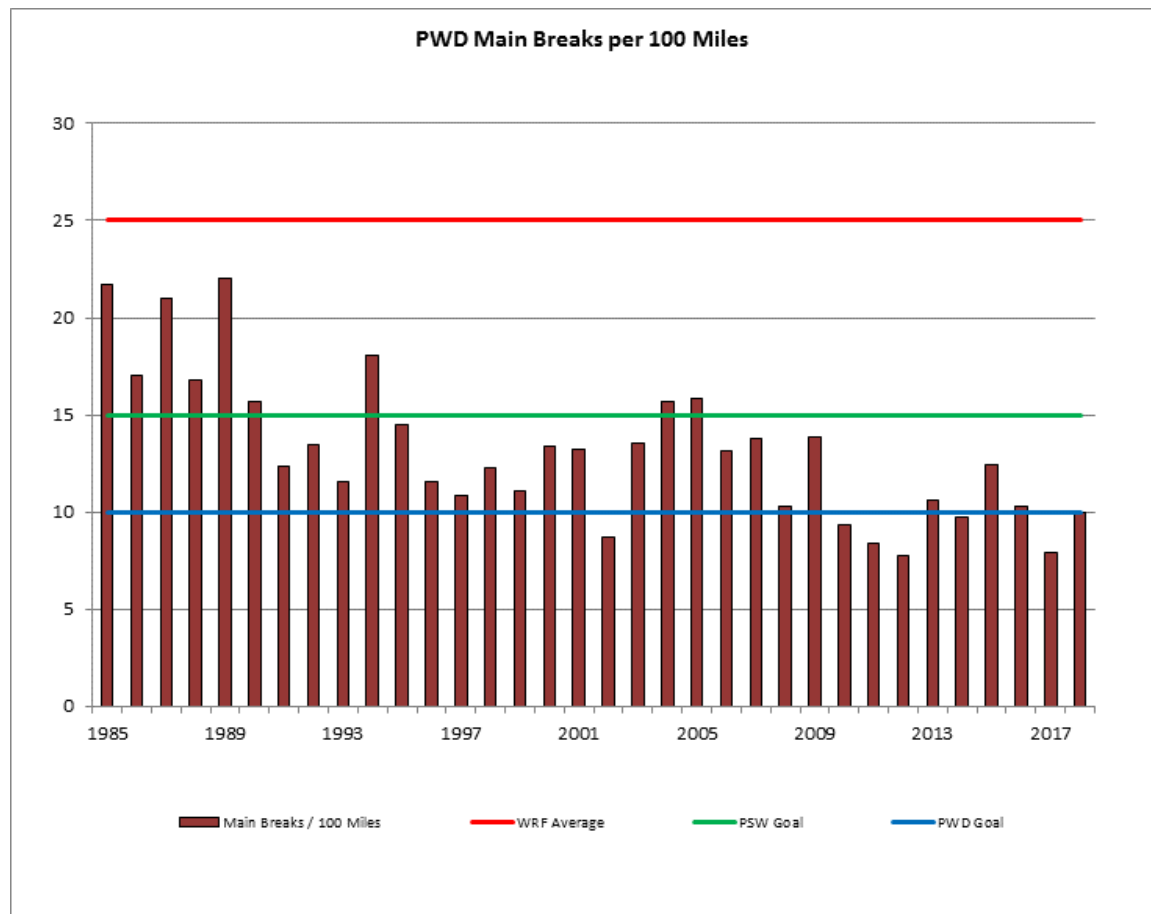
The current list of projects is determined on the basis of water quality complaints, leak frequency data, age of main, and municipal/state reconstruction projects.

Budget Summary:

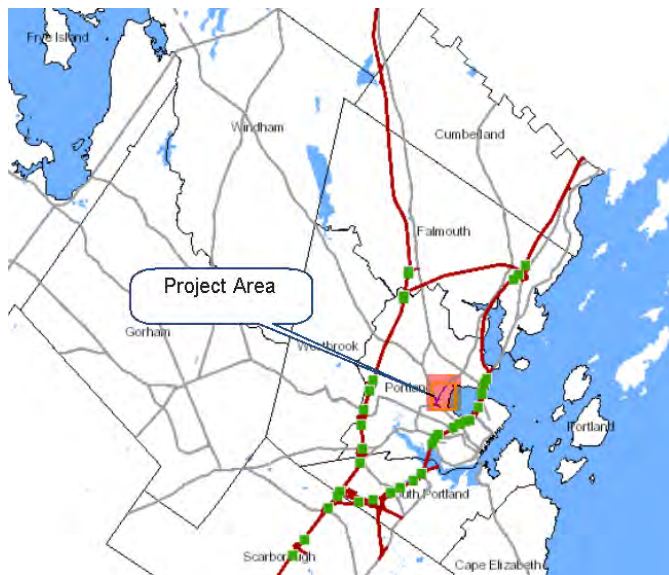
Budget Year			Project	Budget Year Cost
2020	Bond	3110	WMR- Walton, Mackworth, Irving, Sawyer , PO	\$2,000,000
2020	Bond	3111	WMR – Brighton, Deering, Falmouth, Bedford - PO	\$1,000,000
2020	R&R	3115	WMR- Fore St, Mountfort to Morning, PO	\$1,000,000
2020	Bond	3117	WMR -College Street, School to Husky Drive -GO	\$750,000
2020	Bond	3118	WMR - Veranda Street Wordsworth to Martin Pt. - PO	\$500,000
2020	Bond	3219	WMR – Pearl Street, Commercial to Congress- PO	\$350,000
2020	Bond	3220	WMR- Mosher Rd- Little River Bridge - GO	\$200,000
2020	Bond	3221	WMR – Warren Ave- New Turnpike Crossing - PO	\$600,000
2020	Bond	3222	WMR – Tuttle Road, Culvert at Harris Road – CU	\$100,000
2020	Bond	3121	WMR- Various Main Replacements - Operations	\$500,000
2021	Bond	3121	WMR- Various Main Replacements	\$7,000,000
2022	Bond	3121	WMR- Various Main Replacements	\$7,000,000
2023	Bond	3121	WMR- Various Main Replacement s	\$7,000,000
2024	Bond	3121	WMR- Various Main Replacements	\$7,000,000
Total Cost, All Years				\$28,000,000

Subprogram # 43 Water Main Replacement (continued)

Water Main Replacement Projects - 2020	Districts	CIP Budget	Pipe Footage		Contracting Partnering Agency
		Estimated	Installed	Price/Ft	
Walton, Canco to Ocean and Mackworth, Ocean to Clifton, Irving, Sawyer	PO	\$ 2,000,000	5600	\$ 357	PO CSO
Brighton Ave/ Deering /Falmouth/ Bedford - roundabout	PO	\$ 1,000,000	2400	\$ 417	PACTS
Fore Street, Mountfort to Morning Ave	PO	\$ 1,200,000	3000	\$ 400	PO CSO
Warren Ave- Turnpike Crossing	PO	\$ 600,000	1700	\$ 353	MTA/PO
Veranda Street Wordsworth to Martin Pt. 1928	PO	\$ 500,000	1600	\$ 313	Portland/MDOT
Pearl Street, Commercial to Congress	PO	\$ 400,000	1000	\$ 400	PO CSO
Mosher Road - Little River Bridge replacement project - Gorham	GO	\$ 200,000	400	\$ 500	MDOT
College Street, School to Husky Drive, Academy	GO	\$ 750,000	2000	\$ 375	Gorham
Tuttle Road, Cumberland - Culvert at Harris Road	CU	\$ 100,000	400	\$ 250	MDOT
Water Main Replacement Projects - Operations		\$ 500,000	1500	\$ 333	
Depot Street, 202 to River Road (high system connector 407 zone) *	WI	\$ 1,000,000	2600	\$ 385	Windham
*includes \$7,000,000 from Subprogram 43 and \$1,000,000 from Subprogram 307		\$8,000,000			

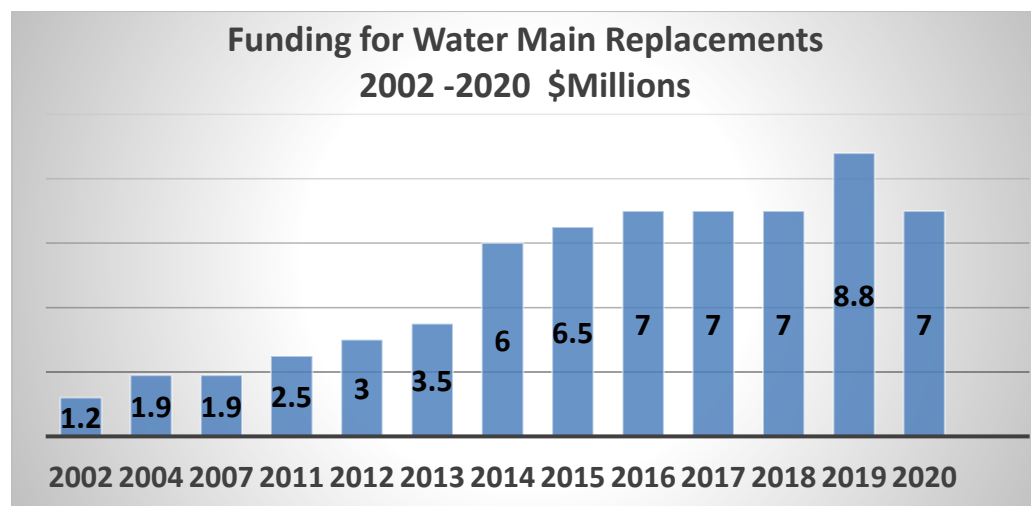


City of Portland – CSO Storm Water Separation Project – Mackworth Basin



The following old water mains will be replaced in conjunction with the City of Portland Combined Sewer Overflow (CSO) storm separation project.

- Walton Street, Canco to Ocean Ave. - 1600 feet of 6" 1888 cast iron
- Ocean Ave Walton to Forest- 2200 feet of 12", 1911 cast iron (1 leak)
- Mackworth St. – Ocean to Clifton – 1300 feet of 6" 1932 cast iron (6 leaks)
- Irving Street – Ocean to Bryant – 600 feet of 6" 1914 cast iron
- ~~Hersey Street – Ocean to Clifton – 1500 feet of 6" 1931 cast iron (5 leaks)~~ (removed from project)
- Sawyer Street – Ocean to Irving – 700 feet of 6" 1914 cast iron



Subprogram # 53 **Water Valve Replacement**

Division: Water - General
Funding: R & R - Water - Div. 20

Manager: Wallace, Jim
Priority: Routine replacement

Description:

Replacement of deteriorated valves in the distribution system.

Justification / Impact:

Replacement is determined and prioritized through data and workorders generated from our Distribution Valve Operation Program, Inspectors Valve Operation Reports, Leak Reports, Flushing Program Data, and the Distribution Maintenance Crews.

History:

Internal inspection of valves replaced has shown decay of the discs and spreaders which render the valves non-operational and ineffective in isolating a section of the distribution system. External inspection has shown corrosion of nuts and bolts, corroded operating nuts, and bent operating stems. Repacking and rebolting these valves has only provided a costly and temporary solution to the external portion of the valve. Replacement insures the valve will be up to standard and operational for many years to come with no required maintenance.



Origin of the Subprogram:

Our target is to replace 50 (+ or -) valves per year.

Budget Summary:

Budget year	Project	Budget Year Cost
2020 - R&R	3087 Replace Distribution Valves	\$200,000
2021 - R&R	3087 Replace Distribution Valves	\$200,000
2022 - R&R	3087 Replace Distribution Valves	\$200,000
2023 - R&R	3087 Replace Distribution Valves	\$200,000
2024 - R&R	3087 Replace Distribution Valves	\$200,000
Total Cost, All Years:		\$1,000,000

Previous Years on CIP: All

Related Projects:

Procurement Issues: Work is to be performed using District Staff, equipment, and materials.

Subprogram # 56**Water Main Renewal - Seasonal Mains****Division:** Water - General**Manager:** Wallace, Jim**Funding:** R & R – Water- Div. 20**Priority:** Routine replacement**Description:**

This portion of the Water Main Renewal Program is to replace depreciated Seasonal Surface mains with new Seasonal Surface mains. Approximately 2000 to 3000 feet of main are included annually in this general program.

Justification / Impact:

This program improves customer satisfaction with improved water flow and quality and reduces maintenance costs via new leak free materials.

History:

This is a long term program in which old galvanized seasonal water mains with capacity, water quality or maintenance problems are replaced on an as-needed basis.

Origin of the Subprogram:

Projects are initiated by monitoring customer complaints and leakage problems. When consistent problems are identified, the main is scheduled for replacement.

Budget Summary:

Budget year	Project	Budget Year Cost
2020 - R&R	3077 Water Main Replacement - Seasonal Mains	\$25,000
2021 - R&R	3077 Water Main Replacement - Seasonal Mains	\$25,000
2022 - R&R	3077 Water Main Replacement - Seasonal Mains	\$25,000
2023 - R&R	3077 Water Main Replacement - Seasonal Mains	\$25,000
2024 - R&R	3077 Water Main Replacement - Seasonal Mains	\$25,000
Total Cost, All Years:		\$125,000

Previous Years on CIP: All**Related Projects:****Procurement Issues:** This work is accomplished by District Staff, equipment and material.

Subprogram # 61 Water Services - Renew Domestic & Fire

Division: Water - General

Manager: Wallace, Jim

Funding: R & R – Water- Div. 20

Priority: Routine replacement

Description:

Replace obsolete galvanized, cast iron, cement lined iron, and 50 year old copper services with current materials and sized for future conditions.

Justification / Impact:

Replacement is determined and prioritized by water quality concerns, leaking conditions, street reconditioning, distribution main replacement, and area/report analysis through District Data. This Project is also coordinated with the various municipal paving projects in order to minimize future inflated municipal street opening costs and repairs.

History:

Galvanized and cast iron were common materials used in the installation of services from the early 1900s to the late 1940s. Copper was also used starting in the 1930s. The relatively inferior material of galvanized and cast iron are subject to rust related water quality and restricted flow problems from plugging as well as leak frequency from deterioration and corrosion. Older copper lines (50 years old + or -) are starting to show signs of leak failures from the old tube nut fittings used to couple fittings together. From a cost and end product comparison it is more efficient to replace than repair. The District has a long term program to replace and upgrade all sub standard services.

Origin of the Subprogram:

There are approximately 1,000 (1/2" to 2" size) galvanized, cement lined iron, and cast iron domestic services, and an additional 11,000 copper services installed prior to 1950. We also have 260 cast iron services installed prior to 1950. Our goal is to replace at least 300 services per year.

Budget Summary:

Budget year	Project	Budget Year Cost
2020 - R&R	3082 Water Services Replacement	\$600,000
2021 - R&R	3082 Water Services Replacement	\$600,000
2022 - R&R	3082 Water Services Replacement	\$600,000
2023 - R&R	3082 Water Services Replacement	\$600,000
2024 - R&R	3082 Water Services Replacement	\$600,000
Total Cost, All Years:		\$3,000,000

Previous Years on CIP:

All

Related Projects:

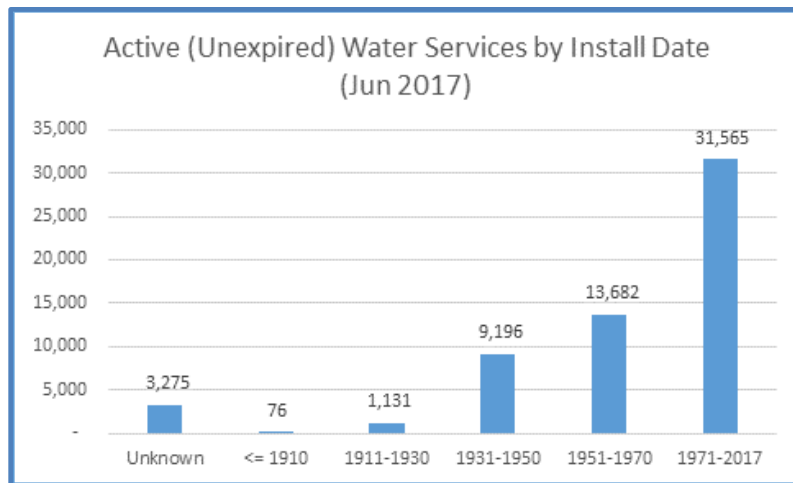
Procurement Issues:

Project to be performed using District Staff, equipment, and materials and contracted through our main replacement projects.

Subprogram # 61**Water Services - Renew Domestic & Fire****Active (Unexpired) Water Services by Install Date**

Install Date	# Services	%
Unknown	3,275	5.9%
<= 1910	76	0.1%
1911-1930	1,131	2.0%
1931-1950	9,196	16.5%
1951-1970	13,682	24.6%
1971-2017	31,565	56.7%

Total **55,650**



Subprogram # 65 Water Hydrants Replacement

Division: Water - General
Funding: R & R – Water – Div. 20

Manager: Wallace, Jim
Priority: Routine replacement

Description:

Replace and upgrade obsolete hydrants to meet current safety and operational standards, and to insure inventory parts availability for hydrant repairs.

Justification / Impact:

Replacement is determined and prioritized by: (1) hydrant failures (major damage and/or external leak,) (2) upgrade and replacement of obsolete sub standard hydrants based on (age - safety standards - repair parts availability - cost comparison to replace or repair,) (3) distribution main replacement program, (4) municipal and state reconstruction projects and (5) data gathered from the Hydrant Repair and Reconditioning Programs and the Winter Hydrant Inspection Program.



History:

The O&M Hydrant Repair/Reconditioning Programs and the Hydrant Winter Inspection Programs have been in place since the early 60s. These programs insure that our hydrants meet fire protection standards and provide direction for our C. I. P. Replacement Program. In recent times the ability to procure replacement parts for the 620 Matthews Post hydrants (Vintage late 1800s to the late 1940s) has become difficult or impossible. The 870 Darling B-50 hydrants (vintage early 1950s to early 1960s) require major internal rebuilding. Both hydrant makes are not traffic model hydrants and fail to have a sheer point to breakaway on impact. This failure results in costly repairs and replacements, and is unsafe in many highway standards (Deadly-Fixed-Objects Regulation).

Origin of the Subprogram:

Our project is focused on replacing and upgrading 75 hydrants per year over a twenty year replacement program of 1450 hydrants.

Budget Summary:

<u>Budget year</u>		<u>Project</u>	<u>Budget Year Cost</u>
2020 - R&R	3072	Hydrant Replacement	\$200,000
2021 - R&R	3072	Hydrant Replacement	\$200,000
2022 - R&R	3072	Hydrant Replacement	\$200,000
2023 - R&R	3072	Hydrant Replacement	\$200,000
2024 - R&R	3072	Hydrant Replacement	\$200,000
Total Cost, All Years:			\$1,000,000

Previous Years on CIP: All

Related Projects:

Procurement Issues: Project is performed using District staff, equipment, and materials.

Subprogram # 122**Water Facilities Renewal and Replacement****Division:** Water - General**Manager:** Wallace, Jim**Funding:** R & R – Water- Div. 20**Priority:** Routine replacement**Description:**

This is an ongoing project designed to maintain and improve water pump stations, treatment facilities and related infrastructure. Modifications and upgrades will ensure adequate capacity, reliability and safety of these facilities.

Justification / Impact:

Components of the older pump stations that have reached their useful life and obsolete equipment should be replaced. Replacing this equipment before it fails completely reduces the amount spent on operating and maintaining the equipment.

History:

This planned renewal and replacement will assist operations in moving toward a goal of performing more predictive and preventive maintenance instead of emergency maintenance.

Origin of the Subprogram:**Budget Summary:**

Budget Year			Project	Budget Year Cost
2020	R&R	3008	Steep Falls Finished Water Piping Replacement	\$125,000
2020	R&R	3032	Water Facilities R&R	\$ 50,000
2020	R&R	3033	Ozone Generator Cooling - Auto Temp Control	\$115,000
2021	R&R	3032	Water Facilities R&R	\$100,000
2022	R&R	3032	Water Facilities R&R	\$100,000
2022	R&R	3210	Chemical Storage Facilities Upgrades	\$300,000
2023	R&R	3032	Water Facilities R&R	\$100,000
2024	R&R	3032	Water Facilities R&R	\$100,000
2024	Bond	3211	Windham Pump Upgrades	\$350,000
			Total Cost, All Years	\$1,340,000

Previous Years on CIP:

2007 to present



2019 CIP -Upgraded SLWTF Standby Generator to meet DEP standard for use in Real-Time Demand Response Program

Subprogram # 18 SLWTF Intakes - Replace Mechanical Screens

Division: Water - General

Manager: Johnson, Gordon

Funding: Bonds - Water- Div. 20

Priority: Routine replacement

Description:

This project involves selecting and installing a screen system to replace the existing screens in service at the intakes on Sebago Lake. The present systems use two travelling screens with backwash at each location with three sets of hand screens at the 1925 Intake and two sets of hand screens at the 1952 Intake.

Justification / Impact:

The existing equipment is approaching 50 years old and is basically worn out. The new equipment will be chosen to automate the screening process as much as possible to minimize operator time and reduce/prevent fish breakthrough.

History:

The intake screens were supposed to be retired after SLWTF start-up. Manual screens, designed for the inlet channel of the ozone contactor, were supposed to replace the need for the ones at the intakes. Unfortunately, a method for washing the screens was not designed into the facility. Many attempts were made to use the inlet screens before deciding to continue the use of the intake screens.

Origin of the Subprogram:

The hand and travelling screens at the intake buildings were installed in the early 1950's. They are past their expected lifespan. Present washing procedures are labor intensive, requiring nine to fifteen labor hours per week. We have experienced small fish getting by the screens and showing up in the clearwell. The ozone and chlorination process kills the fish, but we do not want to let them escape into the system.

Budget Summary:

<u>Budget year</u>	<u>Project</u>	<u>Budget Year Cost</u>
2021 - Bond 3007	Replace Mechanical Screens	\$3,500,000
Total Cost, All Years:		\$3,500,000

Previous Years on CIP: 1998 to present

Related Projects:

Procurement Issues: Internal engineering services followed by competitive proposals for purchase and installation.

Subprogram # 203 Water Storage Facility Maintenance & Upgrade

Division: Water - General

Manager: Johnson, Gordon

Funding: R & R - Water - Div. 20

Priority: Routine replacement

Description:

This project consists of developing a maintenance program. Maintenance that may be necessary includes leak repair, painting, inside liners, base and/or cover needs. Once this work is complete, a multi-year program of maintenance contracts will be implemented to upgrade individual facilities. In some facilities, recirculation systems to routinely turn over the water in the tank and/or new altitude valves will be installed.

Justification / Impact:

Basic maintenance to preserve and prolong the useful life of needed facilities. Prevent water quality problems due to corrosion and from water stagnating in the tank.

History:

Several steel standpipes and elevated tanks have been removed over the last decade. Those that remain will be evaluated for their hydraulic value and water quality impact in the Comprehensive Water System Strategic Plan. Those that are considered to be valuable hydraulic assets to the water system will be upgraded via this ongoing program.

Origin of the Subprogram:

Maintenance has been deferred for several years pending completion of a hydraulic study to determine which tanks still have hydraulic value.

Budget Summary:

Budget year	Project	Budget Year Cost
2020 - R&R	3102 Water Tank Maintenance	\$ 50,000
2021 - R&R	3102 Water Tank Maintenance	\$ 25,000
2021 - Bond	3104 Water Tank Maintenance: Gorham Tank	\$450,000
2022 - R&R	3102 Water Tank Maintenance	\$ 50,000
2023 - R&R	3102 Water Tank Maintenance	\$ 50,000
2024 - R&R	3102 Water Tank Maintenance	\$ 50,000
Total Cost, All Years:		\$675,000

Previous Years on CIP:

Since 2000

Procurement Issues:

RFP preparation and contract administration will be by District Staff.
Maintenance and repair services will be competitively bid.

Subprogram # 46**Water System Security****Division:** Water - General**Funding:** R & R – Water – Div.20**Manager:** Wallace, Jim**Priority:** Security of facilities**Description:**

This program is to improve the physical security of the District's water facilities. The program supports installing and upgrading security measures on District property and facilities. These measures include perimeter fencing, signage, access control, cyber keys and locks, video surveillance and monitoring, security lighting and improved SCADA monitoring.

Justification / Impact:

The District has performed two Vulnerability Assessments (2003, 2015) and has been following the recommendations from these reports.

History:

In the fall of 2004 and summer of 2005 fencing was installed on the East and West side of the lower bay inside the 2 mile limit. This was funded through the CIP. In 2005 hatch covers along with alarms were installed over tank hatches and a cyberlock system was installed on all SCADA panels. This was funded by a grant from MEMA - Homeland Security. In subsequent years video surveillance and access control were expanded to all major facilities across the District along with continued improvements to perimeter fencing and access control.

**Origin of the Subprogram:**

The vulnerability assessment completed in March of 2003 indicated that physical protection of existing facilities could be improved. Many of those recommendations were completed and a new Vulnerability Assessment was completed in 2015 and new recommendations are now determining the water system security improvements.

Budget Summary:

Budget year	Project	Budget Year Cost
2020 - R&R	3097 Water System Security Improvements	\$25,000
2021 - R&R	3097 Water System Security Improvements	\$25,000
2022 - R&R	3097 Water System Security Improvements	\$25,000
2023 - R&R	3097 Water System Security Improvements	\$25,000
2024 - R&R	3097 Water System Security Improvements	\$25,000
Total Cost, All Years:		\$125,000

Previous Years on CIP: 2004 to present

Related Projects:

Procurement Issues: Standard purchasing procedures will apply.

Cape Elizabeth Wastewater

Cape Elizabeth – Wastewater Treatment Facilities

In response to a regulatory requirement to eliminate bypassing of flows during periods of wet weather, upgrades were completed in 2012 to increase the peak flow capacity of the facility. These upgrades included new influent screening, high flow and low flow return sludge pumps, upsizing a portion of the secondary clarifier effluent piping, and new effluent pumps. Recent engineering evaluations include assessments of the aeration and secondary clarifier structures, disinfection systems, and HVAC equipment. Upgrades recently completed or ongoing include:

- Influent alkalinity metering system for enhanced buffering capacity and activated sludge stability
- Heating and ventilation system to serve the headworks and sludge thickening areas (ongoing)
- Replacement of the chlorine and sodium bisulfite chemical disinfection systems with Ultraviolet Disinfection (ongoing)

UV Disinfection System Project – 2018 CIP 424, project 2701 - Construction of the upgrade will be completed by Spring 2020.



Cape Elizabeth – Sewer System

The current CSO Master Plan identifies reduction of CSO volume through infiltration/inflow (I/I) reduction within the Town's and City of South Portland's collection systems and improvements to the Ottawa Road Pump Station. The Town of Cape Elizabeth completed a project that installed new storm drains and helped remove private I/I from residential homes. South Portland has also done work removing catch basins from the sewer system and installing storm drains. PWD work is underway with improvements to the Ottawa Road Pump Station including upgrades to standby power, flow measurement, and pumping.

CCTV assessment of the collection system is ongoing as part of the District's 10 year program to inspect its entire collection system.

Cape Elizabeth - Pump Stations

The District has continued with the installation of standby power generators at key pump stations. These generators enable systems to operate during the frequent power outages that occur in Cape Elizabeth while reducing manpower during these events. Additionally, automated emergency power goes a long way towards eliminating the occasional back-ups that have occurred within the collection system.

In 2018 CIP an upgrade project was approved for the Family Field (Little John) Pump Station. The District is nearing completion of the detailed design and plans to put the upgrade project out to bid this coming winter for construction in the 2020-2021 season.

Cape Elizabeth Wastewater (continued)

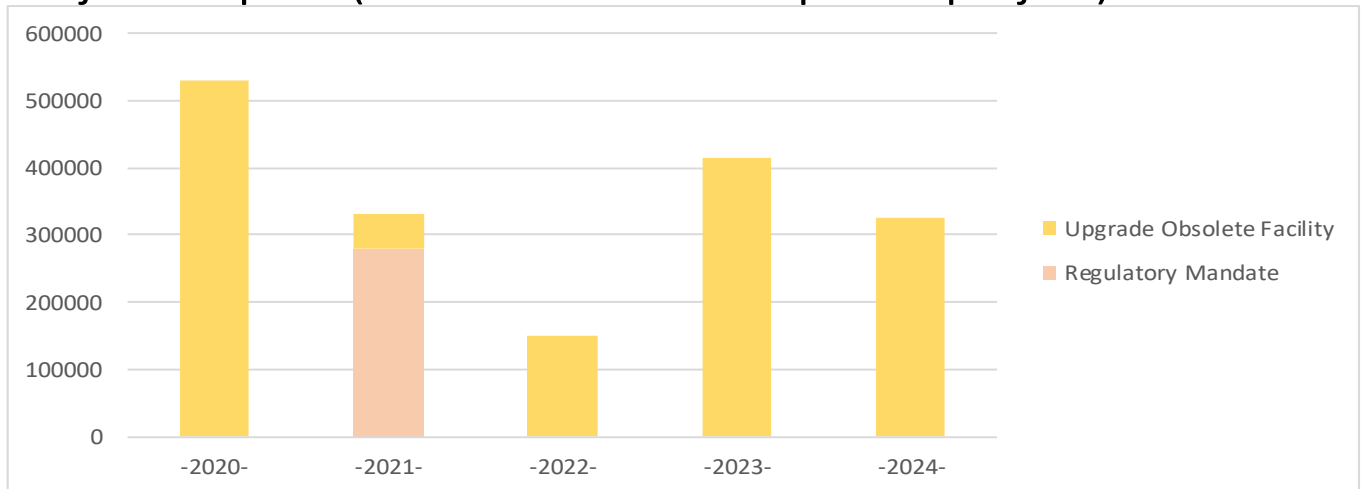
Project by Program and Subprogram/Project Summary

Program	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
WW Collection & Pumping						
52\3002 Maiden Cove PS Upgrades	\$430,000					\$430,000
52\3005 Ottawa Rd PS Upgrades		\$280,000				\$280,000
52\3130 Cape Elizabeth Pump Station	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000
52\3168 Stonegate South Upgrades				\$90,000		\$90,000
52\3169 Algonquin PS Upgrades				\$135,000		\$135,000
52\3170 Peabbles Cove PS Upgrades				\$90,000		\$90,000
WW Collection & Pumping Total	\$455,000	\$305,000	\$25,000	\$340,000	\$25,000	\$1,150,000
WW Treatment						
424\3000 Cape WWTF Process Evaluation	\$50,000					\$50,000
424\3129 Cape Elizabeth WWTF	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000
424\3188 Phase 2 Improvements					\$275,000	\$275,000
424\3189 Boiler Upgrade/Replacement			\$100,000			\$100,000
424\3213 WAS Piping and RDT Drive Upgrade				\$50,000		\$50,000
WW Treatment Total	\$75,000	\$25,000	\$125,000	\$75,000	\$300,000	\$600,000
Grand Total	\$530,000	\$330,000	\$150,000	\$415,000	\$325,000	\$1,750,000

Financing Summary (see table above for specific project)

Funding Source	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Bond General Program	\$430,000	\$280,000		\$315,000	\$275,000	\$1,300,000
Renewal and Replacement	\$100,000	\$50,000	\$150,000	\$100,000	\$50,000	\$450,000
Grand Total	\$530,000	\$330,000	\$150,000	\$415,000	\$325,000	\$1,750,000

Project Purpose (see table above for specific project)



Subprogram # 52**Cape Elizabeth Pump Stations - R&R****Division:** Wastewater - Cape Elizabeth**Manager:** Poulin, Charlene**Funding:** Bond and R&R – Wastewater – Div. 51**Priority:** Routine replacement**Description:**

This program provides a planned approach for the replacement of obsolete equipment in Cape Elizabeth wastewater pump stations.

Justification / Impact:

The pump stations have reached the end of their useful design life and obsolete equipment must be replaced. Upgrades, including the addition of VFD's in some cases, will provide more pumping capacity, mitigate CSO activity, and provide some power savings.

History:

This planned approach will assist maintenance and operations in moving toward a goal of performing more predictive/preventative maintenance instead of emergency maintenance.



Ottawa Road Pump Station – Installed in 1976 – scheduled for upgrade in 2021

Budget Summary:

Budget Year		Project		Cost
2020	Bond	3002	Maiden Cove PS Upgrades	\$ 430,000
2020	R&R	3130	Cape Elizabeth Pump Station R&R	\$ 25,000
2021	Bond	3005	Ottawa Rd PS Upgrades	\$ 280,000
2021	R&R	3130	Cape Elizabeth Pump Station R&R	\$ 25,000
2022	R&R	3130	Cape Elizabeth Pump Station R&R	\$ 25,000
2023	R&R	3130	Cape Elizabeth Pump Station R&R	\$ 25,000
2023	Bond	3168	Stonegate South Upgrades	\$ 90,000
2023	Bond	3169	Algonquin PS Upgrades	\$ 135,000
2023	Bond	3170	Peabbles Cove PS Upgrades	\$ 90,000
2024	R&R	3130	Cape Elizabeth Pump Station R&R	\$ 25,000
Total Cost, All Years				\$ 1,150,000

Previous Years on CIP: 2005 to present

Related Projects: Subprogram #407

Condition Assessment – Cape Elizabeth Pump Stations

2014 Cape Elizabeth Pump Station Report			
Station	Rating	Station Type	Address
Algonquin Pump Station	3.30	Sub Dup	10 Waumbek Road
Birch Knolls	4.00	Sub Sing	19 Birch Knolls
Broad Cove No. Pump Station	3.79	Sub Tri	53 Broad Cove Road
Broad Cove So. Pump Station (2016)	3.15 4.5	Sub Dup	32A Broad Cove Road
Clifford	4.00	Sub Sing	886A Shore Road
Cragmoor North	3.65	Sub Dup	7A Cragmoor
Cragmoor South	3.30	Sub Sing	876A Shore Road
Cross Hill	3.65	Sub Dup	59 Wells Road
Family Field (2018 under design Construction 2020; formerly known as Little John))	2.76	Packaged Dry Pit	7 Little John Road
Garden Ln Pump Station (2014)	5	Sub Dup	5 Garden Lane
Gull Crest - Public Works Building	3.08	Sub Dup	9 Cooper Drive
Gull Crest - Public Works Transfer Station	3.04	Sub Sing	21 Dennison Drive
Hunts Point	3.90	Sub Dup	1A Hunt's Point Road
Maiden Cove Pump Station Postponed until 2020	1.98	Ejection	5 Kenyon Lane
Mitchell Rd Pump Station (2017)	3.16	Sub Dup	468 Mitchell Road
Oakhurst Pump Station	2.94	Sub Dup	123 Oakhurst Road
Ottawa Rd. Pump Station	2.09	Packaged Dry Pit	14 Ottawa Road
Pachios	3.97	Sub Dup	880A Shore Road
Peabbles Cove Pump Station	3.31	Sub Dup	15 Peabbles Cove Road
Peabbles Point Pump Station	2.87	Sub Dup	56 Shipwreck Cove Road
Running Tide Pump Station	3.59	Sub Dup	13A Running Tide Road
Spurwink Pump Station	4.16	Canned	445 Spurwink Ave
Stonegate North (2016)	3.47 4.5	Sub Dup	30 Stonegate Road
Stonegate South	3.04	Sub Dup	8 Stonegate Road
Tall Pines East Pump Station	4.67	Sub Dup	225 Ocean House Road
Tall Pines Pump Station	2.58	Sub Dup	30 Tall Pine Road
Wildwood Pump Station (2015)	2.95 4.5	Sub Dup	34A Wildwood Drive
Cape Elizabeth Average	3.38		
PWD Overall Average (74 Stations)	3.47		

Subprogram # 424**Cape Elizabeth WWTF****Division:** Wastewater - Cape Elizabeth**Manager:** Rodriguez, Paul**Funding:** R & R – Wastewater – Div. 51**Priority:** Routine replacement**Description:**

Provide for plant upgrades required to continue to meet regulatory and operational requirements and for the timely routine replacement of equipment nearing the end of its service life. The plant came online in 1988 along with the Spurwink Pump Station which pumps all of the Southern Cape Elizabeth system's flow to the plant. Treated water is pumped to an outfall located near Peabbles Cove in accordance with the plant's discharge permit which was renewed in December 2016.

**Justification / Impact:**

Physical assets require scheduled maintenance and eventual replacement. Planned upgrades include instrumentation and control in accordance with current industry practice and provide enhanced automation, monitoring and control of the treatment processes. Regulatory requirements are continuously revised and updated by the EPA and administered by the Maine Department of Environmental Protection. This account provides for the equipment replacement and system upgrades necessary to continue to meet regulatory and operational requirements.

History: In response to a regulatory requirement to eliminate bypassing of flows during periods of wet weather, upgrades were completed in 2012 to increase the peak flow capacity of the facility. These upgrades included new influent screening, high flow and low flow return sludge pumps, upsizing a portion of the secondary clarifier effluent piping, and new effluent pumps. Recent engineering evaluations include assessments of the aeration and secondary clarifier structures, disinfection systems, and HVAC equipment. Upgrades recently completed or ongoing include:

- Influent alkalinity metering system for enhanced buffering capacity and activated sludge stability
- Heating and ventilation system to serve the headworks and sludge thickening areas (ongoing)
- Replacement of the chlorine and sodium bisulfite chemical disinfection systems with Ultraviolet Disinfection (ongoing)

Budget Summary:

Budget Year			Project	Cost
2020	R&R	3000	Cape WWTF Process Evaluation	\$ 50,000
2020	R&R	3129	Cape Elizabeth WWTF- R&R	\$ 25,000
2021	R&R	3129	Cape Elizabeth WWTF- R&R	\$ 25,000
2022	R&R	3129	Cape Elizabeth WWTF- R&R	\$ 25,000
2022	R&R	3189	Boiler Upgrade/Replacement	\$ 100,000
2023	R&R	3129	Cape Elizabeth WWTF- R&R	\$ 25,000
2023	Bond	3213	WAS Piping and RDT Drive Upgrade	\$ 50,000
2024	R&R	3129	Cape Elizabeth WWTF- R&R	\$ 25,000
2024	Bond	3188	Phase 2 Improvements	\$ 275,000
Total Cost, All Years				\$ 600,000

Previous Years on CIP:

2006

Cumberland Wastewater

Cumberland – Pump Stations

In 2007, the District completed upgrading the Tuttle Road pump station and the Foreside Road pump station. The Powell Road pump station was completed in 2008. In 2011, the 4th year of CCTV assessment of buried infrastructure was completed. An emergency generator was installed at the Smalls Brook Crossing pump station. This was part of a continued program to install emergency generators at pump stations. In 2014, an assessment of all of the pump stations in the system was completed to assist with prioritization and CIP development. In 2017, the Longmeadow pump station was upgraded including replacement pumps and telemetry panel.

The District and the Town of Cumberland have investigated infiltration and inflow (I/I) sources in the collection system. CCTV work, flow monitoring, and smoke testing are used to identify sources of I/I. The Town of Cumberland, with the District's assistance, also inspect homes in an effort to properly manage sump pumps and other sources of inflow. This project is intended to better understand the peak flows that will be sent to Falmouth for treatment and will possibly impact the capacity and cost of shared infrastructure in Falmouth.

The Town of Falmouth replaced the joint use Mill Creek Pump Station and Force Main, which came online in 2017. Planned improvements to the Cumberland system are shown in CIP subprogram #41.

Cumberland Wastewater (continued)

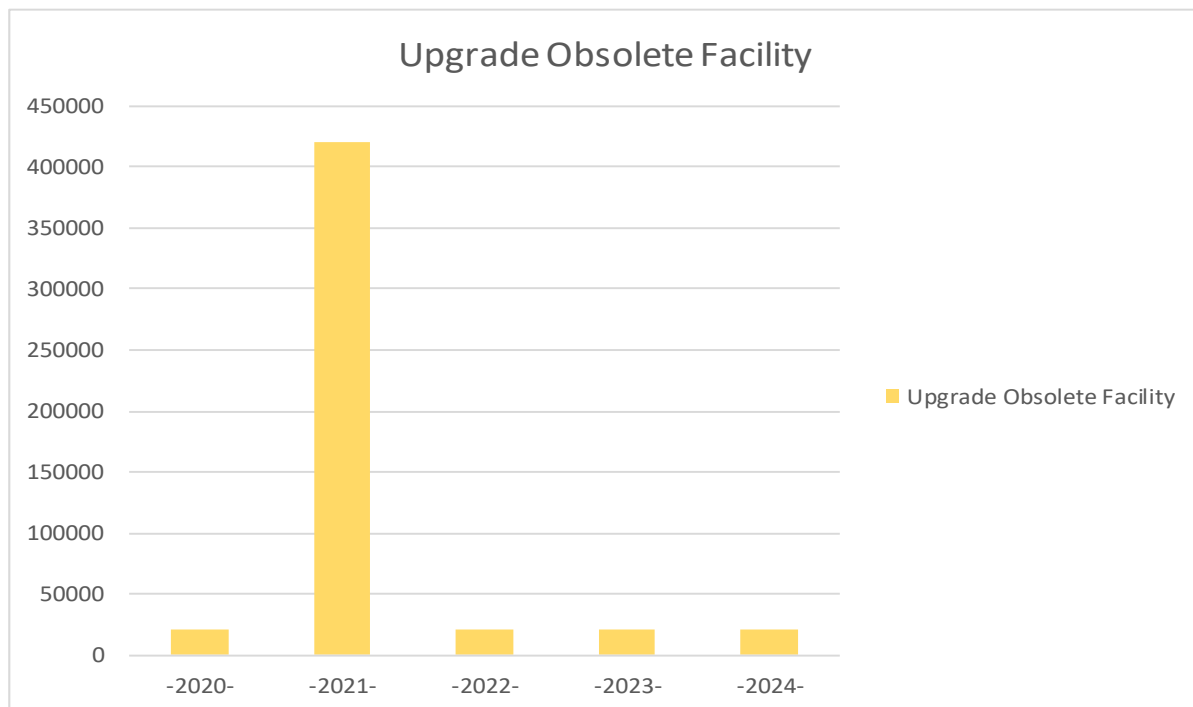
Project by Program and Subprogram/Project Summary

Program	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
WW Collection & Pumping						
41\3136 Cumberland WW Pump Stations	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$100,000
41\3171 Stony Ridge Pump Replacement		\$30,000				\$30,000
41\3172 Ocean Terrace PS Pump Replacement		\$50,000				\$50,000
41\3173 Ferne Lane PS Pump Replacement		\$30,000				\$30,000
41\3174 Ledge Rd PS Upgrades		\$75,000				\$75,000
41\3175 Brookside PS Pump and Electrical		\$35,000				\$35,000
41\3176 Cumberland Meadows PS Upgrades		\$85,000				\$85,000
41\3177 Smalls Brook PS Upgrades		\$95,000				\$95,000
WW Collection & Pumping Total	\$20,000	\$420,000	\$20,000	\$20,000	\$20,000	\$500,000
Grand Total	\$20,000	\$420,000	\$20,000	\$20,000	\$20,000	\$500,000

Financing Summary (see table above for specific project)

Funding Source	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Bond General Program		\$305,000				\$305,000
Renewal and Replacement	\$20,000	\$115,000	\$20,000	\$20,000	\$20,000	\$195,000
Grand Total	\$20,000	\$420,000	\$20,000	\$20,000	\$20,000	\$500,000

Project Purpose (see table above for specific project)



Subprogram # 41**Cumberland WW Pump Stations - R&R****Division:** Wastewater - Cumberland**Manager:** Poulin, Charlene**Funding:** R & R – Wastewater- Div. 60**Priority:** Routine replacement**Description:**

This project provides for continual upgrade of the pumping stations located within the Cumberland wastewater system. In most cases the work involves pump and rail replacements along with control modifications.

Justification / Impact:

Physical assets require scheduled maintenance and eventual replacement. This program will provide a planned approach to the maintenance management of Cumberland's wastewater pump stations.

History:

This planned approach will assist maintenance and operations in moving towards a goal of predictive and preventative maintenance.

Origin of the Subprogram:**Budget Summary:**

Budget year		Project	Cost
2020 - R&R	3136	Cumberland WW Pump Stations - R&R	\$20,000
2021 - R&R	3136	Cumberland WW Pump Stations - R&R	\$20,000
2021 - Bond	3171	Stony Ridge Pump Station Upgrades	\$30,000
2021 - Bond	3172	Ocean Terrace PS Pump Replacement, Bypass	\$50,000
2021 - Bond	3173	Ferne Lane PS Upgrade	\$30,000
2021 - Bond	3174	Ledge Rd PS Upgrades	\$75,000
2021 - Bond	3175	Brookside PS pump and Electrical Upgrades	\$35,000
2021 - Bond	3176	Cumberland Meadows PS Upgrades	\$85,000
2021 - Bond	3177	Smalls Brook PS Upgrades	\$95,000
2022 - R&R	3136	Cumberland WW Pump Stations - R&R	\$20,000
2023 - R&R	3136	Cumberland WW Pump Stations - R&R	\$20,000
2024 - R&R	3136	Cumberland WW Pump Stations - R&R	\$20,000
Total Cost, All Years:			\$500,000

Previous Years on CIP: 2001 to present**Related Projects:****Procurement Issues:** RFP for engineering services. Construction services will be low bid.

Condition Assessment – Cumberland Pump Stations

2014 Cumberland Pump Station Report			
Station	Rating	Station Type	Address
Brookside PS (2015)	3.18 4.5	Sub Dup	14 Brookside Drive
Cumberland Meadows	3.63	Sub Dup	12 Red Mill Way
Drowne Rd.	4.93	Sub Dup	2 Baxter Lane
Fern Ln. PS	3.81	Sub Dup	26 Ferne Lane
Foreside Rd. PS	3.75	Canned	82 Foreside Road
Ledge Rd. PS	3.82	Sub Dup	23 Ledge Road Unit A
Longmeadow Dr. PS (2016)	3.65 4.5	Sub Dup	17 Longmeadow Road
Ocean Terrace PS	3.26	Canned	12 Ocean Terrace
Powell Rd. PS	3.73	Canned	5 Powell Road
Small Brook Crossing	3.43	Sub Dup	18 Crossing Brook Road
Stony Ridge PS	3.60	Sub Dup	29 Stony Ridge Road
Tuttle Rd.	3.80	Canned	229 Tuttle Road
Twin Brook	3.83	Sub Dup	185 Tuttle Road
Cumberland Average	3.72		
PWD Overall Average	3.47		



2016 – Longmeadow P.S. installed in 1983 – condition rating was 3.26 - Upgrades included new SCADA and pump control panels, pumps, valves, and electrical work. New rating is 4.5

Gorham/Westbrook/Windham Wastewater

Westbrook Regional Treatment Plant

Wright-Pierce completed a comprehensive plant evaluation of the Westbrook Regional WWTF in 2001. The plan outlined recommended upgrades to the facility that had been constructed in the late '70s. To date, the District has made improvements to:

- Plant water system (2006)
- Clarifier scum removal (2006)
- Scum handling, and sludge conveyances control (2006)
- Plant electrical system – Standby Generator (2008)
- Polymer system (2010)
- RAS pumps (2011)
- Plant Control System (2013)
- RAS and flow split to the secondary clarifiers (2014)
- Sludge Dewatering (2018)

Proposed major modifications for a headworks upgrade were set aside in favor of installing screens at the two major pump stations feeding the treatment plant. Start-up of these systems at the Cottage Place and East Bridge St. Pump Stations in 2008 successfully eliminated pump plugging and has reduced the quantity of rags at the treatment plant. As part of the aeration and clarifier upgrade design effort, reducing the spacing of the screens at the pump stations is under consideration to provide additional protection for the new equipment and reduce associated maintenance. Also under consideration are alternatives for providing septage screening and handling at the plant.

In 2013, design and replacement of the control system began. This was completed in 2014 along with chemical feed pumps, residual samplers, and enhanced automation of the disinfection system.

The aeration system was evaluated in 2015 to develop a roadmap for the eventual upgrade of the aeration system as it nears the end of its service life, and in light of potential regulatory changes. The recommended upgrades to the aeration system will facilitate process control to maintain dissolved oxygen to meet today's loadings, match current peak demand, and provide more energy efficient oxygen delivery. Similar to the East End plant in Portland, a selector is recommended to enhance process control and improve settleability.

In the summer of 2014, the Department of Environmental Protection requested that treatment plants across the State of Maine complete ambient and treatment plant effluent sampling for nitrogen and phosphorus. The recommended upgrades to the aeration facilities would be incorporated into any additional treatment system upgrades for nutrient removal, should that become necessary in the future; however, the latest permit renewal includes continued sampling and monitoring only.

The secondary clarification process at Westbrook has not been upgraded or modified since its original construction and the sludge withdrawal mechanisms are nearing the end of their useful life based on an assessment of the clarifiers completed in 2016. Design of the aeration and secondary clarification upgrade is underway, targeting spring 2020 for bidding. A CIP project for construction is proposed for consideration this year (CIP #416 project 3023).



Gorham/Westbrook/Windham Wastewater (continued)

In 2015, the District completed an evaluation of sludge dewatering technologies for the Westbrook Regional WWTF, including rehabilitation of the existing belt filter press. Alternative technologies were piloted to quantify the improvement in dewatering performance as compared to the existing equipment. It was determined that alternative technologies would increase the dewatered sludge solids content from an average of approximately 16% to a minimum of 20%, which significantly reduces the volume of sludge to be disposed. This would reduce sludge disposal costs while enhancing flexibility with respect to future sludge disposal alternatives. As a result, in 2016 the proposed belt filter press rehabilitation project (CIP #416 project 2075) was replaced with a proposed upgrade to an alternative technology (CIP #167 project 2534). In 2016, alternative technologies were evaluated and competitively procured through an evaluated bid process that resulted in a recommendation to upgrade to a screw press technology in January of 2017. This project was completed in the spring of 2018 and has been performing well and achieving the target minimum cake solids. In the winter of 2019 the belt filter press equipment was removed and a platform was installed around the screw press to facilitate access for operation and maintenance. Work to remove the belt filter press control panel, which includes a number of hard-wired interconnects with various system components, along with associated control system modifications is scheduled to begin this fall.



2018 CIP 416 project 3027 - Screw Press Access Stair and Platform

Gorham/Westbrook/Windham Wastewater (continued)

Westbrook – Sewer System

In late 2007, the District hired Woodard & Curran, Brown & Caldwell and Jordan Environmental to update the City of Westbrook's CSO Master Plan. This plan was completed and submitted to Maine DEP in 2008. Some of the work included in the plan involved the City, and some involved the District. Because the City operates the collection system, the bulk of the first five years would focus on the removal of infiltration and inflow (I/I) from the City collection system. Later portions of the plan would include storage and other work on District owned assets. Since the plan was updated, all flow from all the CSO outfalls are now continuously monitored.

The plan was updated in 2014 and submitted to the DEP per the State's requirements. The plan included a summary of the work completed in the first 5 years and a revised set of projects and schedule. The projects that involve District facilities are being completed in accordance with the Master Plan and have included several projects to increase the capacity of the interceptor system. The Master Plan includes upgrades and capacity increase at the Dana Court Pump Station (CIP #29 project 2527). This project was substantially completed this summer. The plan also includes the addition of floatables containment at the CSO diversion structure prior to the Cottage Place pump station (CIP #29 project 2524) which is currently underway.

Gorham/Windham – Pump Stations and Collector Systems

In May of 2008, flows from the Town of Windham, the Maine Correctional Center and the Little Falls section of Gorham were re-directed to the Westbrook/Gorham WWTF for treatment. This action led to the closure of two outfalls into the Presumpscot River. This project also led to an upgrade of the Tow Path pump station and the decommissioning of the treatment plant in Little Falls in 2010. Due to the relatively young age of most of Gorham's other pump stations, preventive maintenance, condition assessment through CCTV inspection of buried infrastructure, and minor repairs have been the focus in recent years.

To increase reliability and improve service during power outages, standby generators have been installed at most of the pump stations. In 2014, an assessment of all of the pump stations in the system was completed, and stations with identified needs were then flagged for more detailed investigation. As a result of those studies, upgrades at the Androscoggin PS (CIP #180 project 2317) and Canterbury Pines PS (CIP #60 project 1117) were completed by the end of 2017.

To ensure that accurate wastewater flow is measured and used for allocating operating costs to the Town of Gorham, a flow meter was installed to measure the flow from the Town of Gorham to the Westbrook Gorham Windham WWTF. This meter was installed and is maintained by a third party vendor as part of the District's extensive flow monitoring program.

Gorham/Westbrook/Windham Wastewater (continued)

Gorham, Westbrook and Windham are served by a centralized wastewater treatment plant in Westbrook.

Capital costs are allocated by each municipalities relative design capacity of the specific infrastructure.

Program Summary

Fund(s)	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Gorham Wastewater						
WW Collection & Pumping	\$20,000	\$20,000	\$350,000	\$20,000	\$20,000	\$430,000
Gorham Wastewater Total	\$20,000	\$20,000	\$350,000	\$20,000	\$20,000	\$430,000
Westbrook Wastewater						
WW Collection & Pumping	\$45,000	\$95,000	\$20,000	\$20,000	\$20,000	\$200,000
Westbrook Wastewater Total	\$45,000	\$95,000	\$20,000	\$20,000	\$20,000	\$200,000
Windham Wastewater						
WW Collection & Pumping	\$20,000	\$20,000	\$20,000	\$520,000	\$20,000	\$600,000
Windham Wastewater Total	\$20,000	\$20,000	\$20,000	\$520,000	\$20,000	\$600,000
Gorham/Westbrook/Windham WW						
WW Treatment	\$11,300,000	\$750,000	\$225,000	\$50,000	\$950,000	\$13,275,000
Gorham/Westbrook/Windham WW Total	\$11,300,000	\$750,000	\$225,000	\$50,000	\$950,000	\$13,275,000
Gorham/Windham Wastewater						
WW Collection & Pumping	\$300,000					\$300,000
Gorham/Windham Wastewater Total	\$300,000					\$300,000
Grand Total	\$11,685,000	\$885,000	\$615,000	\$610,000	\$1,010,000	\$14,805,000

Program Summary - Percent Allocated to Each Municipality

Fund(s)	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Gorham Wastewater						
WW Collection & Pumping - Gorham Share	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Westbrook Wastewater						
WW Collection & Pumping -Westbrook Share	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Windham Wastewater						
WW Collection & Pumping -Windham Share	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Gorham/Westbrook/Windham Wastewater						
WW Treatment -Gorham Share	30.8%	30.8%	30.8%	30.8%	30.8%	30.8%
WW Treatment -Westbrook Share	66.6%	66.6%	66.6%	66.6%	66.6%	66.6%
WW Treatment -Windham Share	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
Gorham/Windham Wastewater						
WW Collection & Pumping -Gorham Share	69.0%	69.0%	69.0%	69.0%	69.0%	69.0%
WW Collection & Pumping -Windham Share	31.0%	31.0%	31.0%	31.0%	31.0%	31.0%

Program Summary - Percent Allocated to Each Municipality

Fund(s)	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Gorham Wastewater						
WW Collection & Pumping - Gorham Share	\$20,000	\$20,000	\$350,000	\$20,000	\$20,000	\$430,000
Westbrook Wastewater						
WW Collection & Pumping -Westbrook Share	\$45,000	\$95,000	\$20,000	\$20,000	\$20,000	\$200,000
Windham Wastewater						
WW Collection & Pumping -Windham Share	\$20,000	\$20,000	\$20,000	\$520,000	\$20,000	\$600,000
Gorham/Westbrook/Windham WW						
WW Treatment -Gorham Share	\$3,480,400	\$231,000	\$69,300	\$15,400	\$292,600	\$4,088,700
WW Treatment -Westbrook Share	\$7,525,800	\$499,500	\$149,850	\$33,300	\$632,700	\$8,841,150
WW Treatment -Windham Share	\$293,800	\$19,500	\$5,850	\$1,300	\$24,700	\$345,150
Gorham/Westbrook/Windham WW Total	\$11,300,000	\$750,000	\$225,000	\$ 50,000	\$ 950,000	\$13,275,000
Gorham/Windham Wastewater						
WW Collection & Pumping -Gorham Share	\$207,000	\$0	\$0	\$0	\$0	\$207,000
WW Collection & Pumping -Windham Share	\$93,000	\$0	\$0	\$0	\$0	\$93,000
Gorham/Windham Wastewater Total	\$300,000	\$1	\$0	\$0	\$0	\$300,000

Gorham/Westbrook/Windham Wastewater (continued)

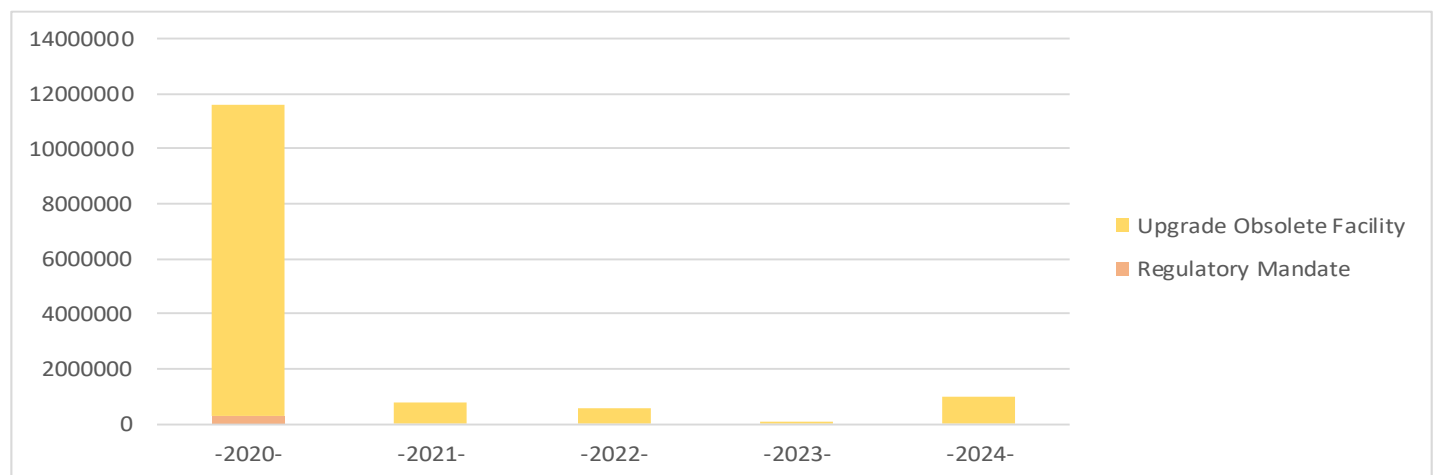
Project by Program and Subprogram/Project Summary

Program	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
WW Collection & Pumping						
180\3138 Windham- Little Falls WW System	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$100,000
181\3139 Windham - Depot Street Pump Station				\$500,000		\$500,000
29\3163 CSO Master Plan Update		\$75,000				\$75,000
29\3164 Modeling Update	\$25,000					\$25,000
411\3134 Westbrook WW Systems R&R	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$100,000
60\3137 Gorham WW Pump Station - R&R	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$100,000
60\3178 Gateway Commons PS Upgrades			\$85,000			\$85,000
60\3179 Park South PS Upgrades			\$95,000			\$95,000
60\3180 Briarwood PS Telemetry Upgrade			\$75,000			\$75,000
60\3181 Meadowland PS Telemetry Upgrade			\$75,000			\$75,000
60\3212 Little River Bridge Forcemain	\$300,000					\$300,000
WW Collection & Pumping Total	\$385,000	\$135,000	\$390,000	\$560,000	\$60,000	\$1,530,000
WW Treatment						
416\3023 Aeration and Secondary Clarifiers	\$11,250,000					\$11,250,000
416\3132 Westbrook Gorham Windham WWTF	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000
416\3159 Plant Water System Rehab/Controls			\$75,000			\$75,000
416\3160 Influent/Septage Screening		\$700,000				\$700,000
416\3166 Process Area Ventilation Upgrades					\$750,000	\$750,000
416\3190 Access Road and Parking Lot			\$100,000			\$100,000
416\3191 TWAS Mixer Replacement					\$150,000	\$150,000
WW Treatment Total	\$11,300,000	\$750,000	\$225,000	\$50,000	\$950,000	\$13,275,000
Grand Total	\$11,685,000	\$885,000	\$615,000	\$610,000	\$1,010,000	\$14,805,000

Financing Summary (see table on above for specific project)

Funding Source	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Bond General Program				\$500,000		\$500,000
Bond State Revolving Loan	\$11,250,000					\$11,250,000
Renewal and Replacement	\$435,000	\$885,000	\$615,000	\$110,000	\$1,010,000	\$3,055,000
Grand Total	\$11,685,000	\$885,000	\$615,000	\$610,000	\$1,010,000	\$14,805,000

Project Purpose (see table on above for specific project)



Subprogram # 180**Windham - Little Falls WW System****Division:** Wastewater - Windham Little Falls**Manager:** Poulin, Charlene**Funding:** Bonds, R&R – Wastewater – Div. 55**Priority:** Routine replacement**Description:**

This program provides for a planned approach to the replacement of obsolete equipment for the Windham-Little Falls wastewater pump stations. Few improvements had taken place during the first 25 -years of operation. The scope of this program is based on the amount of required maintenance and current performance of the existing infrastructure. The scope includes complete replacement of drives, motors, pumps, controls and other major equipment to ensure operational reliability of the pump stations.

Justification / Impact:

When pump stations have reached the end of their useful design life (typically 20-years) obsolete equipment should be replaced. These improvements will ensure the pump stations continue to deliver adequate flows to the WWTP with increased reliability. Additionally, these needed improvements will allow for a Preventative Maintenance plan that will keep the pump stations operating at the design level well into the life of the upgrade.

History:

The original Windham-Little Falls waste water system was built in 1987. The original system included two pump stations. These two pump stations were to be replaced with a single new pump station as part of the 2008 redevelopment of the Keddy Mill site. This project was never completed and the existing pump stations are now more than 25-years old.

Origin of the Subprogram:**Budget Summary:**

Budget year		Project	Budget Year Cost
2019 - R&R	3138	Windham - Little Falls WW System R&R	\$ 20,000
2019 - Bond	3139	Depot Street Pump Station - Phase 1	\$560,000
2020 - R&R	3138	Windham - Little Falls WW System R&R	\$ 20,000
2021 - R&R	3138	Windham - Little Falls WW System R&R	\$ 20,000
2022 - R&R	3138	Windham - Little Falls WW System R&R	\$ 20,000
2023 - R&R	3138	Windham - Little Falls WW System R&R	\$ 20,000
2023 - Bond	3139	Depot Street Pump Station - Phase 2	\$500,000
Total Cost, All Years:			\$1,160,000

Previous Years on CIP:

2000 to present

Related Projects:

Subprogram #181

Procurement Issues:

Engineering and contracting will be via standard competitive retention procedures.

Subprogram # 180**Windham - Little Falls WW System**

The Depot Street Project will be in conjunction with the District replacing water mains on Depot Street and installing a 407- zone transmission main.



Subprogram # 29**Westbrook CSO Abatement****Division:** Wastewater - Westbrook**Manager:** Poulin, Charlene**Funding:** R&R – Wastewater – Div. 62**Priority:** Regulatory mandate**Description:**

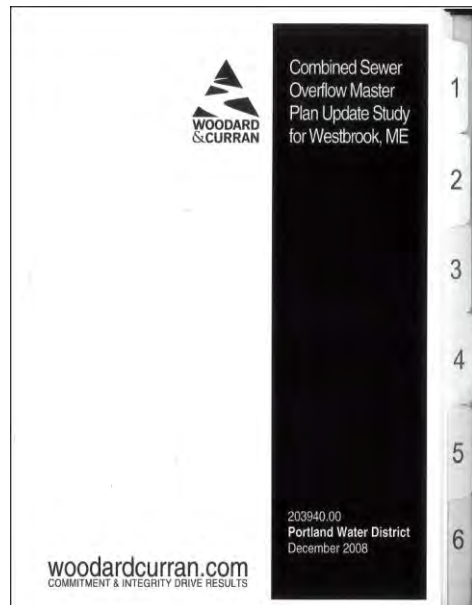
This project contemplates funding and programming the design and construction of projects recommended in a study that was completed by Woodard & Curran and Brown & Caldwell. The purpose of the study was to update the Westbrook CSO Master Plan.

Justification / Impact:

The District, City of Westbrook and the DEP agreed that an upgrade to the existing CSO Master Plan was favored over work previously scheduled for the sewer between Brown and King Streets. The Westbrook/Gorham WWTF license was renewed in 2006. Written into the new license was a requirement for the District to submit a CSO Master Plan update and abatement schedule on or before December 31, 2008. This was completed on time and submitted to DEP for their approval.

History:

King Street/Brown Street sewer work was put aside in lieu of updating the Westbrook CSO Master Plan. Project awarded to Woodard and Curran/Brown and Caldwell. Updated Master Plan due on or before 12/31/08 for Department review and approval.

Origin of the Subprogram:**Budget Summary:**

Budget year			Project	Budget Year Cost
2020	R&R	3164	Modeling Update	\$ 25,000
2022	R&R	3163	CSO Master Plan Update	\$ 75,000
PEND		2522	Construction of New Storage Facility	\$3,200,000
Total Cost, All Years:				\$3,300,000

Previous Years on CIP: 2000 to present**Related Projects:****Procurement Issues:****Weir at Warren Ave CSO**

Subprogram # 411**Westbrook WW Systems R&R****Division:** Wastewater - Westbrook**Manager:** Poulin, Charlene**Funding:** R&R - Wastewater – Div. 62**Priority:** Routine replacement**Description:**

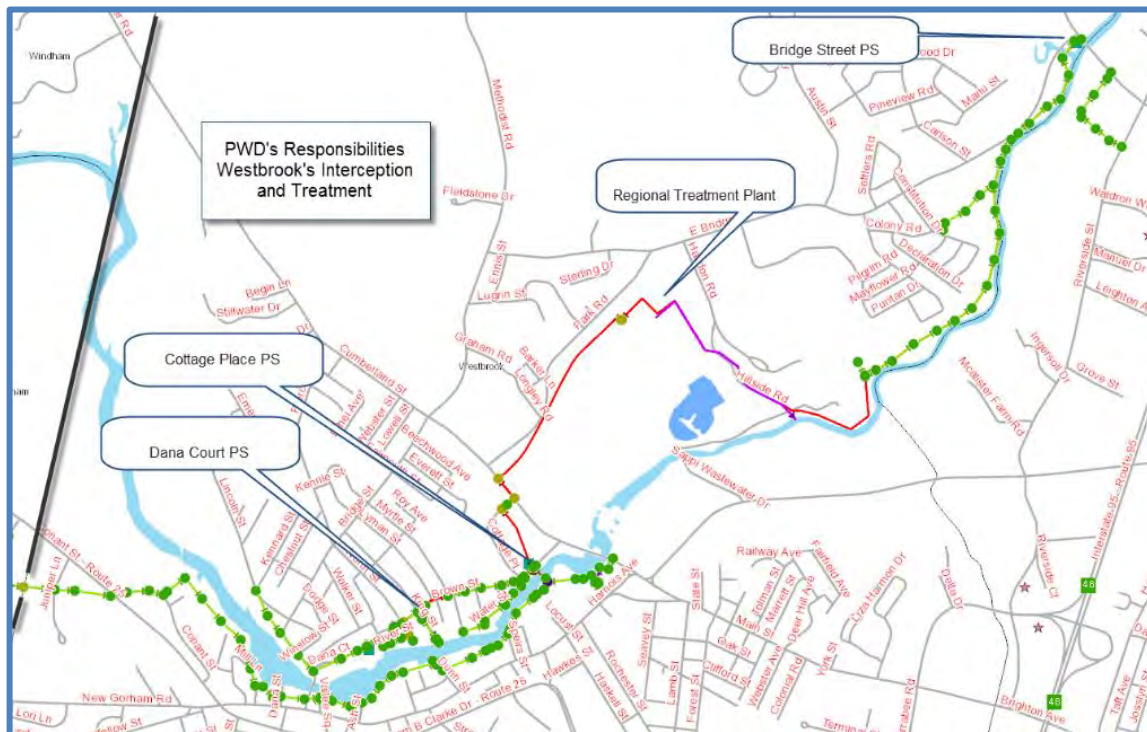
This project provides for the timely renewal of equipment associated with pump stations and the purchase of monitoring equipment for the interceptor system. Major pump stations have been recently upgraded but funds need to be available for replacement parts when necessary.

Justification / Impact:

An on-going study to upgrade the Westbrook CSO Master Plan will be complemented with the addition of a portable flow monitoring device. The Dana Court pump station has yet to be upgraded and funds are required to assure continued operation.

Budget Summary:

<u>Budget year</u>	<u>Project</u>	<u>Budget Year Cost</u>
2020 - R&R	3134 Westbrook WW Systems R&R	\$20,000
2021 - R&R	3134 Westbrook WW Systems R&R	\$20,000
2022 - R&R	3134 Westbrook WW Systems R&R	\$20,000
2023 - R&R	3134 Westbrook WW Systems R&R	\$20,000
2024 - R&R	3134 Westbrook WW Systems R&R	\$20,000
Total Cost, All Years:		\$100,000



Subprogram # 60**Gorham WW Pump Stations - R&R****Division:** Wastewater - Gorham Village**Manager:** Poulin, Charlene**Funding:** Bond and R&R – Wastewater – Div. 61**Priority:** Routine replacement**Description:**

This is an ongoing project designed to maintain and improve Gorham wastewater pump stations. Modifications and upgrades will ensure adequate capacity, reliability and safety.

Justification / Impact:

Components of the older pump stations have reached their useful life and obsolete equipment should be replaced. Replacing this equipment before it fails completely reduces the amount spent on operating and maintaining the equipment.

History:

This planned renewal and replacement will assist operations in moving toward a goal of performing more predictive and preventive maintenance instead of emergency maintenance.

Budget Summary:

Budget year	Project	Budget Year Cost
2020 – R&R	3212 Little River Bridge Replacment – Force Main	\$300,000
2020 - R&R	3137 Gorham WW Pump Stations - R&R	\$20,000
2021 - R&R	3137 Gorham WW Pump Stations - R&R	\$20,000
2022 - R&R	3137 Gorham WW Pump Stations - R&R	\$20,000
2022 - Bond	3178 Gateway Commons PS Upgrades	\$85,000
2022 - Bond	3179 Park South PS Upgrades	\$95,000
2022 - Bond	3180 Briarwood PS Upgrades	\$75,000
2022 - Bond	3181 Meadowland PS Upgrades	\$75,000
2023 - Bond	3137 Gorham WW Pump Stations - R&R	\$20,000
2024 - R&R	3137 Gorham WW Pump Stations - R&R	\$20,000
Total Cost, All Years:		\$730,000

Previous Years on CIP: 2000 - present**Related Projects:****Procurement Issues:** Primarily staff labor for installation using standard parts procured competitively.

Condition Assessment – Gorham Pump Stations

<u>2014 Gorham Pump Station Report</u>			
Station	Rating	Station Type	Address
Briarwood	3.78	Sub Dup	62 Briarwood Lane
Canterbury Pines	3.54	Sub Dup	14 Canterbury Pines Drive
Gateway Commons	3.83	Sub Dup	57 Clearview Drive
Glenwood Ave	3.59	Sub Dup	21 Glenwood Ave
Heartwood	3.81	Sub Dup	18 Caitlin Drive
Little River	4.08	Sub Dup	240B Mosher Road
Mallison	4.06	Sub Dup	35 Mallison Street
Meadowland Condo	3.72	Sub Dup	33A Joseph Drive
Old Dynamite	4.96	Sub Dup	14 Old Dynamite Way
Olde Canal	4.03	Sub Dup	338 Mosher Road
Park South Condo	3.98	Sub Dup	16 Kiara Lane
Running Spring/Southwoods	3.63	Sub Dup	50 Running Springs Road
Tink Drive	4.93	Sub Dup	46 Tink Drive(back)
University	3.95	Sub Dup	166 School Street
Woodlawn	3.76	Sub Dup	24 Tow Path Road
Gorham Average	3.98		
PWD Overall Average (74 Stations)	3.47		

Subprogram # 416 Westbrook Gorham Windham Regional WWTF

Division: Wastewater - Joint Westbrook

Manager: Rodriguez, Paul

Funding: Bonds, R&R – Wastewater- Div. 64

Priority: Upgrade obsolete facility

Description:

The Westbrook Comprehensive Plant Evaluation (CPE) Program completed in 2001 identified a series of recommended system improvements and upgrades to replace inefficient, non-existent, or obsolete equipment and systems. Many of the items identified are intended to improve plant performance and efficiency. This CPE Upgrade Program represents the phased implementation of that long range program.

Justification / Impact:

The current facility is over 27 years old and many of the existing systems have reached or exceeded the design life of the equipment. Even with the excellent level of maintainance, many of the systems will eventually require replacement. Additionally, the identified programs are designed to provide for more efficient and cost effective treatment systems. Regulatory requirements continue to increase and the technology required to meet these levels has increased. Achieving these standards through a more reliable, efficient, and cost effective manner is the ultimate goal of this program.

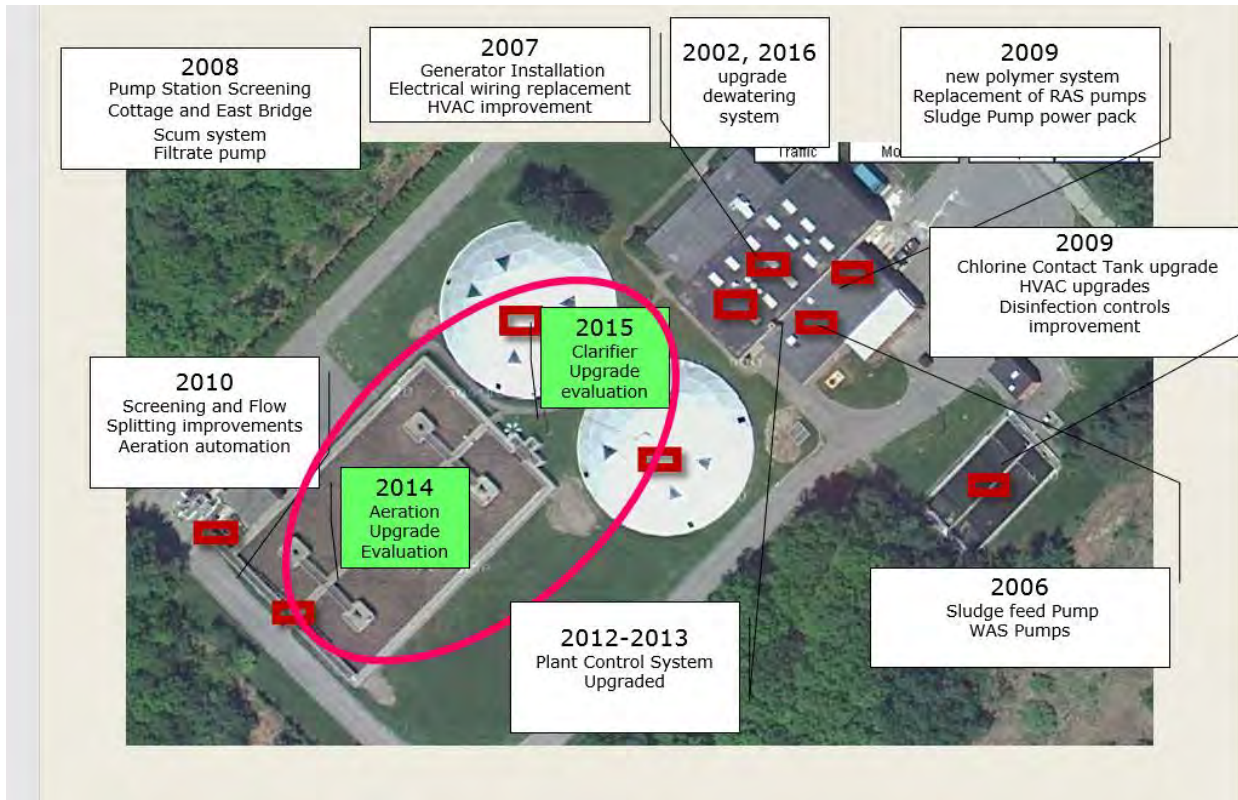


History:

This program is the result of the CPE study performed by Wright-Pierce dated March 2001. Recent studies and evaluations include the Aeration System Alternatives Analysis (2015) and the Secondary Clarifier Condition Assessment (2016).

Budget Summary:

Budget Year			Project	Cost
2020	SRF	3023	Aeration and Secondary Clarifiers - Construction	\$ 11,250,000
2020	R&R	3132	Westbrook Gorham Windham WWTF R&R	\$ 50,000
2021	R&R	3132	Westbrook Gorham Windham WWTF R&R	\$ 50,000
2021	R&R	3160	Influent/Septage Screening	\$ 700,000
2022	R&R	3132	Westbrook Gorham Windham WWTF R&R	\$ 50,000
2022	R&R	3159	Plant Water System Rehab/Controls	\$ 75,000
2022	R&R	3190	Access Road and Parking Lot Resurfacing	\$ 100,000
2023	R&R	3132	Westbrook Gorham Windham WWTF R&R	\$ 50,000
2024	R&R	3132	Westbrook Gorham Windham WWTF R&R	\$ 50,000
2024	Bonds	3166	Process Area Ventilation Upgrades	\$ 750,000
2024	R&R	3191	TWAS Mixer Replacement	\$ 150,000
			Total Cost, All Years	\$ 13,275,000

Subprogram # 416 Westbrook Gorham Windham Regional WWTF

Portland Wastewater

East End Treatment Plant

PWD has completed a number of significant upgrade projects to key systems at the East End Wastewater Treatment Facility in recent years, including the following

- Aeration (2015)
- Sludge Dewatering (2011)
- Installation of a second CSO rated screen in the headworks (2010)
- Addition of a second waste activated sludge thickener, enclosed for odor control (2015)
- Building envelope improvements including roofing and windows (2016-2017)
- Addition of a screenings wash press (2014)
- Rehabilitation of the grit removal equipment and piping (2017-2019)

In 2015, upgrade of the aeration system began to expand the system's capability to manage the spikes in pollutant loading to the treatment plant while exercising regular process control to better manage the performance of the treatment system. Since substantial completion in 2017, the upgrade has had a significant positive impact on the activated sludge system by promoting good settling, reducing odors, and enabling a significant amount of nitrogen management. The project was awarded a grant from Efficiency Maine for energy efficient design.

In 2015-2016, evaluations of the plant's electrical and HVAC systems were completed and long term replacement programs were developed. In 2018 design of the EEWTF/Northeast PS Backup Power Upgrade began. Due to the purchase and sale agreement with Central Maine Power for installation of a substation and new primary feeders for the East End plant, this effort is recommended for combination with switchgear replacement which was also recommended as part of the electrical system evaluation. Construction of power distribution upgrades for EEWTF/NEPS is recommended as part of the 2020 CIP (#21, project 3014) Also underway as part of the 2018-2019 CIP are two significant upgrades to the HVAC systems at the plant – the sludge dewatering areas (CIP#21, project 2705) and the Third Floor HVAC Upgrade (CIP #21, project 3017).

Rehabilitation of primary clarifier sludge removal mechanism #3 was completed in 2018. Underway and scheduled for completion this coming winter is rehabilitation of mechanisms #1 and #2. Upgrades to the chlorine contact tank isolation gate actuators has begun and is anticipated to be complete in winter 2020. Replacement of the sodium hypochlorite storage tanks and piping was completed in September 2019. In the spring of 2019 overhaul of the main odor control system fan (OCF-1) was completed including installation of the spare fan impeller and replacement of all wear components. Assessments of the secondary clarifiers, return sludge piping, and effluent flow meter replacement are currently in progress.

Peaks Island Treatment Plant

In 2014, the District conducted a feasibility study of ultraviolet disinfection at the Peaks facility as a potential replacement of the batch chlorination/dechlorination process. The study concluded that UV disinfection would provide a cost effective alternative to chlorination while enhancing the plant's ability to disinfect during wet weather flows. The system was installed in 2015 and has been performing well.

In 2018, the District installed a control panel and associated lifting systems to facilitate sequencing batch reactor tank dewatering in a timely fashion for maintenance, inspection and repairs. In the spring of 2019 the influent screen was replaced with a new combination screen/screenings washer-compactor.

Portland Wastewater (continued)

Pump Stations

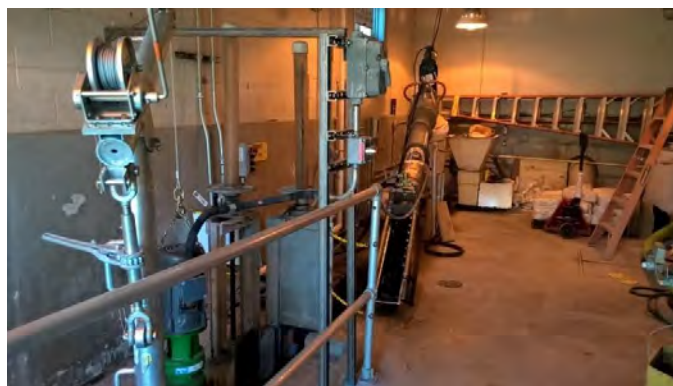
PWD has undertaken several significant upgrades to the Portland pumping systems in recent years. India Street was upgraded in 2008 to include self-cleaning wet wells, new pumps, and odor control. Upgrades to the Northeast pump station have included internal piping and Pumps 2, 3 and 4 in 2007-2008, Pump 1 replacement in 2017, and the addition of odor control in 2018.

Further modifications to the Northeast pump station are pending future CSO and storm water work planned by the City. CIP subprogram #70 outlines future plans for the remaining pump stations in the City. The full upgrade of the Baxter Boulevard Pump Station was delayed (only pumps, with the ability to be expanded, were replaced) to allow the City's plan to include possible upgrades to the flow capacity of the pump station. Thompson Point Pump Station and the associated force main were upgraded along with the Arcadia Pump Station in 2013.

Phase 1 of the Fore River Pump Station pumping system and controls upgrade is complete. Phase 2 of upgrades to the Fore River station are underway, including installation of a bypass connection and force main condition assessment. The phase 2 design was completed in 2018 with anticipated construction completion in 2020, and will primarily include upgrade of the station's screening, electrical, and ventilation systems. Detailed design of the Baxter Blvd. Pump Station upgrades (CIP #70 project 3144) is underway and is expected to be bid in the spring of 2020. Design of the Stroudwater Pump Station (CIP #70 project 3006) is nearing completion and construction is expected to be complete in 2020.

The City of Portland submitted a Tier III Long-Term Control Plan for the mitigation of CSO flows to Maine DEP in 2011. The plan includes a \$167 million plan over 15 years. This plan focuses on storage and dedicated wet weather systems at the East End WWTF in the later years of the plan. A 2-million gallon storage conduit along Baxter Blvd. and Payson Park was commissioned in 2013. Design and construction of the next two storage conduits is underway. These storage conduits are part of the City's collection system and are owned, operated, and maintained by the City. The treatment of flow from the storage conduits is coordinated with the City on an ongoing and regular basis.

The Portland City Council approved a \$3.1 million sewer expansion on Peaks Island. The project was managed, constructed, and financed by the District. The project was completed in 2014.



**New East End Treatment Plant's Influent Screen
Rotated out of the Channel for Inspection**

Portland Wastewater (continued)

Project by Program and Subprogram/Project Summary

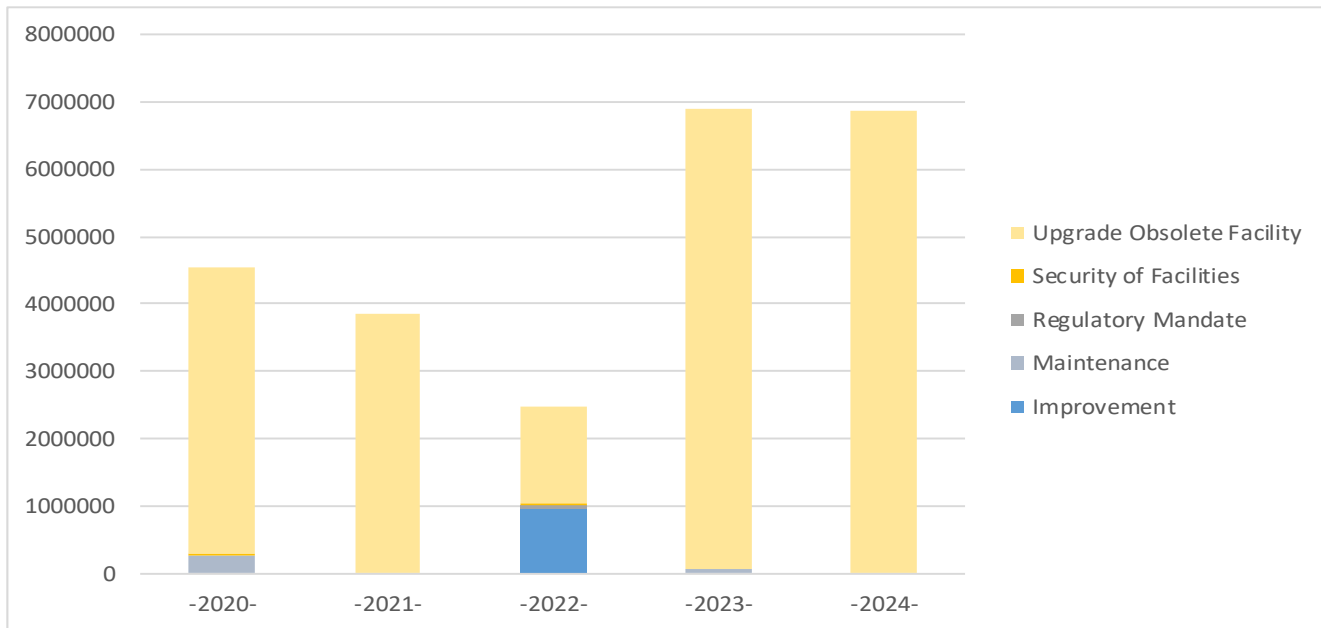
Program	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
WW Collection & Pumping						
131\3162 Modeling and Flow Assessment			\$50,000			\$50,000
423\3161 Stormwater Piping Rehabilitation				\$50,000		\$50,000
70\3135 Portland WW Pump Stations - R&R	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000
70\3143 Baxter Blvd PS Upgrades - Construction	\$1,950,000					\$1,950,000
70\3184 Garrison St PS Upgrade to Submersible		\$375,000				\$375,000
70\3185 Congress St PS Upgrade to Submersible		\$375,000				\$375,000
70\3186 Westbrook St PS Upgrades			\$100,000			\$100,000
70\3187 India St PS Generator Upgrade				\$300,000		\$300,000
70\3205 Northeast PS Generator and Switchgear					\$2,000,000	\$2,000,000
WW Collection & Pumping Total	\$2,000,000	\$800,000	\$200,000	\$400,000	\$2,050,000	\$5,450,000
WW Treatment						
21\2564 - 2018 Security Improvements	\$25,000		\$25,000			\$50,000
21\3009 Dewatering Odor Control Rehab			\$950,000			\$950,000
21\3014 Main 12.4 kV Switchgear Upgrades	\$1,750,000					\$1,750,000
21\3016 Plant Water System Upgrade		\$540,000				\$540,000
21\3020 Process Gate Automation	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000
21\3021 Power Panel Upgrades	\$75,000					\$75,000
21\3024 Portable Wastewater Pump	\$250,000					\$250,000
21\3133 East End WWTF R&R	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$375,000
21\3145 Lower Lot Paving		\$150,000				\$150,000
21\3146 Gravity Belt Thickener Replacement				\$550,000		\$550,000
21\3147 Secondary Clarifier Sludge Rake				\$5,000,000		\$5,000,000
21\3148 Return Sludge Piping Replacement			\$750,000			\$750,000
21\3149 HVAC Upgrades - Process Area			\$400,000			\$400,000
21\3150 HVAC -Tunnel and Pump Gallery					\$900,000	\$900,000
21\3151 Influent Screen#2/Headworks Conveyors				\$350,000		\$350,000
21\3152 Gravity Thickener #1/Solids Monitoring		\$1,400,000				\$1,400,000
21\3153 Primary Sludge Pumping		\$300,000				\$300,000
21\3156 Clarifier Ventilation					\$1,375,000	\$1,375,000
21\3202 Thickened Sludge Storage/Mixing Rehab					\$400,000	\$400,000
21\3203 Odor Control System Tower#2	\$250,000					\$250,000
21\3204 Dewatering System Upgrade					\$2,000,000	\$2,000,000
21\3206 Primary Gallery Power/MCC Upgrade		\$500,000				\$500,000
21\3208 Pri. Gallery Electrical Prelim. Design	\$50,000					\$50,000
423\3131 Peaks Island R&R	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$100,000
423\3192 Aeration System Upgrade				\$250,000		\$250,000
423\3193 Decanter/Valve Replace/Refurbish				\$200,000		\$200,000
423\3194 SBR B Influent Valve Replacement		\$30,000				\$30,000
WW Treatment Total	\$2,545,000	\$3,065,000	\$2,270,000	\$6,495,000	\$4,820,000	\$19,195,000
Grand Total	\$4,545,000	\$3,865,000	\$2,470,000	\$6,895,000	\$6,870,000	\$24,645,000

Portland Wastewater (continued)

Financing Summary (see table on adjacent page for specific project)

Funding Source	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Bond General Program		\$500,000		\$450,000	\$400,000	\$1,350,000
Bond State Revolving Loan	\$3,700,000	\$1,940,000	\$1,700,000	\$5,550,000	\$5,375,000	\$18,265,000
Renewal and Replacement	\$845,000	\$1,425,000	\$770,000	\$895,000	\$1,095,000	\$5,030,000
Grand Total	\$4,545,000	\$3,865,000	\$2,470,000	\$6,895,000	\$6,870,000	\$24,645,000

Project Purpose (see table on adjacent page for specific project)



Subprogram # 131 **Portland CSO Mitigation**

Division: Wastewater - Portland

Manager: Rodriguez, Paul

Funding: R&R – Wastewater – Div 57

Priority: Regulatory mandate

PWD owns and operates 21 of the 31 licensed CSO outfalls in the City of Portland. Upstream mitigation of CSO flows is primarily the responsibility of the City of Portland through their ongoing Long-Term Control Plan, currently in the third tier. Permanent monitors operated by PWD and located at critical sites allow for the continuous monitoring of nearly all outfalls. This provides accurate measurement of flow totals, alarming to prevent dry weather overflows, and for the measurement and verification of ongoing mitigation efforts by the City of Portland. It is critical that we have real time monitoring at CSO sites. This monitoring allows us to proactively address potential dry weather events as well as increasing our ability to implement operational measures based on system performance.

Justification / Impact:

In 2007 PWD started to install ADS Flowshark Meters at 7 key critical sites in Portland. By 2009 sixteen (16) were installed in Portland that monitor continuous flow and provide real time data and alarming at CSO sites. Due to technological changes and cellular capabilities, the current ADS Flowshark monitors have started to reach their expected life span. The benefit to the real time monitors has been valuable to both the City and to PWD. With real time monitoring, reduction of CSO events due to projects can be quantified. The reliability of the data is solid with a 98% uptime of the CSO meters during rain events allowing us to rely on actual data for CSO reporting. Over the past eight years, staff has been able to prevent Dry Weather Overflows and respond in a quick manner due to the alarming capabilities.

History:

All except for two CSO's are real time monitored by either ADS Environmental or Flow Assessment since 2010. Minor evaluation of India Street Tide gate was performed by Johnson and Jordan in 2013.

Budget Summary:

<u>Budget year</u>	<u>Project</u>	<u>Budget Year Cost</u>
2022 - RR 3162	Modeling and flow assessment	\$50,000
Total Cost, All Years:		\$50,000

Previous Years on CIP: 2007

Related Projects:

Procurement Issues:

Subprogram # 70**Portland WW Pump Stations - R&R****Division:** Wastewater - Portland**Manager:** Poulin, Charlene**Funding:** R&R, Bonds – Wastewater- Div. 57**Priority:** Routine replacement**Description:**

This program provides for a planned approach to the replacement of obsolete equipment in the Portland wastewater pump stations. Few improvements have taken place during the 25 years of operation. Pumps have to be upgraded, screens reconsidered and control systems revamped.

Justification / Impact:

The pump stations have reached the end of their useful design life and obsolete equipment must be replaced. Continued attention to the pump stations will allow for a predictive approach to maintenance while ensuring operational optimization and reliability.

History:

This program is based on the Portland Pump Station CPE performed by Wright-Pierce and contemplates improvements with funding from the R&R accounts.

Budget Summary:

Budget Year		Project		Cost
2020	R&R	3135	Portland WW Pump Stations - R&R	\$ 50,000
2020	SRF	3143	Baxter Blvd PS Upgrades - Construction	\$ 1,950,000
2021	R&R	3135	Portland WW Pump Stations - R&R	\$ 50,000
2021	Bonds	3184	Garrison St PS Upgrade to Submersible	\$ 375,000
2021	Bonds	3185	Congress St PS Upgrade to Submersible	\$ 375,000
2022	R&R	3135	Portland WW Pump Stations - R&R	\$ 50,000
2022	Bonds	3186	Westbrook St PS Upgrades	\$ 100,000
2023	R&R	3135	Portland WW Pump Stations - R&R	\$ 50,000
2023	Bonds	3187	India St PS Generator Upgrade	\$ 300,000
2024	R&R	3135	Portland WW Pump Stations - R&R	\$ 50,000
2024	SRF	3205	Northeast PS Generator and Switchgear Replacement	\$ 2,000,000
Total Cost, All Years				\$ 5,350,000

Previous Years on CIP:

2003

Procurement Issues:

Subprogram # 21 **East End WWTF Upgrade**

Division: Wastewater – Portland
Funding: Bonds – Wastewater – Div.57

Manager: Rodriguez, Paul
Priority: Upgrade obsolete facility

Description:

The Portland Comprehensive Plant Evaluation (CPE) Program completed in 1998 identified a long range series of plant system upgrades needed to replace obsolete equipment and systems to meet future operating and regulatory conditions. This CPE Upgrade Program represents the phased implementation of that long range program. The inclusion of the initial phase of odor control was requested by the City of Portland and included in this Program. This Program continues to provide for the replacement of outdated and obsolete systems, including the primary clarifier sludge collection equipment and sludge dewatering system.

Justification / Impact:

The current facility is forty-years old and many of the original systems are worn out and/or functionally obsolete. Implementation of the program shown below allows the District to meet current and future regulatory requirements while obtaining the operating cost advantages of new technology. The impact and benefit of this program is reduced operating cost, system reliability and the ability to meet permit conditions.

History:

This implementation program began with the Woodard & Curran CPE completed in 1998. Wright-Pierce and CH2M-Hill were retained to implement the initial phases of this on-going program. Since then, work has been completed on the influent channels, screening, grit removal, primary sedimentation basins, odor control and secondary clarifiers. Construction of the new dewatering system, including the Fournier Rotary Presses, was completed in 2005. Fine bubble aeration system replaced the old mechanical air system in 2017.

Origin of the Subprogram:

The aging facility and increasing difficulty to achieve reliable operations that consistently meet license requirements led to the CPE. This implementation program is a direct result of the CPE.

Budget Summary:

Budget Year		Project		Cost	
2020	Bonds	3014	Main 12.4 kV Power Distribution Upgrades Project	\$	1,750,000
2020	R&R	3020	Process Gate Automation	\$	50,000
2020	R&R	3021	Power Panel Upgrades	\$	75,000
2020	R&R	3024	Portable Wastewater Pump	\$	250,000
2020	R&R	3133	East End WWTF R&R	\$	75,000
2020	R&R	3203	Odor Control System Tower#2 Rehabilitation	\$	250,000
2020	R&R	3208	Pri. Gallery Electrical Upgrade Prelim. Design	\$	50,000
2020	R&R	2564	Security Improvements	\$	25,000
2021	R&R	3016	Plant Water System Upgrade	\$	540,000
2021	R&R	3020	Process Gate Automation	\$	50,000
2021	R&R	3133	East End WWTF R&R	\$	75,000
2021	R&R	3145	Lower Lot Paving	\$	150,000
2021	R&R	3152	Gravity Thickener #1 Rehab and Solids Monitoring	\$	1,400,000
2021	R&R	3153	Primary Sludge Pumping Upgrade/Rehabilitation	\$	300,000
2021	R&R	3201	Thickened Primary Sludge Pumping Rehabilitation	\$	450,000
2021	Bonds	3206	Primary Gallery Power/MCC Upgrade	\$	500,000

Capital Expenditures

340

2022	Bonds	3009	Dewatering Odor Control Rehab and Expansion	\$ 950,000
2022	R&R	3020	Process Gate Automation	\$ 50,000
2022	R&R	3133	East End WWTF R&R	\$ 75,000
2022	SRF	3148	Return Sludge Piping Replacement	\$ 750,000
2022	Bonds	3149	HVAC Upgrades - Process Area	\$ 400,000
2022	R&R	2564	Security Improvements	\$ 25,000
2023	R&R	3020	Process Gate Automation	\$ 50,000
2023	R&R	3133	East End WWTF R&R	\$ 75,000
2023	Bonds	3146	Gravity Belt Thickener Replacement	\$ 550,000
2023	SRF	3147	Secondary Clarifier Sludge Rake Replacement	\$ 5,000,000
2023	R&R	3151	Influent Screen #2 and Headworks Conveyors	\$ 350,000
2024	R&R	3020	Process Gate Automation	\$ 50,000
2024	R&R	3133	East End WWTF R&R	\$ 75,000
2024	SRF	3150	HVAC Upgrades - Tunnel and Pump Gallery	\$ 900,000
2024	Bonds	3156	Clarifier Ventilation	\$ 1,375,000
2024	R&R	3202	Thickened Sludge Storage and Mixing Rehab	\$ 400,000
2024	Bonds	3204	Dewatering System Upgrade	\$ 2,000,000
Total Cost, All Years				\$ 19,065,000

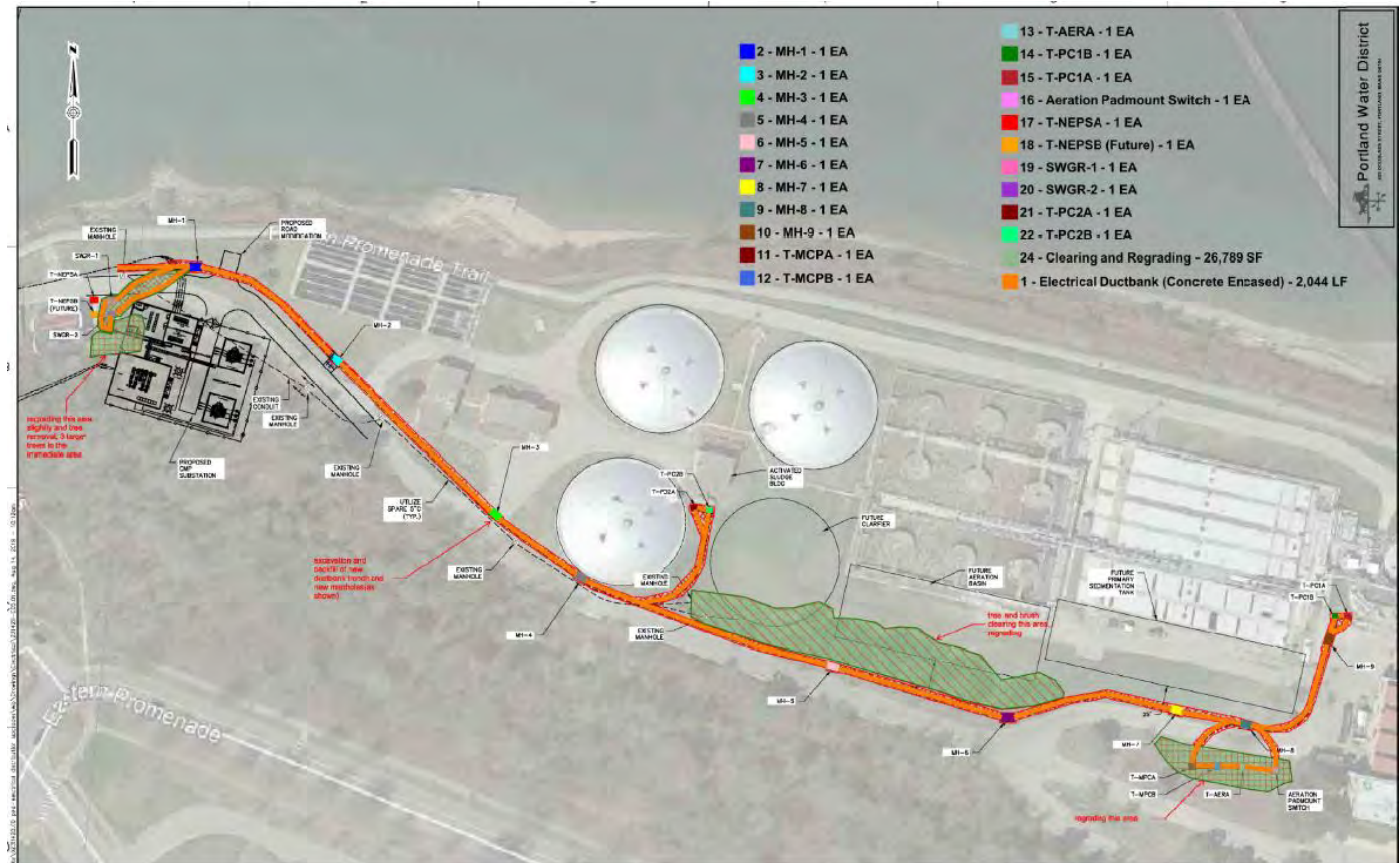
Previous Years on CIP:

1999 to present

Related Projects:

Procurement Issues:

RFP for engineering services. Construction services will be low bid.



Site Plan for 2020 proposed East End WWTF Main 12.4Kv Power Distribution Upgrades Project

Subprogram # 423**Peaks Island WW Treatment and Systems****Division:** Wastewater - Peaks**Manager:** Rodriguez, Paul**Funding:** R & R - Wastewater**Priority:** Routine replacement**Description:**

This account will provide for timely routine replacement of equipment at the Peaks Island Treatment Plant and pump stations.

Justification / Impact:

Physical assets require scheduled maintenance and eventual replacement. This project provides funding for the efficient and timely replacement of equipment using routine and replacement funds.

History:

This program has been used at most PWD wastewater systems in the past.

Budget Summary:

Budget year		Project	Budget Year Cost
2020 - R&R	3131	Peaks Island R&R	\$ 20,000
2021 - R&R	3131	Peaks Island R&R	\$ 20,000
2021 - R&R	3194	SBR Influent valve replacement	\$ 30,000
2022 - R&R	3131	Peaks Island R&R	\$ 20,000
2023 - R&R	3161	Stormwater Piping Rehabilitation	\$ 50,000
2023 - R&R	3131	Peaks Island R&R	\$ 20,000
2023 - R&R	3192	Aeration System Upgrade	\$250,000
2023 - R&R	3193	Decanter and Valve replacement /Refurbishment	\$200,000
2024 - R&R	3131	Peaks Island R&R	\$ 20,000
Total Cost, All Years:			\$630,000

Previous Years on CIP: 2007 - present**Related Projects:****Procurement Issues:****Peaks Island Treatment Plant – Built 1994**

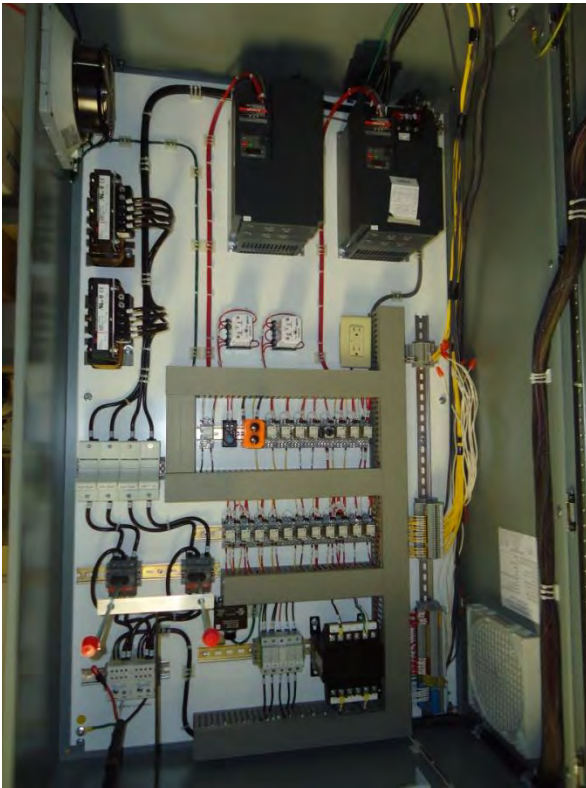
Wastewater – Multi-fund Program

SCADA and Process Control Plan

In the early part of this decade, the District began installing Supervisory Control and Data Acquisition (SCADA) equipment throughout its service area. The goal was to bring all critical alarming back into the District. Since then, standards have developed and SCADA is in place at most all of our installations. The next step is to meet our goal of bringing all wastewater related SCADA information into a single site located at the East End WWTF in Portland. This will allow us to monitor each wastewater facility at a single wastewater location. The construction of the Central Control Center at the East End WWTF began in 2010. During this time, the Westbrook/Gorham/Windham WWTF was connected to the Central Control Center directly, improving the ability to monitor and control this facility. Subsequently, Peaks Island WWTF and Cape Elizabeth WWTF automation and control system improvements occurred allowing for their connection to the Central Control Center.

Future programming routines will allow staff to interact with remote sites from a central location. In the end, our goal is to have operation staff in position to acknowledge alarms, trouble shoot mechanical problems and make process adjustments to four wastewater plants and better than 70 pump stations without having to call in additional staff.

CIP subprogram #177 outlines much of the work that is needed to complete the long-range SCADA plan. In 2020, Phase 2 of the SCADA Radio Modem Replacement Project is proposed (CIP #177, project 3126). This project will replace 17-year old radios, Programmable Logic Controllers (PLC) and antennas and will therefore provide more reliable networks.



The SCADA panel for the newly installed Great Pond Pump Station for the Peaks Island Sewer Extension Project

Wastewater – Multi-fund Program(continued)

The projects below are being completed and benefits multiple wastewater funds and are allocated to the respective fund based on the relative use of the asset.

Program Summary

Fund(s)	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Wastewater-All						
SCADA & Technology	\$350,000	\$350,000				\$700,000
Wastewater-All Total	\$350,000	\$350,000				\$700,000
Grand Total	\$350,000	\$350,000				\$700,000

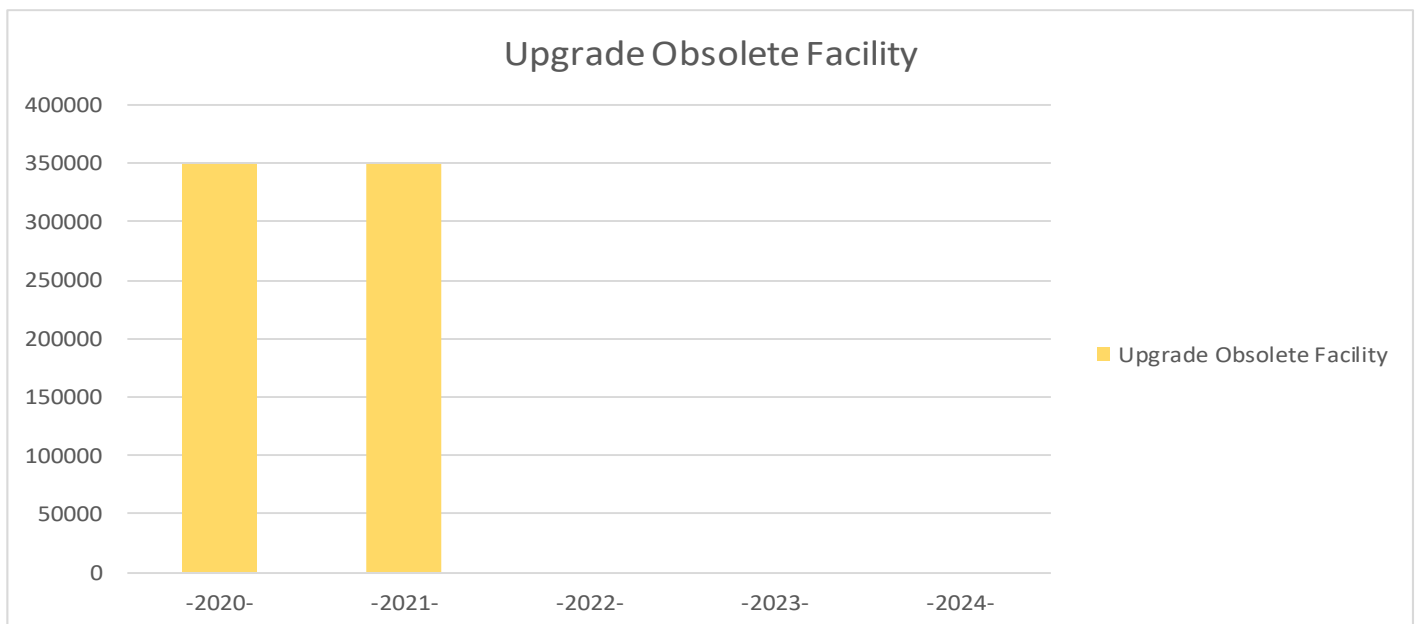
Project by Program and Subprogram/Project Summary

Program	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
SCADA & Technology						
177\3125 SCADA Radio Modem Replacement Project		\$350,000				\$350,000
177\3126 SCADA Radio Modem Replacement Project	\$350,000					\$350,000
SCADA & Technology Total	\$350,000	\$350,000				\$700,000
Grand Total	\$350,000	\$350,000				\$700,000

Financing Summary (see table above for specific project)

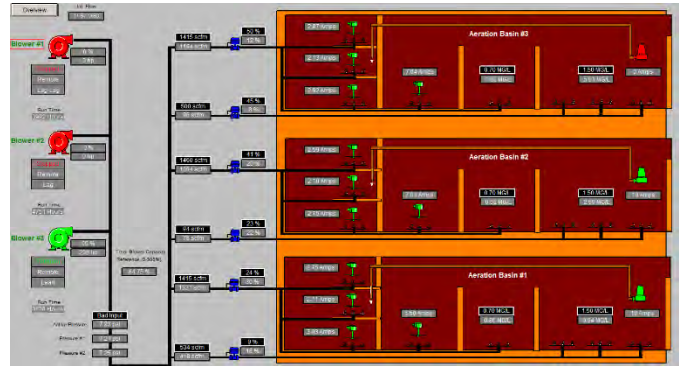
Funding Source	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Bond General Program		\$220,000				\$220,000
Renewal and Replacement	\$350,000	\$130,000				\$480,000
Grand Total	\$350,000	\$350,000				\$700,000

Project Purpose (see table above for specific project)



Subprogram # 177**SCADA/Process Control - Wastewater****Division:** Wastewater - Portland**Funding:** R & R - Wastewater**Manager:** Pellerin, Greg**Priority:** Upgrade obsolete facility**Description:**

The program supports all 80 wastewater sites across the District in upgrading and replacing the existing Supervisory Control and Data Acquisition (SCADA) equipment. The work needed is replacement of hardware and software to be compatible to the District SCADA standards and provide for increased automation of wastewater systems and treatment. Programmable Logic Controllers (PLC) have been replaced across the District to meet the new standards and remove outdated, non-maintainable equipment.

**Justification / Impact:**

The benefit of this program is to increase the automation and reduce the staff hours needed to perform routine activities for the systems and treatment plants across the District.

In 2017, the new aeration system went on line. The system is fully automated and is represented in the District's SCADA system.

History:

The District started changing out the system in 2003 by replacing the existing 20 year-old system across the six wastewater communities and installing new SCADA equipment where it did not exist. All systems have been retrofitted or replaced but more automation of these systems will continue.

Budget Summary:

Budget year	Project	Budget Year Cost
2020 - R&R 3126	SCADA Radio Modem Replacement Project - Phase 2	\$350,000
2020 - R&R 3127	Westbrook SCADA Server Renewal Program	\$ 20,000
2021 - R&R 3125	SCADA Radio Modem Replacement Project – Phase3	\$300,000
2020 - R&R 3128	EEWWTP SCADA Server Replacement Project	\$ 20,000
Total Cost, All Years:		\$690,000

Previous Years on CIP:

2003 to present

Related Projects:

Subprogram #110

Procurement Issues:

Water and Wastewater – Multi-fund Program

The projects below are being completed and benefits multiple water and wastewater funds and are allocated to the respective fund based on the relative use of the asset.

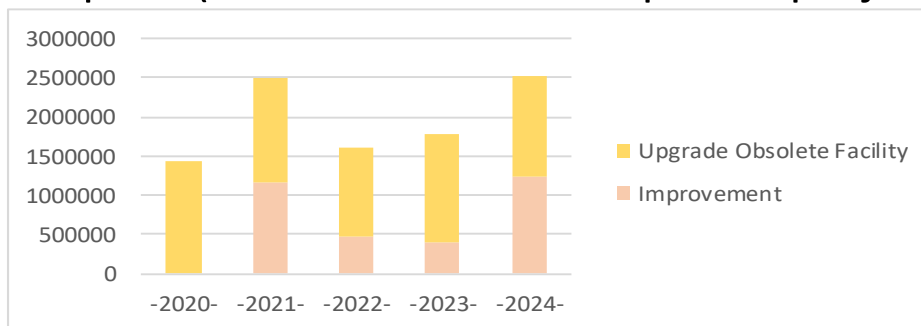
Project by Program and Subprogram/Project Summary

Program	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Comprehensive Planning						
3\3071 Asset Management Plan		\$750,000				\$750,000
Comprehensive Planning Total		\$750,000				\$750,000
SCADA & Technology						
50\3038 Technology Upgrade	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,000,000
SCADA & Technology Total	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,000,000
Vehicle/Equipment Replacement						
326\3041 Vehicle and Equipment	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$2,000,000
Vehicle/Equipment Replacement Total	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$2,000,000
Water Distribution System						
63\3046 Meter Replacement	\$390,000	\$400,000	\$400,000	\$400,000	\$400,000	\$1,990,000
Water Distribution System Total	\$390,000	\$400,000	\$400,000	\$400,000	\$400,000	\$1,990,000
Water Facilities Program						
68\3050 Facility Upgrades	\$50,000	\$50,000	\$50,000	\$300,000	\$300,000	\$750,000
68\3053 Douglass Street Roof		\$250,000				\$250,000
68\3054 HVAC Improvements		\$425,000	\$475,000	\$400,000	\$1,225,000	\$2,525,000
68\3215 Generator/Electrical	\$400,000					\$400,000
68\3216 Stockroom Platform Demo		\$25,000				\$25,000
68\3217 SMT Carpet/Lighting			\$75,000			\$75,000
68\3218 Renovation of Finance				\$75,000		\$75,000
Water Facilities Program Total	\$450,000	\$750,000	\$600,000	\$775,000	\$1,525,000	\$4,100,000

Financing Summary (see table above for specific project)

Funding Source	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Bond General Program		\$425,000	\$475,000	\$400,000	\$1,225,000	\$2,525,000
Operating Budget		\$750,000				\$750,000
Renewal and Replacement	\$1,440,000	\$1,325,000	\$1,125,000	\$1,375,000	\$1,300,000	\$6,565,000
Grand Total	\$1,440,000	\$2,500,000	\$1,600,000	\$1,775,000	\$2,525,000	\$9,840,000

Project Purpose (see table above for specific project)



Subprogram # 3 Comprehensive Infrastructure Asset Management Plan

(Updated CWWSP Plan)

Division: Allocation

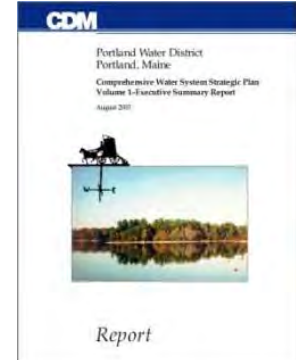
Manager: Crovo, Chris

Funding: Operating Funds – Water and Wastewater Funds

Priority:

Description:

The District completed a Comprehensive Water System Strategic Plan (CWSSP) in 2003. This plan has served as the District's water system master plan for the past 16 years and also serve as a driver to develop an Asset Management approach to infrastructure maintenance and replacement of all the District's assets. This project will provide the an update to the existing CWSSP plan but will also build out Asset Management Plans for all the District's water and wastewater critical assets



Justification / Impact:

Since the completion of the CWSSP plan in 2003 the District has completed the following;

- Completed an Asset Inventory of our Infrastructure Systems
- Fully develop and integrated our CMMS and GIS system (Asset Information Management System – AIM)
- Updated portions of the Hydraulic Model for the Water system
- Completed many of the recommended capital projects
- Maintained a financial model for water system and wastewater communities
- Conducted many evaluations and condition assessments of many critical assets

The District is preparing to take the next step in Asset Management and would be seeking consulting assistance to completed the following;

- Determine assets that are critical to sustained performance and develop asset management plans for each asset class
- Development of condition-based monitoring plans and deployment
- Determine long-term optimized financial strategy

This effort would be used to update and create a single document outlining the status of our infrastructure and a multi-year plan on projects to be completed in the coming decade.

Budget Summary:

<u>Budget year</u>	<u>Project</u>	<u>Budget Year Cost</u>
2021 - R&R 3071	Comprehensive Infrastructure AMP	\$750,000
		Total Cost, All Years: \$ 750,000

Previous Years on CIP:

Related Projects:

Procurement Issues:

Subprogram # 50 **Technology Upgrade and Replacement**

Division: Allocation

Manager: Davis, Chad

Funding: R & R – Water- Div. 10

Priority: Routine replacement

Description:

PWD has made a commitment to using technology as a means of operating more efficiently. This project is therefore an ongoing one and crosses all department lines and major processes. The focus is on establishing and maintaining a stable reliable network and databases to support PWD decision making, planning, budgeting and daily work activities. The project must also plan for growth and adaptation as new technology solutions become feasible.

Justification / Impact:

While economic payback can be demonstrated for many of the line items in this project, replacement of obsolete facilities is also a factor in technology investment. A fast, secure, reliable network and databases impacts PWD ability to be proactive and competitive. Better available information that is timely supports a customer-centric business perspective.

History:

Technology infusion into PWD began anew after an EMA study in 1996 recommended the use of technology to reduce a competitive gap, improve customer service and operating efficiency. Early on a technology master plan was developed as a guide for our investments. Key development work focused on building a stable reliable network infrastructure, acquiring best fit software solutions and populating the associated databases and documenting standard operating procedures. Most of the work was done in team environments to ensure the technology solution met the needs of the target PWD employee group. The PWD network consists of a 206 PC/Laptop/Thin Client wide area network supported by 39 servers housing various applications and data sources supporting asset management, customer billing, financials, GIS, voice mail, email, and VoIP phone. Our network also supports over fifty employees in the field via a wireless data network. Technology advances and cost savings continue to influence the design and delivery of information to our employees and customers.

Budget Summary:

<u>Budget year</u>	<u>Project</u>	<u>Budget Year Cost</u>
2020 - R&R	3038 Technology Upgrades	\$200,000
2021 - R&R	3038 Technology Upgrades	\$200,000
2022 - R&R	3038 Technology Upgrades	\$200,000
2023 - R&R	3038 Technology Upgrades	\$200,000
2024 - R&R	3038 Technology Upgrades	\$200,000
		Total Cost, All Years: \$1,000,000

Previous Years on CIP:

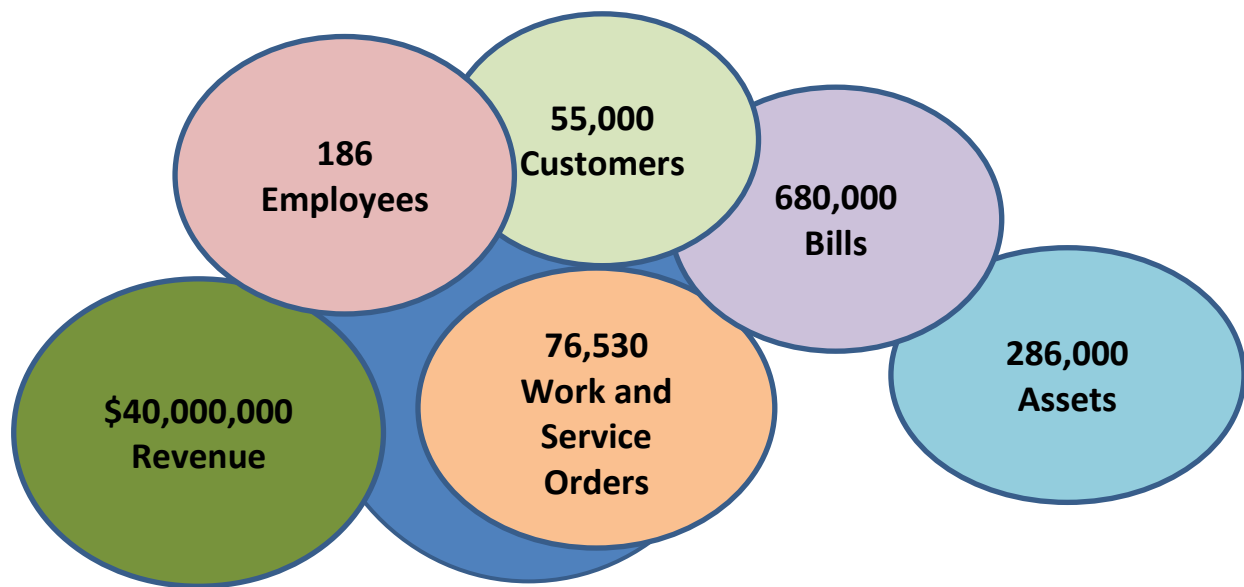
All since 1996

Related Projects:

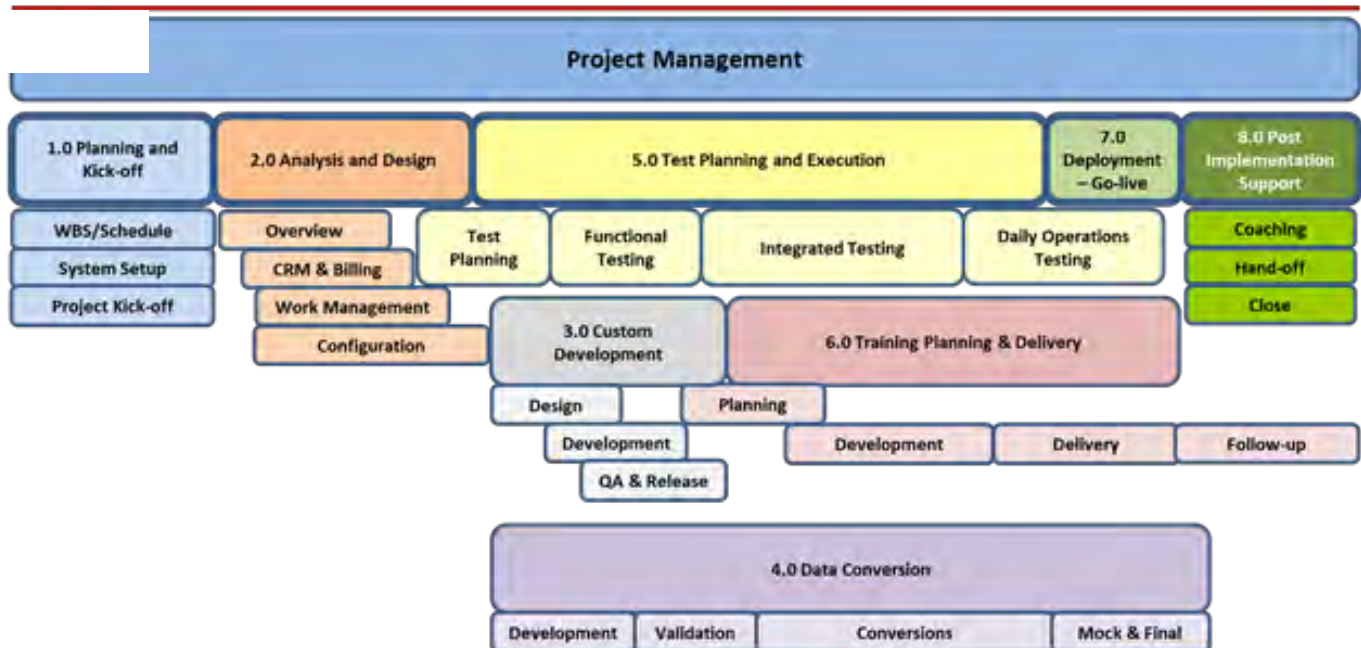
Procurement Issues:

Standard procurement procedures are used for major hardware, software and consulting purchases.

Assets - Billing and Customer & Computerized Maintenance Management System Project (previously known as the ABC project)



Cayenta Implementation Methodology



This 2018 project, CIP #50 project 2542 – Hansen System Replacement (Billing and Customer Relations & Computerized Maintenance Management Systems) \$4,600,000 is expected to be on-line late 2020.

Subprogram # 326**Vehicle and Equipment Replacement****Division:** Allocation**Funding:** R & R – Water- Div. 10**Manager:** Welch, Andrew**Priority:** Routine replacement**Description:**

This project is to replace a portion of the District's Vehicle and Equipment fleet each year.

This year's review included the evaluation of all of the vehicles and equipment which have met or exceeded the trade criteria. In reviewing the fleet, the replacement cost is between \$4,500,000 and \$5,000,000.

Justification / Impact:

The rolling stock and construction equipment fleet are essential to the District's "mission to provide our customers with quality water, wastewater and related environmental services." Maintaining a reliable fleet of vehicles and equipment enables staff to fulfill the mission with safety, efficiency and timeliness. Worker safety, efficient operations and customer satisfaction are the basic benefits of maintaining a sound vehicle and equipment inventory.

History:

The Asset Management Department conducts an annual evaluation of major pieces of equipment and vehicles to determine our annual replacement needs. The various trade criteria are also reviewed to assure that they are appropriate. Based on the age and use of the fleet, projections of future annual costs are included in the five-year plan. These projections are re-reviewed each year to develop a minimum replacement program for the current year. Several major pieces of equipment will need to be replaced in the next two to four years.

**Origin of the Subprogram:**

Annual review and replacement of vehicles and equipment is a basic operating need of any geographically dispersed utility.

Budget Summary:

Budget year	Project	Budget Year Cost
2020 - R&R	Vehicle and Equipment Replacement	\$400,000
2021 - R&R	Vehicle and Equipment Replacement	\$400,000
2022 - R&R	Vehicle and Equipment Replacement	\$400,000
2023 - R&R	Vehicle and Equipment Replacement	\$400,000
2024 - R&R	Vehicle and Equipment Replacement	\$400,000
Total Cost, All Years:		\$2,100,000

Previous Years on CIP:

All

Procurement Issues:

Specifications are developed and proposals are solicited from approximately thirty vehicle and equipment dealers. Purchases are made on the basis of price and other criteria which lead to lowest life cycle cost.

2020 Annual Vehicle and Equipment Estimated Replacement Cost and Trade-in values

2020 Air Compressor	ASSET PURCHASE	\$24,000
TRL05510 2005 Air Compressor	TRADE	(\$2,500)
2020 1-Ton 4x4 Cab, Chassis and Utility Body	ASSET PURCHASE	\$39,000
VEH11080 2011 4x4 Utility	TRADE	(\$6,000)
2020 Wheeler Dump	ASSET PURCHASE	\$150,000
VEH08030 2008 Mack Wheeler Dump	TRADE	(\$50,000)
2020 4x4 1/2 Ton Extended Cab P.U.	ASSET PURCHASE	\$29,000
VEH15110 2015 Dodge Ram 1/2 ton P.U.	TRADE	(\$9,000)
2020 Cargo Van	ASSET PURCHASE	\$25,000
VEH08100 2008 GMC G2500 Van	TRADE	(\$3,000)
2020 2x4 1/2 on P.U. 8' Bed with lift gate	ASSET PURCHASE	\$26,000
VEH10050 2010 2x4 1/2 ton P.U. with lift gate	TRADE	(\$3,500)
2020 2x4 3/4 ton P.U. 8' bed	ASSET PURCHASE	\$28,000
VEH11100 2011 2x4 3/4 ton Extended Cab Utility Body	TRADE	(\$4,000)
2020 4x4 1-ton with Plow and Utility Body	ASSET PURCHASE	\$45,000
VEH13040 2013 4x4 with Plow and Utility Body	TRADE	(\$8,000)
Vacuum Excavation Trailer	ASSET PURCHASE	\$120,000
	Total CIP Request	\$400,000

Subprogram # 63 **Meter Replacement and Leak Detection**

Division: Allocation

Manager: Wallace, Jim

Funding: R & R – Water - Div. 10

Priority: Routine replacement

Description:

This work includes the cost to maintain the Long Service Meter Change program, and replacement of damaged meters. It also include the purchasing of leak detection and monitoring equipment. The District completed a change out all of its 50,000 meters to radio read system in 2009. The meters and batteries are expected to last 20 years for the smaller meters and less for the larger meters.

Justification / Impact:

This is a required program to meet PUC requirements and maintain accurate billing of customer accounts and account for lost water. Since long service meters typically under estimate the actual water flow, the Long Service Meter Change program is needed to ensure that the District receives all the revenue to which it is entitled.

History:

New terms and conditions have recently been instituted to increase the long service interval from 15 to 20 years.

Origin of the Subprogram:

These costs do not reflect the value of meters and radio reading devices which is contributed by customers.

Budget Summary:

<u>Budget year</u>	<u>Project</u>	<u>Budget Year Cost</u>
2020 - R&R	3046 Meter Replacement and Leak Detection	\$390,000
2021 - R&R	Meter Replacement and Leak Detection	\$400,000
2022 - R&R	Meter Replacement and Leak Detection	\$400,000
2023 - R&R	Meter Replacement and Leak Detection	\$400,000
2024 - R&R	Meter Replacement and Leak Detection	\$400,000
Total Cost, All Years:		\$1,990,000

Previous Years on CIP:

All

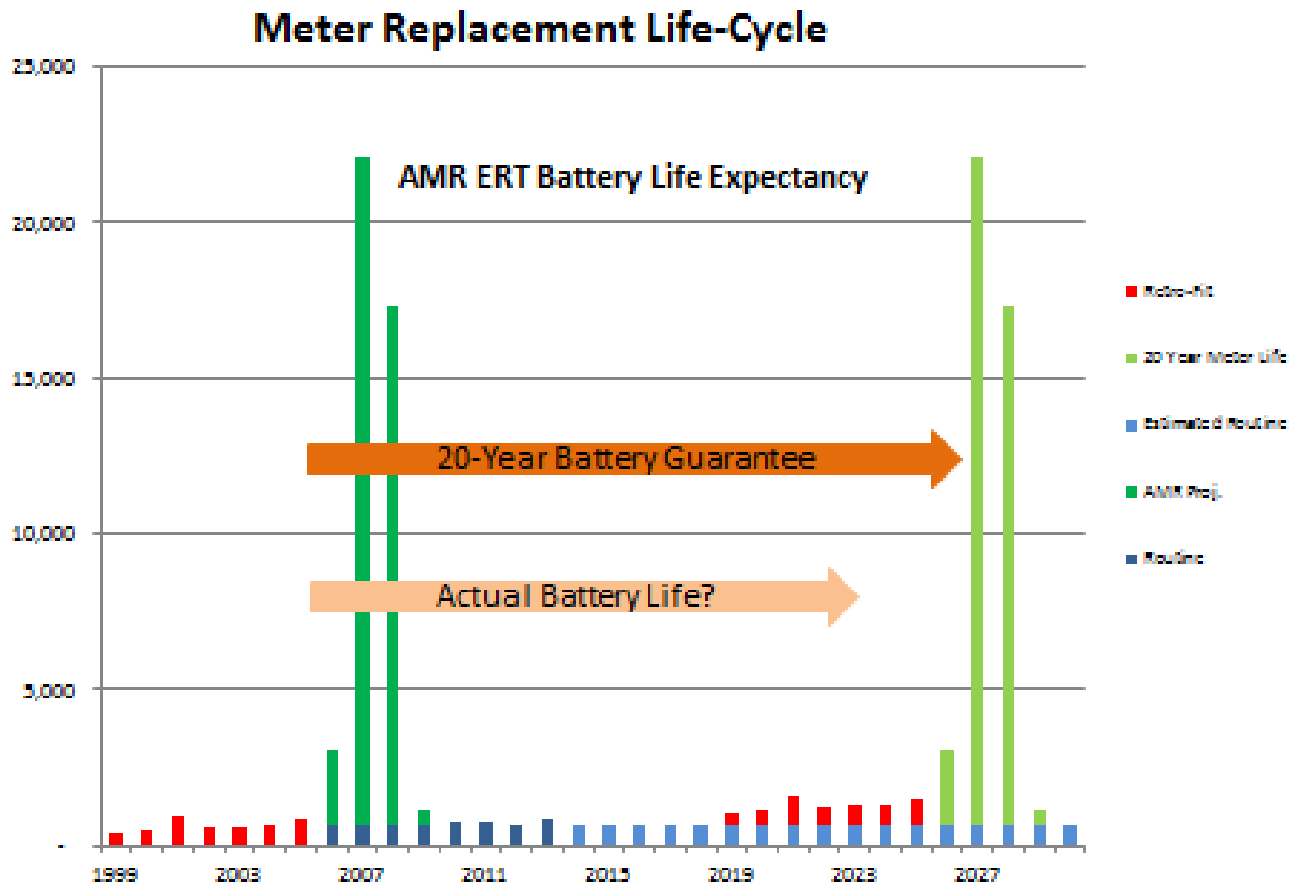
Related Projects:

none

Procurement Issues:

Standard meter procurement procedures.



Subprogram # 63**Meter Replacement and Leak Detection**

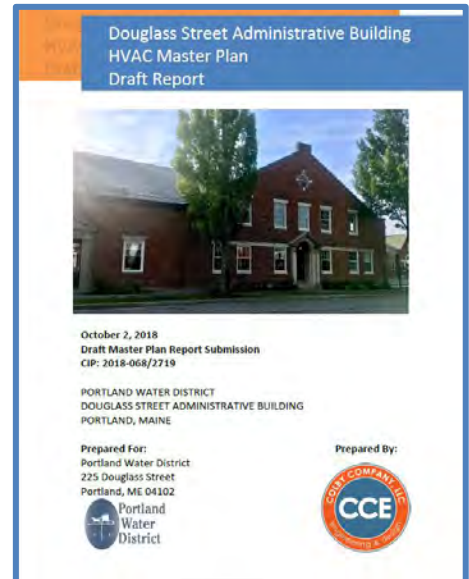
The above graph is projecting the life cycle of the District's 50,000 meters.
The next major meter change-out is projected for 2026-2028.

Subprogram # 68**Facilities Improvements****Division:** Allocation**Manager:** Welch, Andrew**Funding:** R & R – Water- Div. 10**Priority:** Upgrade obsolete facility**Description:**

This project is a combination of numerous subprojects addressing the improvements and maintenance needs of the Douglass Street and Lake office facilities. Some of the projects shown in this years plan are ongoing projects while others are for the current plan year only.

Justification / Impact:

In order to maintain our office facilities in good condition and provide a suitable environment for our employees and customers, it is necessary to have a program to address any problem areas and additional requirements. In order to maintain the integrity of the facilities, problem areas such as leaks, indoor air quality, worn out or aging equipment and infrastructure needs to be addressed on an ongoing basis.

Budget Summary:

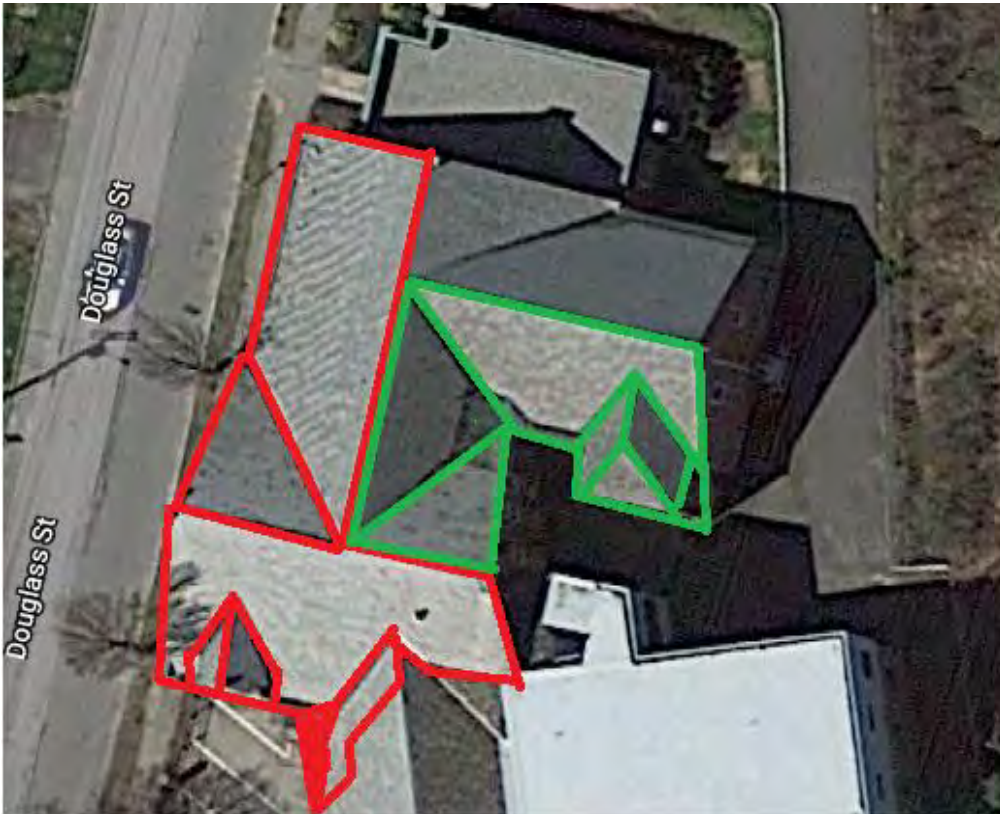
Budget Year		Project		Cost
2020	R&R	3050	Facility Upgrades	\$ 50,000
2020	Bonds	3215	Generator/Electrical Upgrades	\$ 400,000
2021	R&R	3053	Douglass Street Roof replacement - Phase 3 of 3	\$ 250,000
2021	Bonds	3054	HVAC Improvements -Phases 1	\$ 425,000
2021	R&R	3216	Stockroom Platform Demo	\$ 25,000
2022	R&R	3050	Facility Upgrades	\$ 25,000
2022	Bonds	3054	HVAC Improvements -Phases 2	\$ 475,000
2022	R&R	3217	SMT Renovation/Carpet/Lighting	\$ 75,000
2023	R&R	3050	Facility Upgrades	\$ 300,000
2023	Bonds	3054	HVAC Improvements -Phases 3	\$ 400,000
2023	R&R	3218	Renovation of Finance	\$ 75,000
2024	R&R	3050	Facility Upgrades	\$ 300,000
2024	Bonds	3054	HVAC Improvements -Phases 4	\$ 1,225,000
Total Cost, All Years				\$ 4,075,000

Previous Years on CIP:

2000

Related Projects:

Procurement Issues:



2019 – Douglass Street –
Slate Roof replacement –
Phase 2 – Project Started
November

Watershed/Land Funds

Subprogram # 1

Watershed Land Acquisition

Division: Water - General

Manager: Twaddel, Norman

Funding: Watershed Land Reserve

Priority: Regulatory mandate

Description:

Purchase land with or without buildings in accordance with the Watershed Land Purchase Policy.

Justification / Impact:

Ownership of land, particularly along the shore of Sebago Lake within the two-mile limit is the surest way to control land use that affects Lower Bay water quality and body contact.

History:

The District has a long standing policy to purchase Sebago Lake water frontage and other critical land for the purpose of watershed protection and long-term maintenance of Sebago Lake water quality. We do not aggressively solicit land to buy, but we have made public our interest to purchase Watershed land and, in recent times, all purchases have resulted from seller initiated contacts.

Origin of the Subprogram:

Budget Summary:

<u>Budget year</u>	<u>Project</u>	<u>Budget Year Cost</u>
PEND 1	Watershed Protection Land Purchase	\$434,000
Total Cost, All Years:		\$434,000

Previous Years on CIP:

All since 1994

Related Projects:

None

Procurement Issues:

Purchase decisions are negotiated on the basis of professional real estate appraisals. Board of Trustees approval of individual purchases is required.

Eel Cove – Shorefront properties within the 2 mile limit left.

(Lanni/Porter purchased in 2007, Stanford in 2008 ,Messenger 2017, Webb 2018)



Subprogram # 2 Watershed Land Conservation

Division: Water - General

Manager: Hunt, Paul

Funding: Watershed Land Reserve

Priority: Regulatory mandate

Description:

Contribute towards land conservation projects in accordance with the Watershed Land Conservation Policy.

Justification / Impact:

There is a direct link between the degree to which a watershed is forested and the quality of water in the lakes and streams within it (AWWA, 2004). Conservation of forested land in perpetuity protects water quality, which benefits both customers of the Portland Water District and all other users of Sebago Lake.

History:

In 2007 the Portland Water District trustees adopted a policy to support measures to preserve Sebago Lake watershed land in perpetuity and to provide open space for lake-friendly public access. The District acknowledges that it is neither feasible nor necessary to own all land in the watershed. Instead the District cooperates and partners with organizations and individuals who seek to preserve and manage their watershed lands in a manner that protects water quality and therefore protects the health of drinking water consumers. In 2012, the policy was amended to allow for a contribution of up to 25% of the easement/acquisition value and a Standard Operating Procedure was developed for assessing projects.

Budget Summary:

<u>Budget year</u>	<u>Project</u>	<u>Budget Year Cost</u>
PEND 2	Watershed Land Conservation	\$200,000
Total Cost, All Years:		\$200,000

Previous Years on CIP:

None

Related Projects:

Subprogram #1 – Watershed Land Acquisition

Procurement Issues:

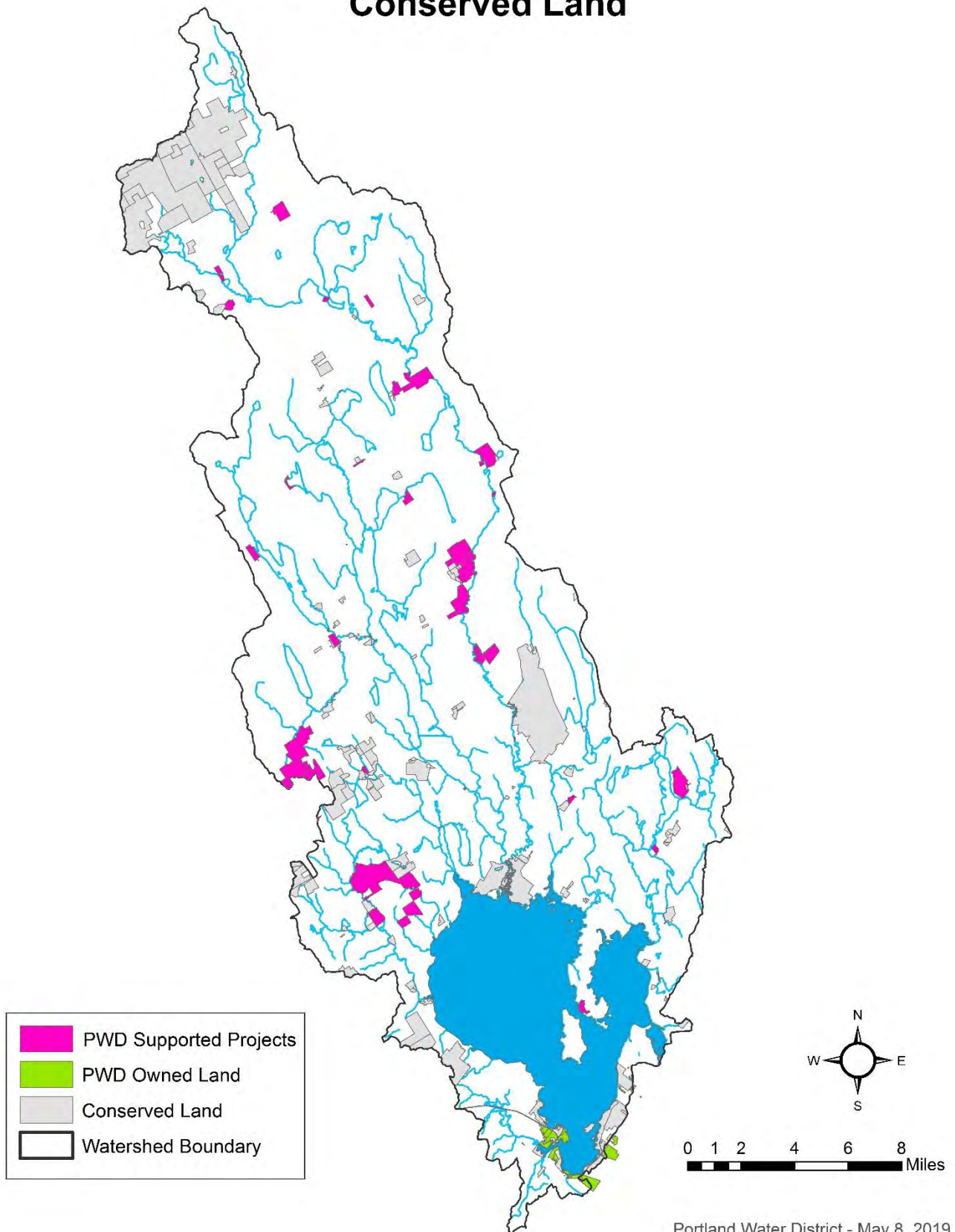
Project contributions are recommended by staff based on a formula. Board of Trustees approval of contributions is required.

Subprogram #1 and #2 are pending unscheduled work that may occur in 2020. If projects are undertaken, the Board of Trustees will be requested to approve and the Capital Improvement Plan amended. The project funding has not been included in the 2020 budget.

Summary of Watershed Conservation Projects 2008-2018 – 5826 Acres Conserved – District's contribution \$900,732

Project	Town	Acres	Year	PWD Contribution
Hague	Waterford	350	2008	\$5,000
Little Moose Pond	Waterford	23	2009	\$500
Watkins	Waterford	690	2011	\$9,250
Camp Wawenock	Raymond	60	2010	\$10,000
Tenny River	Raymond	28	2012	\$5,000
Hague Farmstead	Waterford	88	2012	\$1,900
Perley Mills	Bridgton/Denmark	800	2013	\$50,000
Maple Ridge	Harrison	35	2013	\$5,880
Moon Valley	Harrison	14	2013	\$5,510
Flint Farm	Albany Township	156	2013	\$7,600
Perley Pond/NW River	Sebago	150	2014	\$33,600
Crooked River Watershed Forestland	Harrison/Otisfield	791	2014	\$268,899
Cummings Parcel	Harrison	10	2014	\$5,000
Stanley Parcel	Waterford	21	2015	\$1,575
Raymond Community Forest	Raymond	350	2014	\$38,944
Whitney Pond	Stoneham	70	2015	\$36,860
Proctor Pond	Albany Township	54	2015	9000
Howe Woodlot	Waterford	40	2017	3,200
Fogg Lot	Otisfield	68	2017	13,600
Hawk Mountain	Waterford	16	2017	2,420
Crooked River Forest	Harrison	38	2018	5,270
Peabody-Fitch	Bridgton	191	2018	20,724
Tiger Hill/ Sebago Community Forest	Sebago	1417	2018	345,000

Sebago Lake Watershed Conserved Land



Portland Water District - May 8, 2019

Introduction

The District has the responsibility to manage their financial resources by establishing and following prudent financial policies and procedures. A summary of the significant financial policies is listed below. The district is in compliance with the policies except where noted below. Each policy is designated as being adopted by Law, Board or Management – see designation in parenthesis by policy title.

Significant Financial Policies

Accounting, Auditing, and Financial Reporting:

Basis of Accounting (Law-Charter)

The District maintains its accounting records and reports on its financial conditions and results of operations in accordance with generally accepted accounting principles as promulgated by the Governmental Accounting Standards Board (GAAP). As a business-type activity, the District is accounted for in enterprise funds. The basic financial statements are accounting for on the flow of economic resources measurement focus, using the accrual basis of accounting. Under this method, all assets and liabilities are included in the statement of net position, revenues are recorded when earned, and expenses are recorded the time the liabilities are incurred. (See Budgeting and Financial Planning section for difference between GAAP and Budget.)

Fund Structure (Law-Charter)

As required by the District's charter, eight-supporting enterprise funds will be maintained – one fund for water service and seven funds for each of the communities we provide wastewater service. Revenues and expenses that are solely for the benefit of that fund are allocated directly to the enterprise fund. Enterprise funds, used for business-like activities, operate on an accrual basis. The accrual basis of accounting used by enterprise funds requires revenue to be recognized when it is earned and expenses to be recognized when the related benefit is received.

By contract, the District provides billing and meter reading services to two other communities. Related costs are recorded in the appropriate fund.

Costs that benefits more than one fund are recorded in an allocated fund. The balance in each fund is fully allocated to the appropriate enterprise or contracted utility billing funds. A detail explanation of the allocation methods used is provided on subsequent pages (see Cost Allocation Policy Detail on subsequent pages).

Annual Audit (Law-Charter)

Annual audit shall be conducted each year by the June 30. The Board of Trustees shall appoint auditors.

2020 Policy Changes Highlights

Leases: A new accounting rule issued by GASB changes the way leases are recorded. In the past, the revenue received or payment paid were included as revenue and expenses. The new rule requires the present value of the future lease payments be recorded on the balance sheet and amortized over the life of the lease agreement. The District is capitalizing transactions with a present value greater than \$10,000, the same level as other asset purchases.

The change impacts the budget by increasing expense by \$2,480 and revenue by \$39,770.

Watershed Protection Fund: The District protects the Sebago Lake water source by purchasing land and conservation easements. In 2019, the District issued a bond to purchase conservation easement. A Watershed Protection fund was created within the financial system and this Budget document. In the past, those transactions were recorded within the Water Fund.

Significant Financial Policies (continued)

Financial Planning Policies:

Financial Reporting (Management)

Monthly financial reports should be distributed to the Board of Trustees and Management for their review. The report should include a comparison of actual results to budget with variance noted and explained.

Basis of Budgeting (Management)

The budget is consistent with GAAP, including the utilization of accrual accounting, except for the following items:

- Depreciation, being a non-cash expense, is not budgeted,
- Contributions to asset renewal and replacement cash reserve is budgeted,
- Principal Payments are included in the budget,
- Contributed assets are not included in the operating or capital budget,
- Pension Actuarially Determined Contribution is included in the budget opposed to the pension expense, and
- Net proceeds of asset sales are not recorded in the budget.

The Board must authorize any amendment to the operating budget that results in a net increase in the total net operating budget. The general manager and treasurer are authorized to approve transfers between department and funds. The Board of Trustees must approve all capital projects. The upcoming year's projects listed in the Capital Expenditure section of this document are approved when the document is adopted. As long as the actual costs are at or below the approved amount and it is awarded to the lowest bidder, the project does not need additional Board approval.

The policy requires the preparation of a multi-year projection of operating and capital expenses. The budget must be completed so the wastewater communities can be assessed the annual estimated costs by January 15th. The budget year is January 1 to December 31.

Balanced Budget (Charter)

A balanced operating budget is a budget that has total expenditures equal to total revenues, including use of fund balance. A balanced capital budget is a budget that has total expenditures that do not exceed available renewal/replacement fund amounts and external financing (bonds, grants or contributions).

Significant Financial Policies (continued)

Financial Planning Policies (continued):

Long -Range Planning (Management)

Capital Improvement Plan

A five-year capital improvement plan will be updated annually. The Board may authorize capital expenditures in the upcoming year as long the staff awards the project to lowest bidder and the total project budget is within the amount in the capital improvement plan.

Operating Budget

Operating projections of at least three future years are created. For the water fund, the projection is used to decide the appropriate water rate adjustment to consider. For most communities, wastewater services are a joint effort of the District providing treatment and interception service and the community providing collection and storm drain services. The District's projected assessment of our cost and their internal costs are considered when determining the appropriate sewer rate. All funds incorporate the recommendations of the capital improvement plans and operational evaluations/studies when projecting operating costs.

Asset Inventory (Management)

The District utilizes an asset management system that identifies the District assets. All employees must record their time to work orders and the applicable asset they are working on. Assets classifications are being reviewed for accuracy and completeness with review focusing on the most important assets. Condition rating of assets has been done on some assets and efforts will continue on critical assets. Asset evaluation studies are completed periodically on critical assets.

Revenue Policies:

Water Rates (Board)

Water rates are established to provide sufficient revenues to fully support the operation of the water fund's activities. In 1994, 2006, and 2016 cost of service studies calculated for each customer class (e.g. – residential, commercial, etc.) the amount of revenues generated and costs incurred. The study indicated that some classes were subsidizing other classes. Recognizing the impact of changing rates to reflect the cost of service for each customer class would cause significant rate shock for some customers, the approach of gradually adjusting rates over the future rate adjustments was adopted. Cost of service studies should be done periodically, approximately every 10 years, or if significant financial or operational change occurs that may have shifted the costs to serve the different customer classes. Generally, the Board has approved a small annual rate adjustment near the increase in the consumer price index.

In 2013, a new state law allowed for funding through an infrastructure capital reserve. The law allows the District to include an additional 10% in rates to fund a capital reserve. The 2019 budget assumes 1% of the proposed 4.4% water rate adjustment be dedicated to the capital reserve. The 1% will fund the debt service on \$2 million, 10-year bond for replacing aging water mains. Past practice is to issue 20-year bond to finance main renewal. An additional 1% will be added for the each of the ten years beginning in 2014.

Significant Financial Policies (continued)

Revenue Policies (continued):

Wastewater Assessment (Law -Charter)

Wastewater assessments are established to provide sufficient revenues to support the operation for each of wastewater funds' activities. By state law, the municipality must pay the district's assessment.

Service Fees (Board)

Fees for miscellaneous service should be based on the cost to provide the service. Effective January 1, 2016, the District's Board can unilaterally authorize changes for water related fees. The District must file 'terms and conditions' (T&C) with the Maine Public Utilities Commission for information only. The T&C includes the fees for any service the District requires customers to obtain from the District. The District intends to file updated T&C at least every two years to assure the fees assessed covers the costs of providing the service. Updated T&C were approved with an effective date of May 1, 2019. Additionally the Board approved a policy authorizing non-water related fees and will approve those fees in the future at the same time they approve the water related fees.

Investments (Board)

Operating fund investments must be invested with the primary objective, in priority order, of safety, liquidity and yield. Investments should be made in securities that are backed directly or indirectly by the federal government. Currently, we are in compliance with the policy.

Pension funds' investments will be primarily invested in a diversified portfolio of equity and debt securities within guidelines established in the policy. The policy was revised to allow for US equities portion of plan assets, securities of foreign-based issuers that are transacted in US dollars on US exchanges are permitted up to a limit of 20%, an increase from 10%, and will be classified as US equities.

	Minimum <u>Weight</u>	Target <u>Weight</u>	Maximum <u>Weight</u>
US Equities	30%	40%	50%
International Equities	10%	25%	30%
Bonds	20%	25%	40%
Alternatives	0%	10%	15%
Cash & Equivalents	0%	0%	30%

Use of One-time/Unpredictable Revenue (Board)

The District's Board has established a fund to collect the net proceeds of water land sales. The fund is dedicated to future investment in protecting the watershed land. Unexpected water net income is typically allocated to contingency or rainy day fund. However, the Board considers whether any portion should be allocated to the watershed land fund. The Board has established a goal of 25% and 15% of operating expense for the contingency and watershed land funds, respectively. Unexpected wastewater net income is retained in the individual funds contingency fund.

Significant Financial Policies (continued)

Expenditure Policies:

Debt (Board)

Debt may be issued for capital expenditures only. There is no legal limit for the amount of debt the District can issue. However, the Board has set a maximum target for debt service in any fund to 35% of total budget. The target is close to industry standard (AWWA Industry Benchmark, median quartile, 2012). In addition, operating revenue available for debt service should be at least 125% of the annual debt service. The District is in compliance with the policy with the exception that the Windham wastewater fund is above the 35% limit due to construction of the Little Falls Conveyance system in 2009 at the request of the Towns of Windham and Gorham. Debt will not be issued for longer than the useful life of the assets being financed. The average duration of outstanding debt should be 10 years or less.

Reserve Balances (Board)

Each operating fund has a target balance of 25% of annual net operating budget. All funds, except Portland and Windham wastewater funds, are expected to meet the target in the coming year. Portland and Windham funds are 3% and 4% below the target reserve balance.

Each fund has a cash reserve fund for the renewal and replacement of fixed assets. The target balance for the water and wastewater funds are 1% and 5%, respectively, of gross fixed asset costs. The wastewater target was increased from 3% to 5% in 2017. Westbrook and Windham meet the revised wastewater target. Cape Elizabeth, Cumberland, Gorham and Portland do not meet the increased target. The Water fund balance is anticipated to meet the target in 2021. In addition, the Water fund has a target balance of 15% of the annual net operating budget for a watershed land reserve. We project the reserve to be at 8% at the end of 2019.

The 2020– 2024 trend of operating and renewal & replacements fund balances for each of the Water & Wastewater funds are located in the Budget by Fund section.

Capital Expenditures (Board)

A capital expenditure is a project with a cost of \$10,000 or more and has a useful life greater than 5 years. An exception is made for certain assets annually purchased in bulk that exceed the \$10,000 amount in a year. For example, individual hydrants, meters and service lines costs less than \$10,000 but total annual purchases exceed \$10,000.

The Board of Trustees must approve all capital expenditures. An annual capital improvement plan is reviewed and approved by the Board and provides authorization for capital expenditures as long as the project costs is not exceeded and the lowest bid is accepted. If project cost is anticipated to exceed budget or the lowest bid is not accepted, the Board must specifically authorize. The General Manager who must inform the Board of the expenditure must approve emergency capital expenditures.

Purchasing (Board)

The policy outlines the requirements for obtaining competitive pricing and the formal bidding processes. It also establishes authorization levels for operating expenses including the requirement that expenses greater than \$50,000 be approved by the Board. Amounts less than \$50,000 must be included in the Board approved budget. We are in compliance with the policy.

Significant Financial Policies (continued)

Expenditure Policies (continued):

Pension Funding Policy (Board)

The Board voted to fully fund the District's defined benefit plan by contributing at least the annual required contribution as calculated by the actuary. Because of new accounting rules that went into effect in 2015, the Board adopted a new pension funding policy effective for 2015. The policy states the District's intention to adequately fund the pension plan and contribute at least the actuarially determined contribution consistent with assumption used to calculate the pension expense under the new accounting rule, except to spread out the funding for impact of changes of the benefits negotiated as part of the three-year union contract over the life of the union contract. The policy states the District will fund \$1 million a year, assuming the \$1 million is greater than the actuarially determined contribution (ADC). The 2020 Budget assumes the ADC of \$1.1 million will be paid in 2020.

Risk Management Policies

Maine Tort Claims Act (Law- State)

As a public entity, the District's liability for third party tort claims is limited by the provisions of the Maine Tort Claims Act. The Act provides that the District is immune from claims, unless the Act provides a specific exception from immunity. In the District's case, the exception most likely to affect the District is one making the District liable for negligent use of machinery and equipment. Should the District be liable for a claim under the provisions of the Act, its liability is capped by the Act at \$400,000. The immunity provided public entities by the Tort Claims Act helps keep to keep the cost of the District's insurance lower, allowing the District to pass this savings to its ratepayers.

Property and Liability Insurance (Board)

Property and liability insurance is purchased to cover building and personal property losses including losses due to flood and earthquakes. Certain liability claims are limited under the Maine Tort Claim Act to \$400,000. The Board adopted a change to limit insurance on claims covered by the Tort Claim Act to the Act's limit.

Safety Program (Management)

A full-time safety officer and executive safety team oversee various safety policies including confined space entry, electrical safety, ergonomic for video display terminals, fall protection, hazard communication and safety commitment policies. A safety incentive policy outlines an employee award program recognizing good safety performance.

Employee Management (Management)

A four-person Employee Services department oversees the district's employee relations management and practices. Over 60 policies have been created to guide management and employees with one goal of reducing the District's risk to losses.

In-House Legal Counsel (Board)

In 2006, the Board authorized hiring in-house legal counsel. Legal counsel actively participates in overseeing the district's operation, including reviewing all contracts, and proactively identifying ways to reduce or avoid legal issues.

Cost Allocation Policy Detail

The District has one water fund and six wastewater funds (Cape Elizabeth, Cumberland, Gorham, Portland, Westbrook and Windham). In addition, the District also provides billing and/or meter reading services to three other municipalities (Falmouth, Scarborough and South Portland).

It is the District's policy to directly assign expenses to a fund/municipality whenever possible. However, there are some expenses, such as paid time off or work done by administrative personnel, where such an assignment is not possible. In such cases, an allocation of that cost must be done.

In 1995, the District engaged an outside consultant to review and update its cost allocation process. Since that time, organizational and other changes have necessitated updates and modifications. The changes that were made used the guidelines from the 1995 study. The current allocations were reviewed and approved by the District's current auditors during 2013.

Currently the District uses the following methods to allocate costs:

- Customers Served
- Direct Labor
- General Allocation Percentage
- Gross Asset Value
- Meter Equivalent Units
- Relative Benefits
- Square Footage Utilized

A description of each method, the percentages used in this Budget and the dollars allocated, are in the following pages.

Each financial transaction is assigned a cost center number when the transaction is recorded in the financial system. The fund number indicates whether it is a 'direct' charge to the fund or an 'indirect' charge that will be allocated. Each department's costs are broken down into the fund category in the Departmental Expense section. All costs ultimately are assigned to the one of the seven enterprise funds or three contract billing municipalities.

<u>Fund</u>	<u>Description</u>	<u>Fund</u>	<u>Description</u>	
10	Allocated to All Direct Funds	57	Portland Wastewater	
20	Water - members	59	South Portland Billing	
30	Water - nonmembers	61	Gorham Wastewater	
50	Allocated to All Wastewater Funds	62	Westbrook Wastewater	
51	Cape Elizabeth Wastewater	64	Allocated to	
53	Cumberland Wastewater		Gorham/Westbrook/Windham	
54	Falmouth Wastewater	65	Allocated to Gorham/Windham	
55	Windham Wastewater	66	Portland Wastewater (Peaks Island)	

Customers Served

This method determines the ratio of customers per fund to the total number of customers served based on the average total number of water and sewer customers.

The costs for Customer Service have three different allocations (general, billing and meter reading costs) that vary slightly. Falmouth has flat billings for their sewer customers; therefore, their general needs are limited (compared with sewer bills based on usage) and they do not utilize meter reading data. In addition, Scarborough does its own billing and payment processing utilizing the District's meter reading data, thus they have no general or billing expenses.

Sub-Groups Using Method:

F1 – Customer Service

H1 – Financial Services (payment processing)

2020 Allocation %:					2019 Allocation %:				
	General F1	Billing F1	Meter Read F1	Paymts H1		General F1	Billing F1	Meter Read F1	Paymts H1
Water	67.50%	66.13%	67.57%	66.13%	Water	67.50%	66.04%	67.48%	66.04%
Cape Eliz	2.15%	2.15%	2.15%	2.15%	Cape Eliz	2.15%	2.15%	2.15%	2.15%
Cumberland	1.08%	1.08%	1.08%	1.08%	Cumberland	1.08%	1.08%	1.08%	1.08%
Falmouth	0.36%	1.82%	0.00%	1.82%	Falmouth	0.36%	1.82%	0.00%	1.82%
Gorham	1.69%	1.71%	1.71%	1.71%	Gorham	1.69%	1.69%	1.69%	1.69%
Portland	15.67%	15.60%	15.60%	15.60%	Portland	15.67%	15.67%	15.67%	15.67%
Scarborough	0.00%	0.00%	0.38%	0.00%	Scarborough	0.00%	0.00%	0.38%	0.00%
So Portland	7.23%	7.20%	7.20%	7.20%	So Portland	7.23%	7.23%	7.23%	7.23%
Westbrook	4.27%	4.26%	4.26%	4.26%	Westbrook	4.27%	4.27%	4.27%	4.27%
Windhan	0.05%	0.05%	0.05%	0.05%	Windhan	0.05%	0.05%	0.05%	0.05%
	100.00%	100.00%	100.00%	100.00%		100.00%	100.00%	100.00%	100.00%
Dollars Allocated:					Dollars Allocated:				
	General F1	Billing F1	Meter Read F1	Paymts H1		General F1	Billing F1	Meter Read F1	Paymts H1
Water	\$697,482	\$227,500	\$53,955	\$120,309	Water	\$664,589	\$266,047	\$53,737	\$122,922
Cape Eliz	\$22,216	\$7,396	\$1,717	\$3,911	Cape Eliz	\$21,168	\$8,661	\$1,712	\$4,002
Cumberland	\$11,160	\$3,715	\$862	\$1,965	Cumberland	\$10,633	\$4,351	\$860	\$2,010
Falmouth	\$3,720	\$6,261	\$0	\$3,311	Falmouth	\$3,544	\$7,332	\$0	\$3,388
Gorham	\$17,463	\$5,883	\$1,365	\$3,111	Gorham	\$16,639	\$6,808	\$1,346	\$3,146
Portland	\$16,191	\$53,667	\$12,457	\$28,381	Portland	\$154,283	\$63,128	\$12,479	\$29,167
Scarborough	\$0	\$0	\$303	\$0	Scarborough	\$0	\$0	\$303	\$0
So Portland	\$74,708	\$24,769	\$5,749	\$13,099	So Portland	\$71,185	\$29,127	\$5,758	\$13,457
Westbrook	\$44,122	\$14,655	\$3,402	\$7,750	Westbrook	\$42,041	\$17,202	\$3,400	\$7,948
Windhan	517	173	40	91	Windhan	495	202	39	92
	\$1,033,307	\$344,019	\$79,850	\$181,928		\$984,577	\$402,858	\$79,634	\$186,132

Direct Labor

This method calculates the ratio of labor dollars directly charged by the area to specific funds.

Sub-Groups Using Method:

B1 – Wastewater Administration

L6 – Laboratory

B3 – East End (Portland) Wastewater Treatment

L9 – Water/Wastewater Systems

C1 – Facilities Services

E7 – Instrumentation (general wastewater)

2020 Allocation %:	B1	B3	C1	E7	L6	L9
Water	0.00%	0.00%	83.08%	0.00%	34.00%	0.00%
Cape Elizabeth	11.88%	7.34%	3.69%	11.88%	4.68%	11.88%
Cumberland	4.00%	0.00%	0.84%	4.00%	0.00%	4.00%
Gorham	5.73%	2.28%	1.09%	5.73%	3.94%	5.73%
Portland	63.39%	75.73%	8.74%	63.39%	35.82%	63.39%
Westbrook	12.72%	14.15%	2.41%	12.72%	21.02%	12.72%
Windham	2.28%	0.50%	0.15%	2.28%	0.54%	2.28%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Dollars Allocated:	B1	B3	C1	E7	L6	L9
Water	\$0	\$0	\$167,983	\$0	\$77,074	\$0
Cape Elizabeth	46,612	34,416	7,461	9,152	10,609	63,425
Cumberland	15,694	0	1,698	3,081	0	21,355
Gorham	22,482	10,691	2,204	4,414	8,932	30,592
Portland	248,713	355,088	17,672	48,832	81,200	338,429
Westbrook	49,907	66,348	4,873	9,799	47,650	67,910
Windham	8,946	2,344	303	1,757	1,224	12,173
	\$392,354	\$468,887	\$202,194	\$77,035	\$226,689	\$533,884
2019 Allocation %:	B1	B3	C1	E7	L6	L9
Water	0.00%	0.00%	80.00%	0.00%	33.27%	0.00%
Cape Elizabeth	10.90%	6.69%	3.36%	10.90%	4.14%	10.90%
Cumberland	3.31%	0.00%	0.66%	3.31%	0.00%	3.31%
Gorham	5.35%	2.26%	1.01%	5.35%	3.13%	5.35%
Portland	66.12%	77.27%	12.88%	66.12%	41.20%	66.12%
Westbrook	12.38%	13.31%	1.70%	12.38%	17.67%	12.38%
Windham	1.94%	0.47%	0.39%	1.94%	0.59%	1.94%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Dollars Allocated:	B1	B3	C1	E7	L6	L9
Water	\$0	\$0	\$162,787	\$0	\$72,618	\$0
Cape Elizabeth	41,874	27,709	6,837	8,043	9,036	61,071
Cumberland	12,716	0	1,343	2,442	0	18,545
Gorham	20,553	9,360	2,055	3,948	6,832	29,975
Portland	254,009	320,038	26,209	48,788	89,927	370,459
Westbrook	47,559	55,127	3,459	9,135	38,568	69,363
Windham	7,453	1,947	794	1,431	1,288	10,869
	\$384,163	\$414,181	\$203,484	\$73,787	\$218,269	\$560,283

General Allocation Percentage

The ratio is calculated by determining each fund's operating budget (total expenditures less other/interest income) as a percentage to the total operating budget.

Sub-Groups Using Method:

E7 – Instrumentation

H1 – Financial Services

J1 – General Manager's

G1 – Information Service

I1 – Employee Services

Office

2020 Allocation %:	E7	G1	H1	I1	J1
Water	56.05%	56.05%	56.05%	56.05%	56.05%
Cape Elizabeth	3.66%	3.66%	3.66%	3.66%	3.66%
Cumberland	2.17%	2.17%	2.17%	2.17%	2.17%
Gorham	2.66%	2.66%	2.66%	2.66%	2.66%
Portland	28.45%	28.45%	28.45%	28.45%	28.45%
Westbrook	6.13%	6.13%	6.13%	6.13%	6.13%
Windham	0.88%	0.88%	0.88%	0.88%	0.88%
	100.00%	100.00%	100.00%	100.00%	100.00%
Dollars Allocated:	E7	G1	H1	I1	J1
Water	\$84,284	\$671,708	\$407,200	\$346,575	\$1,021,198
Cape Elizabeth	5,504	43,862	26,590	22,631	66,683
Cumberland	3,263	26,005	15,765	13,418	39,536
Gorham	4,000	31,878	19,325	16,448	48,464
Portland	42,781	340,947	206,688	175,915	518,342
Westbrook	9,218	73,462	44,534	37,904	111,685
Windham	1,323	10,546	6,392	5,440	16,034
	\$150,373	\$1,198,408	\$726,494	\$618,331	\$1,821,942
2019 Allocation %:	E7	G1	H1	I1	J1
Water	55.89%	55.89%	55.89%	55.89%	55.89%
Cape Elizabeth	3.59%	3.59%	3.59%	3.59%	3.59%
Cumberland	2.08%	2.08%	2.08%	2.08%	2.08%
Gorham	2.64%	2.64%	2.64%	2.64%	2.64%
Portland	28.91%	28.91%	28.91%	28.91%	28.91%
Westbrook	6.04%	6.04%	6.04%	6.04%	6.04%
Windham	0.85%	0.85%	0.85%	0.85%	0.85%
	100.00%	100.00%	100.00%	100.00%	100.00%
Dollars Allocated:	E7	G1	H1	I1	J1
Water	\$80,222	\$604,199	\$395,038	\$289,146	\$1,000,868
Cape Elizabeth	5,153	38,810	25,375	18,573	64,289
Cumberland	2,986	22,486	14,702	10,761	37,248
Gorham	3,789	28,540	18,660	13,658	47,277
Portland	41,496	312,532	204,340	149,565	517,715
Westbrook	8,670	65,295	42,692	31,248	108,163
Windham	1,220	9,189	6,008	4,397	15,222
	\$143,535	\$1,081,050	\$706,814	\$517,348	\$1,790,781

Gross Asset Value

The allocation percentage is each fund's gross (fixed) asset value as a ratio to all gross assets. Costs allocated include those that involve all District assets (All) or in some cases only wastewater assets (WW). The same asset values are used in both calculations except that the Water assets are removed for the wastewater calculations.

Sub-Group Using Method:

E2 – Planning and Design

2020 Allocation %:

	All	WW
Water	64.36%	0.00%
Cape Elizabeth	3.25%	9.12%
Cumberland	1.54%	4.31%
Falmouth	0.00%	0.00%
Gorham	3.50%	9.83%
Portland	22.36%	62.74%
Westbrook	4.40%	12.34%
Windham	0.59%	1.66%
	100.00%	100.00%

2019 Allocation %:

	All	WW
Water	63.64%	0.00%
Cape Elizabeth	3.33%	9.17%
Cumberland	1.59%	4.36%
Falmouth	0.00%	0.00%
Gorham	3.61%	9.92%
Portland	22.77%	62.64%
Westbrook	4.44%	12.21%
Windham	0.62%	1.70%
	100.00%	100.00%

Dollars Allocated:

	All	WW
Water	\$636,348	\$0
Cape Elizabeth	32,134	22,876
Cumberland	15,226	10,811
Falmouth	0	0
Gorham	34,606	24,657
Portland	221,080	157,374
Westbrook	43,504	30,953
Windham	5,834	4,164
	\$988,732	\$250,835

Dollars Allocated:

	All	WW
Water	\$647,795	\$0
Cape Elizabeth	33,896	23,361
Cumberland	16,185	11,107
Falmouth	0	0
Gorham	36,746	25,271
Portland	231,777	159,575
Westbrook	45,195	31,105
Windham	6,311	4,331
	\$1,017,905	\$254,750

Meter Equivalent Units

This calculation takes each meter and assigns a weight based on its size to determine a value of meter service provided to each fund.

Sub-Group Using Method:

A6 – Utility Services (meter service)

2020 Allocation %:

	A6
Water	65.48%
Cape Elizabeth	1.75%
Cumberland	0.96%
Gorham	1.56%
Portland	17.21%
Scarborough	1.12%
South Portland	7.61%
Westbrook	4.23%
Windham	0.08%
	100.00%

2019 Allocation %:

	A6
Water	65.39%
Cape Elizabeth	1.76%
Cumberland	0.97%
Gorham	1.56%
Portland	17.23%
Scarborough	1.14%
South Portland	7.64%
Westbrook	4.23%
Windham	0.08%
	100.00%

Dollars Allocated:

	A6
Water	\$105,909
Cape Elizabeth	2,831
Cumberland	1,553
Gorham	2,523
Portland	27,836
Scarborough	1,812
South Portland	12,309
Westbrook	6,842
Windham	128
	\$161,743

Dollars Allocated:

	A6
Water	\$103,467
Cape Elizabeth	2,785
Cumberland	1,535
Gorham	2,468
Portland	27,263
Scarborough	1,804
South Portland	12,089
Westbrook	6,693
Windham	127
	\$158,231

Relative Benefits

This method of allocation is based upon management's assessment of the benefit received by the departments and funds from the areas providing the service. Customer Service (control/dispatch) allocation assumes most work (95%) will involve the Water fund; the remaining dollars are allocated to wastewater funds based on the number of pump stations in each community. The Laboratory wastewater split was determined by the number of tests run for each community. The allocation (new in 2019) for Industrial Pretreatment (IPT) is based on the applicable industries in each community.

Sub-Groups Using Method:

F1 – Customer Service (control/dispatch center)

L6 – Laboratory (general wastewater)

L6 – Industrial Pretreatment (IPT)

2020 Allocation %:

	F1	L6	IPT
Water	95.00%	0.00%	0.00%
Cape Elizabeth	1.64%	7.94%	0.00%
Cumberland	0.93%	0.00%	0.00%
Gorham	0.99%	3.80%	12.00%
Portland	1.00%	62.50%	64.00%
Westbrook	0.17%	24.80%	22.00%
Windham	0.27%	0.96%	2.00%
	100.00%	100.00%	100.00%

Dollars Allocated:

	F1	L6	IPT
Water	\$187,084	\$0	\$0
Cape Elizabeth	3,230	19,156	0
Cumberland	1,831	0	0
Gorham	1,950	9,168	6,783
Portland	1,969	150,790	36,179
Westbrook	335	59,833	12,436
Windham	532	2,317	1,131
	\$196,931	\$241,264	\$56,529

2019 Allocation %:

	F1	L6	IPT
Water	95.00%	0.00%	0.00%
Cape Elizabeth	1.64%	7.94%	0.00%
Cumberland	0.93%	0.00%	0.00%
Gorham	0.99%	3.80%	10.00%
Portland	1.00%	62.50%	66.00%
Westbrook	0.17%	24.80%	22.00%
Windham	0.27%	0.96%	2.00%
	100.00%	100.00%	100.00%

Dollars Allocated:

	F1	L6	IPT
Water	\$192,217	\$0	\$0
Cape Elizabeth	3,318	19,179	0
Cumberland	1,882	0	0
Gorham	2,003	9,179	7,542
Portland	2,023	150,971	49,774
Westbrook	344	59,905	16,591
Windham	547	2,320	1,508
	\$202,334	\$241,554	\$75,415

Square Footage Utilized

The costs of the Douglass Street administrative facility are charged to each area based on the square footage they occupy. Office space is charged out at a higher rate (five times higher) than warehouse space. Dollars are allocated to the sub-groups.

2020 Allocation %:

Water Operations	
A1 - Water Administration	2.00%
A2 - Transmission/Distribution	5.79%
A6 - Utility Services	<u>1.56%</u>
	9.35%
Environmental Services	
A5 - Water Resources	0.82%
L6 - Water/WW Laboratory (IPT)	<u>0.55%</u>
	1.37%
Wastewater Operations	
B1 - WW Administration	1.78%
L9 - Water/WW Systems	<u>3.66%</u>
	5.44%
Engineering Services	
C1 - Facility Services	23.12%
E2 - Planning & Design	15.04%
E7 - Instrumentation	<u>1.34%</u>
	39.50%
Administration	
F1 - Customer Service	11.53%
G1 - Information Services	5.61%
H1 - Financial Services	8.47%
I1 - Employee Services	3.89%
J1 - BOT & Senior Management	<u>14.84%</u>
	44.34%
	100.00%

Dollars Allocated:

	\$
Water Operations	\$71,306
Environmental Services	10,448
Wastewater Operations	41,487
Engineering Services	301,239
Administration	<u>338,150</u>
	\$762,630

2019 Allocation %:

Water Operations	
A1 - Water Administration	2.67%
A2 - Transmission/Distribution	5.25%
A6 - Utility Services	<u>1.58%</u>
	9.50%
Environmental Services	
A5 - Water Resources	0.83%
L6 - Water/WW Laboratory (IPT)	<u>0.00%</u>
	0.83%
Wastewater Operations	
B1 - WW Administration	0.83%
L9 - Water/WW Systems	<u>3.73%</u>
	4.56%
Engineering Services	
C1 - Facility Services	23.54%
E2 - Planning & Design	15.10%
E7 - Instrumentation	<u>1.37%</u>
	40.01%
Administration	
F1 - Customer Service	11.72%
G1 - Information Services	5.71%
H1 - Financial Services	8.61%
I1 - Employee Services	3.96%
J1 - BOT & Senior Management	<u>15.10%</u>
	45.10%
	100.00%

Dollars Allocated:

	\$
Water Operations	\$71,131
Environmental Services	6,215
Wastewater Operations	34,143
Engineering Services	299,574
Administration	<u>337,685</u>
	\$748,748

Vehicle Rates

Internal Transportation costs are charges the departments receive for the availability of District owned vehicles. Each type of vehicle and piece of equipment has an assigned hourly rate. Most vehicles are charged for 40 hours per week. Charges are either assigned directly to the task or to a “stand-by” account or later allocated. Transportation costs represent the expense of operating the garage and include labor, materials, occupancy and depreciation. Overall budget is 0.9% greater than 2019.

2020 Budget Details

Vehicle Type	Rate	Active Hours	Stand-by Hours	Total Hours
Backhoe/Loader <19,501 GVW	\$33.96	2,308		2,308
Backhoe/Loader >=19,500 GVW	\$39.10	560		560
Car	\$3.22	686		686
Compressor	\$20.56	2,641		2,641
Dump Truck < 15,000 GVW	\$8.68	1,590	490	2,080
Dump Truck 15,001-40,000 GVW	\$11.14	1,692	2,468	4,160
Dump Truck >= 40,000 GVW	\$14.89	3,153	3,087	6,240
Generator/Load Bank	\$34.98	442		442
Misc. Const. Equipment - Forklift, etc.	\$23.66	1,476		1,476
Misc. Trained Equipment - Cement Mixer, Jet Machine, etc.	\$15.45	1,665		1,665
Pick-up Truck/SUV - Light - < 6,000 GVW	\$3.22	1,430	2,730	4,160
Pick-up Truck/SUV - Medium - 6,001-7,500 GVW	\$3.47	14,339	23,102	37,440
Pick-up Truck/SUV - Heavy - 7,501-10,000 GVW	\$4.21	6,920	9,720	16,640
Special Purpose - C - Crane, Sludge, etc.	\$46.30	100		100
Special Purpose - D - Jetvac, etc.	\$61.73	2,756		2,756
Utility Truck 10,001 - 14,000 GVW	\$3.47	9,852	6,788	16,640
Utility Truck 14,001 - 16,000 GVW	\$4.95	3,671	2,569	6,240
Utility Truck 16,001 - 19,500 GVW	\$5.45	6,836	3,564	10,400
Utility Truck 6,001 - 10,000 GVW	\$5.94	5,170	3,150	8,320
Van < 6,000 GVW	\$3.22	1,890	2,270	4,160
Van 6,001-7,500 GVW	\$3.46	1,132	948	2,080
Van 7,501-10,000 GVW	\$4.21	24,224	15,296	39,520
Total Hours		94,533	76,182	170,714

Sub-Group	2019 Budget	2020 Budget	\$ - Difference	% - Difference
A1 - Water Administration	\$0	\$0	\$0	n/a
A2 - Transmission/Distribution	581,553	598,008	\$16,455	2.8%
A3 - Water Treatment	32,971	32,427	(\$544)	-1.6%
A5 - Water Resources	35,244	34,524	(\$720)	-2.0%
A6 - Utility Services	153,956	161,219	\$7,263	4.7%
B1 - WW Administration	0	0	\$0	n/a
B3 - Wastewater Treatment	56,326	55,141	(\$1,185)	-2.1%
C1 - Facility Services	56,505	52,283	(\$4,222)	-7.5%
E2 - Planning & Design	18,527	17,970	(\$557)	-3.0%
E7 - Instrumentation	21,560	21,133	(\$427)	-2.0%
F1 - Customer Service	14,717	14,417	(\$300)	-2.0%
I1 - Employee Services	0	0	\$0	n/a
J1 - BOT & Senior Management	0	0	\$0	n/a
L6 - Water/WW Laboratory	0	0	\$0	n/a
L9 - Water/WW Systems	178,096	172,942	(\$5,154)	-2.9%
	\$1,149,454	\$1,160,064	\$10,610	0.9%

Joint Use Facilities – Operations and Maintenance Allocations

The District has two areas where wastewater flows from more than one community are combined. Costs associated with these combinations are allocated by the percentage of the flow contributed by each community. The areas of combined flow are:

Portland Water District Facilities:

Westbrook Regional – All of the wastewater from Gorham, Westbrook and Windham is treated at Westbrook Regional Wastewater Treatment Facility, with one pump station handling the combined waste from all three communities. The budget for 2020 is \$1,167,968, up \$128,447 or 12.4% due to higher costs for biosolids disposal and chemicals.

Little Falls – The Little Falls areas of Gorham and Windham used to be a self-contained system with its own small treatment facility. Starting in 2008, wastewater from this area was conveyed to the Westbrook Regional Wastewater Treatment Facility. Currently, wastewater from Windham moves into Gorham where it is combined with that community's flow until it joins with the Westbrook flow at the Westbrook town line. The budget is \$77,391, up 11.5% (\$7,965) mostly due higher labor/benefit costs.

----- Westbrook Regional -----				----- Little Falls -----	
	Gorham	Westbrook	Windham	Gorham	Windham
2014	14.00%	83.70%	2.30%	15.00%	85.00%
2015	13.00%	84.70%	2.30%	20.00%	80.00%
2016	15.00%	82.00%	3.00%	22.50%	77.50%
2017	16.50%	80.25%	3.25%	21.50%	78.50%
2018	15.75%	81.00%	3.25%	27.50%	72.50%
2019	13.00%	84.00%	3.00%	28.00%	72.00%
2020	13.00%	84.00%	3.00%	24.50%	75.50%

Contracted Services Facilities:

South Portland – All of the wastewater from the Northern portion of Cape Elizabeth is treated at the South Portland Treatment Facility through a contractual agreement. Charges to the District are budgeted to be \$171,700 in 2020 (an increase of 3.1%).

Falmouth – All of the wastewater from Cumberland is treated at the Falmouth Treatment Facility through a contractual agreement. This cost is budgeted to be \$513,246 in 2020 (2.5% increase). The decrease primarily due to future capital costs.

----- South Portland -----			----- Falmouth -----		
	Cape Eliz	So Portland	Cumberland	Falmouth	Millcreek PS
2014	6.7%	93.3%	24.0%	76.0%	40.8%
2015	6.7%	93.3%	24.0%	76.0%	40.8%
2016	6.7%	93.3%	24.0%	76.0%	40.8%
2017	6.7%	93.3%	24.0%	76.0%	40.8%
2018	6.7%	93.3%	24.0%	76.0%	40.8%
2019	6.7%	93.3%	24.0%	76.0%	40.8%
2020	6.7%	93.3%	24.0%	76.0%	40.8%

Note: Starting in 2013 Millcreek Pump Station (PS) costs were be allocated to Cumberland at the specific rate above whereas in prior years it was allocated based on the Cumberland flow ratio.

Joint Use Facilities – Capital Cost Sharing Allocations

The District has two areas where wastewater flows from more than one community are combined. Costs associated with these combinations are allocated by the percentage of the design flow contributed by each community. The areas of combined flow are:

Portland Water District Facilities:

Westbrook Regional – All of the wastewater from Gorham, Westbrook and Windham is treated at Westbrook Regional Wastewater Treatment Facility. In addition, one pump station handles the combined waste from all three communities.

System	--- Millions of Gallons/Day (MGD) ---				----- Flow Percentage -----		
	Westbrook	Gorham	Windham	Total	Westbrook	Gorham	Windham
Southside Interceptor above Manhole 60	0.16	1.06	0.12	1.34	12.0%	79.1%	9.0%
Manhole 60 up to and including Siphon	5.00	1.06	0.12	6.18	81.0%	17.2%	1.9%
Cottage Place Pumping Station & Force Main	2.12	0.70	0.06	2.88	73.7%	24.3%	2.1%
Westbrook Regional WWTF & Outfall	3.02	1.40	0.12	4.54	66.6%	30.8%	2.6%

Little Falls – The Little Falls areas of Gorham and Windham used to be a self-contained system with its own small treatment facility. Starting in 2008, wastewater from this area was conveyed to the Westbrook Regional Wastewater Treatment Facility. As it is presently constituted, wastewater from Windham moves into Gorham where it is combined with that community's flow until it joins with the Westbrook flow at the Westbrook town line.

Facility Name	----- Gallons/Day -----			-- Flow Percent --	
	Gorham	Windam	Total	Gorham	Windam
Gray Rd/Mallison St Gravity Sewer	63,500	53,500	117,000	54.3%	45.7%
Mallison St Pump Station (PS)/Flow Meter (FM)	84,000	100,000	184,000	45.6%	54.4%
Mosher Rd Gravity Sewer	145,000	100,000	245,000	59.2%	40.8%
Little River PS/FM	222,500	100,000	322,500	69.0%	31.0%
Mosher Rd & Cross Country Gravity Sewer	638,000	100,000	738,000	86.4%	13.6%
Industrial Park Gravity Sewer Upgrade	2,105,000	100,000	2,205,000	95.5%	4.5%
Woodlawn Ave PS (Town Path Rd) effective 2008	-	-	-	100.0%	0.0%
Fire Station (Route 202) PS	-	-	-	0.0%	100.0%
Androscoggin St PS	-	-	-	0.0%	100.0%

Contracted Services Facilities:

South Portland – All of the wastewater from the Northern portion of Cape Elizabeth is treated at the South Portland Treatment Facility through a contractual agreement.

--- Millions Gallons/Day (MGD) ---				---- Flow Percentage ----	
Facility Name	Cape Eliz	So Portland	Total	Cape Eliz	So Portland
Treatment Plant	0.716	8.584	9.300	7.7%	92.3%

Note: In Cape Elizabeth 1/13th of average design flow = 7.7% per Sewer Service Agreement dated 08/11/93.

Falmouth – All of the wastewater from Cumberland is treated at the Falmouth Treatment Facility through a contractual agreement.

Millions of Gallons/Day (MGD)*				----- Flow Percentage -----	
Facility Name	Cumberland	Falmouth	Total	Cumberland	Falmouth
Route 88 Interceptor - Town Line to Millcreek PS	1.790	1.007	2.797	64.0%	36.0%
Millcreek PS & Force Main	1.076	1.998	3.074	35.0%	65.0%
Millcreek Interceptor	2.030	1.595	3.625	55.5%	44.5%
Treatment Facility (average design flow)	0.468	1.092	1.560	30.0%	70.0%
Cumberland Route 1 Sewer Extension to Johnson Rd PS	0.144	0.490	0.634	22.7%	77.3%
Existing Sewers & Mains - Johnson Rd to Millcreek	0.144	0.216	0.360	40.0%	60.0%
Johnson Road PS (gallons pumped per minute)	100	150	250	40.0%	60.0%

* = Peak flow unless noted otherwise

Introduction

The appendix contains the following:

- 2021-2024 Financial Forecast
- Maine Measures of Growth 2019 Scorecard
- Water Benchmark Data
- Portland Water District Rate Sheet Summary
- Customer Satisfaction Survey
- Board of Trustees' Orders and Resolutions
- Glossary

2021 to 2024 Financial Forecast

A long-term financial forecast is developed incorporating estimated cost adjustments to operating expense line items and impact of projects in the capital improvement plan. A summary of the operating and capital budget plans are provided below. An income statement for each fund is provided in the Budget by Fund section.

Consolidated Operating Budget:

	2019 Budget	2020 Forecast	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast
Revenues:						
Water Sales	\$ 24,817,595	\$ 25,686,370	\$ 27,232,956	\$ 28,536,589	\$ 30,114,889	\$ 31,773,739
Assessment Income	\$ 19,448,472	\$ 20,218,572	\$ 20,949,066	\$ 22,430,312	\$ 22,663,946	\$ 23,333,621
Contracted Billing Income	\$ 212,388	\$ 212,460	\$ 238,655	\$ 236,644	\$ 234,805	\$ 233,142
Interest Income	\$ 505,383	\$ 707,747	\$ 530,809	\$ 530,809	\$ 530,809	\$ 530,809
Other Income	\$ 553,614	\$ 664,790	\$ 664,790	\$ 664,790	\$ 664,790	\$ 664,790
Total Revenues	\$ 45,537,452	\$ 47,489,939	\$ 49,616,276	\$ 52,399,144	\$ 54,209,239	\$ 56,536,101
Operating Expenses:						
Salaries & Wages	\$ 6,575,583	\$ 6,861,489	\$ 7,067,333	\$ 7,279,353	\$ 7,497,732	\$ 7,722,664
Employee Benefits	\$ 3,032,331	\$ 3,015,776	\$ 3,166,563	\$ 3,324,892	\$ 3,491,138	\$ 3,665,694
Biosolids Disposal	\$ 1,674,962	\$ 1,731,815	\$ 1,762,987	\$ 1,794,721	\$ 1,827,026	\$ 1,859,912
Chemicals	\$ 1,135,813	\$ 1,220,309	\$ 1,256,918	\$ 1,294,625	\$ 1,333,463	\$ 1,373,467
Contracted Services	\$ 3,034,136	\$ 3,217,876	\$ 3,291,887	\$ 3,367,600	\$ 3,445,054	\$ 3,524,290
Deferred Cost W/O	\$ 10,100	\$ -	\$ -	\$ -	\$ -	\$ -
Facilities	\$ 112,013	\$ 112,336	\$ 114,920	\$ 117,563	\$ 120,267	\$ 123,033
Heat/Fuel Oil	\$ 266,481	\$ 318,991	\$ 330,157	\$ 341,712	\$ 353,671	\$ 366,050
Insurance	\$ 63,817	\$ 72,179	\$ 73,838	\$ 75,536	\$ 77,274	\$ 79,052
Materials & Supplies	\$ 1,123,976	\$ 1,161,661	\$ 1,188,379	\$ 1,215,711	\$ 1,243,674	\$ 1,272,279
Other Expense	\$ 205,952	\$ 232,468	\$ 237,816	\$ 243,285	\$ 248,881	\$ 254,605
Purchased Power	\$ 1,682,683	\$ 1,853,010	\$ 1,853,010	\$ 1,853,010	\$ 1,888,217	\$ 1,924,092
Regulatory/Taxes	\$ 213,965	\$ 244,649	\$ 250,276	\$ 256,032	\$ 261,921	\$ 267,945
Tele/Other Utilities	\$ 245,043	\$ 258,343	\$ 264,286	\$ 270,365	\$ 276,582	\$ 282,943
Transportation	\$ 963,291	\$ 984,302	\$ 1,006,942	\$ 1,030,102	\$ 1,053,795	\$ 1,078,033
SS - Administration	\$ 5,956,031	\$ 6,209,365	\$ 6,675,775	\$ 6,897,746	\$ 7,127,097	\$ 7,364,073
SS - Engineering Services	\$ 1,693,461	\$ 1,669,169	\$ 1,844,084	\$ 1,904,754	\$ 1,967,420	\$ 2,032,148
SS - Environmental Services	\$ 535,238	\$ 524,546	\$ 541,988	\$ 560,010	\$ 578,631	\$ 597,870
SS - Wastewater Services	\$ 1,358,627	\$ 1,403,111	\$ 1,449,764	\$ 1,497,969	\$ 1,547,776	\$ 1,599,240
SS - Water Services	\$ 158,638	\$ 162,437	\$ 218,637	\$ 225,908	\$ 233,419	\$ 241,179
Debt Service	\$ 10,392,178	\$ 10,664,571	\$ 11,298,906	\$ 13,017,042	\$ 13,706,267	\$ 14,871,606
Renewal & Replacement - Direct	\$ 4,255,549	\$ 4,477,349	\$ 4,610,849	\$ 4,720,849	\$ 4,830,849	\$ 4,940,849
Renewal & Replace - Indirect	\$ 850,000	\$ 1,093,981	\$ 836,722	\$ 836,722	\$ 836,722	\$ 836,722
Total Operating Expenses	\$ 45,539,868	\$ 47,489,733	\$ 49,342,037	\$ 52,125,507	\$ 53,946,876	\$ 56,277,746
	\$ (2,416)	\$ 206	\$ 274,239	\$ 273,637	\$ 262,363	\$ 258,355

Consolidated Capital Budget:

Fund(s)	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Water	\$9,506,000	\$12,225,000	\$10,800,000	\$16,300,000	\$9,650,000	\$58,481,000
Cape Elizabeth Wastewater	\$530,000	\$330,000	\$150,000	\$415,000	\$325,000	\$1,750,000
Cumberland Wastewater	\$20,000	\$420,000	\$20,000	\$20,000	\$20,000	\$500,000
Gorham Wastewater	\$20,000	\$20,000	\$350,000	\$20,000	\$20,000	\$430,000
Portland Wastewater	\$4,545,000	\$3,865,000	\$2,470,000	\$6,895,000	\$6,870,000	\$24,645,000
Westbrook Wastewater	\$45,000	\$95,000	\$20,000	\$20,000	\$20,000	\$200,000
Windham Wastewater	\$20,000	\$20,000	\$20,000	\$520,000	\$20,000	\$600,000
Gorham/Westbrook/Windham Wastewater	\$11,300,000	\$750,000	\$225,000	\$50,000	\$950,000	\$13,275,000
Gorham/Windham Wastewater	\$300,000					\$300,000
Wastewater-All	\$350,000	\$350,000				\$700,000
Water and Wastewater	\$1,440,000	\$2,500,000	\$1,600,000	\$1,775,000	\$2,525,000	\$9,840,000
Grand Total	\$28,076,000	\$20,575,000	\$15,655,000	\$26,015,000	\$20,400,000	\$110,721,000

2021 to 2024 Financial Forecast(continued)

A summary of future revenue impact to water ratepayers and wastewater municipal assessments is provided below. Total water revenues are projected to increase between 4.9% and 6.0% each year. The impact to retail customers is listed in the second table.

All 2020 wastewater assessments are at or below projections that were provided to the wastewater municipalities for ratemaking purposes last year except for Cumberland. The updated 2021-2024 are preliminary and will be reviewed with municipal officials in November 2019 before being finalized.

Water Revenues and Municipal Assessments:

	Proposed 2020 Budget	Prior Year 2020 Projection	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast
Water	\$ 25,686,370 4.9%	\$ 26,169,676 5.4%	\$ 27,232,956 6.0%	\$ 28,536,589 4.8%	\$ 30,114,889 5.5%	\$ 31,773,739 5.5%
Wastewater:						
Cape Elizabeth	1,705,380 8.4%	1,705,860 8.5%	1,854,425 8.7%	1,973,768 6.4%	2,022,348 2.5%	2,092,893 3.5%
Cumberland	965,292 6.6%	906,807 0.2%	962,955 -0.2%	993,352 3.2%	1,005,447 1.2%	1,018,193 1.3%
Falmouth	314,112 0.00%	312,050 -0.70%	312,050 -0.7%	310,089 -0.6%	308,147 -1.3%	306,225 -1.2%
Gorham	1,160,676 2.4%	1,160,707 2.4%	1,255,249 8.1%	1,476,697 17.6%	1,486,814 0.7%	1,494,896 0.5%
Portland	12,863,340 2.0%	13,659,198 8.3%	13,190,949 2.5%	13,792,536 4.6%	13,916,774 0.9%	14,429,076 3.7%
Westbrook	2,820,768 11.1%	2,880,704 13.4%	2,951,910 4.6%	3,440,278 16.5%	3,468,697 0.8%	3,499,603 0.9%
Windham	389,004 6.1%	389,421 6.2%	419,184 7.8%	441,301 5.3%	453,487 2.8%	490,564 8.2%

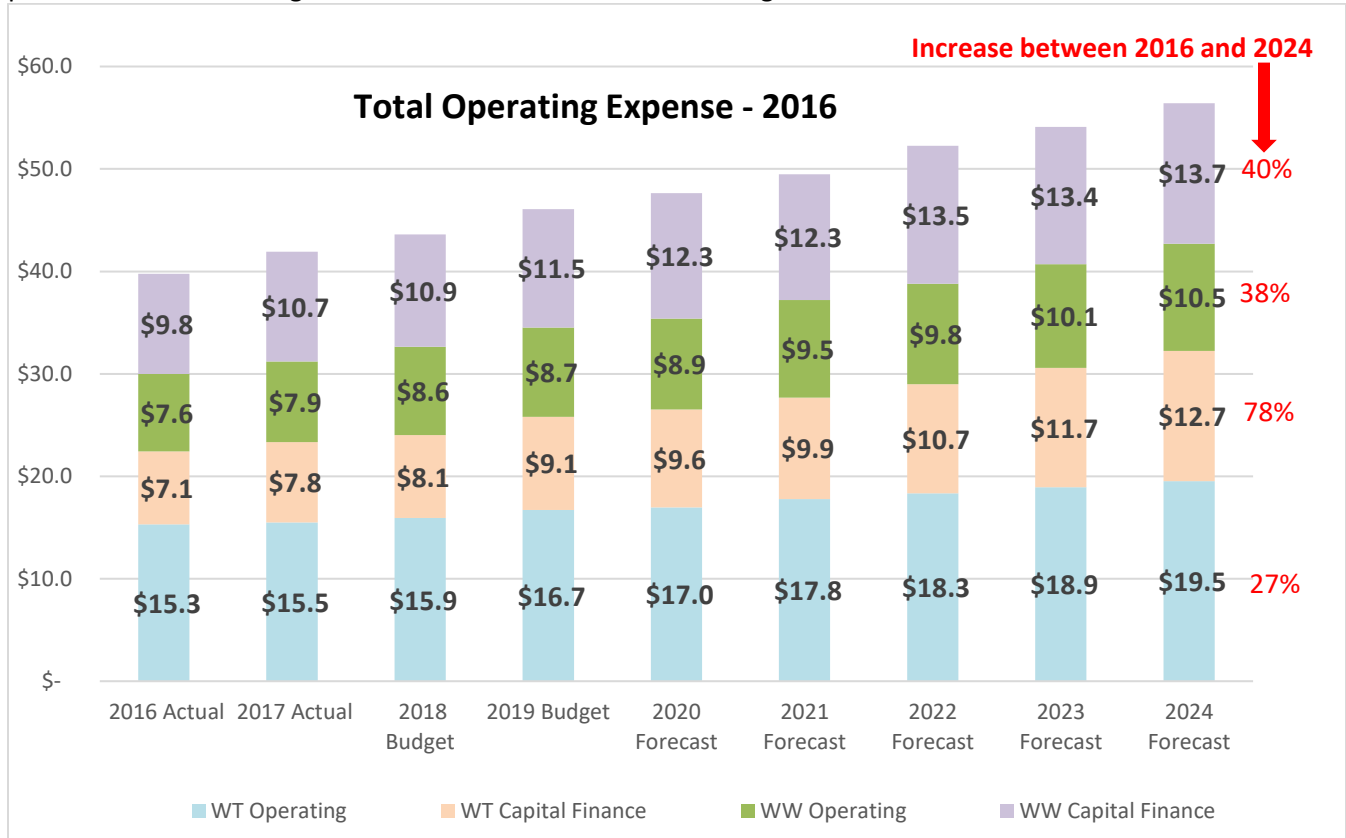
Water Retail Customer Impact:

(By Dollar)		2019	2020	2021	2022	2023	20232
Residential	.62" meter, 7 HCF	\$ 24.39	\$ 25.11	\$ 26.69	\$ 27.60	\$ 29.01	\$ 30.22
Commercial	.75" meter, 80 HCF	188.75	196.13	212.00	221.55	236.29	249.35
Small Industrial	2" meter, 1,300 HCF	1,857.46	1,944.21	2,119.21	2,225.18	2,398.77	2,553.96
Large Industrial	8" meter, 56,000 HCF	60,115.10	62,949.46	68,621.26	72,025.77	77,695.22	82,796.20
Sprinkler (per year)	6" meter	447.20	462.85	496.22	515.92	546.93	574.00
Public Fire (per year)		1,461,652	1,512,675	1,621,723	1,686,085	1,787,399	1,875,857
Seasonal (per year)	.62" meter	234.84	243.04	260.56	270.90	287.18	301.40

(By Percent)							
Residential	.62" meter, 7 HCF	3.8%	3.0%	6.3%	3.4%	5.1%	4.2%
Commercial	.75" meter, 80 HCF	4.7%	3.9%	8.1%	4.5%	6.7%	5.5%
Small Industrial	2" meter, 1,300 HCF	5.7%	4.7%	9.0%	5.0%	7.8%	6.5%
Large Industrial	8" meter, 56,000 HCF	6.0%	4.7%	9.0%	5.0%	7.9%	6.6%
Sprinkler (per year)	6" meter	4.4%	3.5%	7.2%	4.0%	6.0%	4.9%
Public Fire (per year)		4.4%	3.5%	7.2%	4.0%	6.0%	4.9%
Seasonal (per year)	.62" meter	4.4%	3.5%	7.2%	4.0%	6.0%	5.0%

2021 to 2024 Financial Forecast (continued)

Total expenses are projected to increase to over \$56 million by 2023, a 42% total increase since 2016 (or 5.25% a year). As the chart shows, increases in capital financing are driving the increases with water and wastewater capital finance cost increasing by 78% and 40%, respectively. Capital finance costs consists of two components – debt service payments and contribution to the renewal and replacement funds. The debt service component portion of the total budget increases from 19% of the total budget to 26%.



Major assumptions incorporated in the projections are as follows:

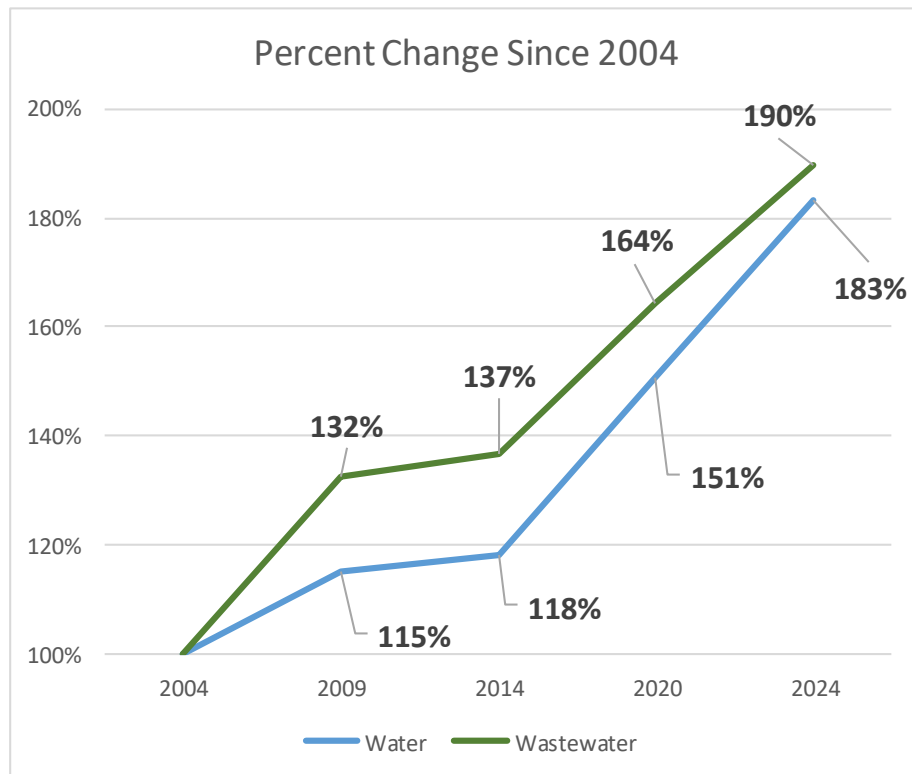
- Salary increases of 3.0% each year. Assumed 1.25 increase in headcount 2021.
- Benefit increases of 5% each year.
- Biosolids contract expires in 2021; assumed 5% increase in unit prices.
- Other expenses increase between 2.3% and 3.5% each year.
- New debt service and renewal/replacement fund expenditures consistent with the 2020 5-year capital plan. The Capital Expenditures Section provides details of the projects.
- Plan incorporates costs related to completion of the new billing and asset management computer system in 2021, additional resources to fully implement a large meter testing program and updating the Asset Management Master Plan in 2021.

The following pages provides additional information on the each major expense category.

2021 to 2024 Financial Forecast (continued)

Budget by Fund Trends

The proposed 2020 budget is 64% and 51% higher than 2004 budget for the wastewater funds and water fund, respectively. Between 2004 and 2009, significant bonded capital projects including the connecting the Little Falls area in Windham and Gorham to the Westbrook Regional Treatment facility and upgrades at the treatment facilities. With the additional investment in water main renewal and 407 zone investment, the gap between water and wastewater closed by seven percent in the last 5 years. The gap is projected to continue to narrow in the next 5 years.



Total Expense Budget

	2004	2009	2014	2020	2024
Water	\$17,608,717	\$20,245,019	\$20,817,310	\$26,519,287	\$32,247,749
WW- Cape Elizabeth	1,043,475	1,089,695	1,378,857	1,726,264	2,108,556
WW- Cumberland	498,146	767,586	771,632	978,595	1,028,170
WW- Falmouth	45,721	10,937	15,012	307,301	309,221
WW- Gorham	578,340	1,056,084	1,121,671	1,179,131	1,508,737
WW- Portland	8,481,000	10,951,209	10,982,397	13,227,844	14,952,454
WW- Westbrook	1,920,536	2,474,362	2,645,693	2,931,963	3,592,624
WW- Windham	54,091	338,117	355,253	397,107	496,641
Other Contract Billing	136,834	206,279	189,158	222,242	233,594
Total	\$30,366,860	\$37,139,288	\$38,276,983	\$47,489,734	\$56,477,746

2021 to 2024 Financial Forecast (continued)

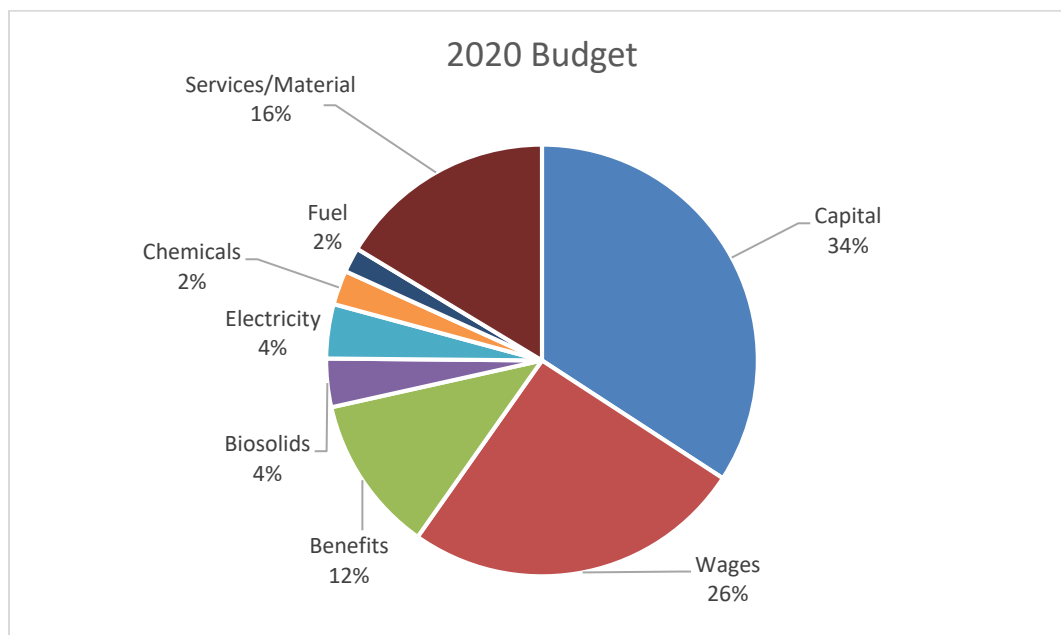
Revenue

Waters and Wastewater Assessments are increased to cover the expenses all the expenses net of interest income and other miscellaneous income.

Interest Income assumed interest rates would decline from 1.8% to 1.4% over the 2021-2024 time frame.

Expenses

Expenses are based on the proposed 2020 budget with appropriate changes as described on the following pages for each category in the graph below. The District has over a half billion dollars of infrastructure to operate and maintain so it isn't surprising the largest cost relates to Capital at 34% of the total budget. To operate and maintain the assets, staff's wages and benefits make up 38% of the budget. All other costs are 28% of the budget.



2021 to 2024 Financial Forecast (continued)

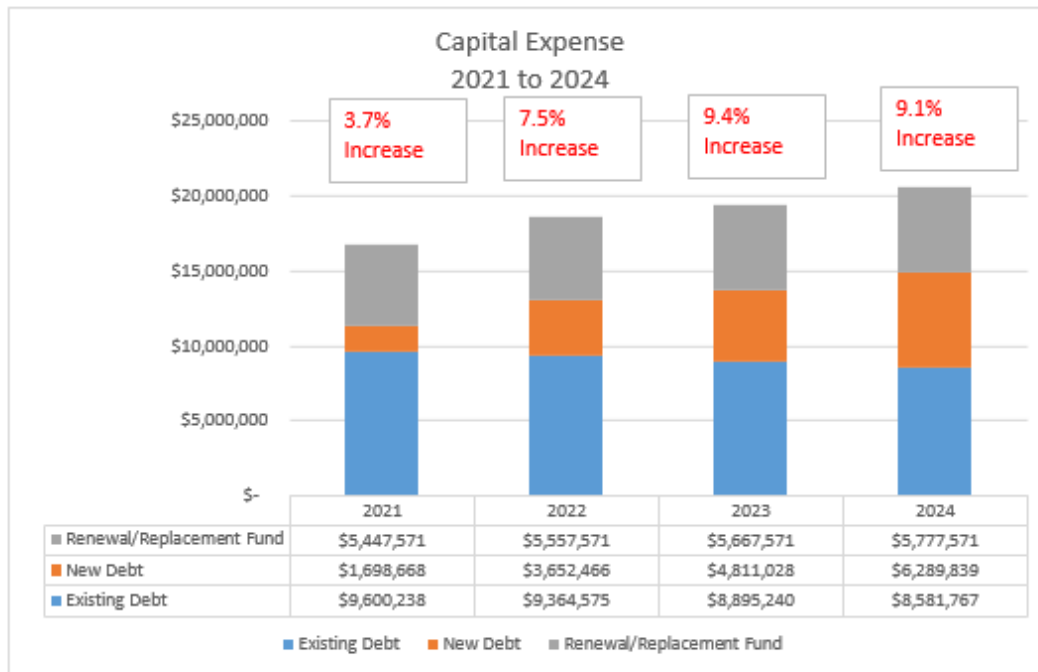
Capital

The operating budget includes the annual contribution to a renewal/replacement fund to pay for smaller capital projects, and debt service on existing and proposed larger capital projects. The contribution to the renewal/replacement fund remains the same except for \$100,000 and \$10,000 increases each year in the Water and Cape Elizabeth Wastewater Fund. Existing debt service declines due to the lower interest costs on declining outstanding principal balance. Over \$81 million of new bonds are forecasted to be issued between 2020 and 2024. Eligible projects will be financed through the State Revolving Loan fund at a subsidized interest. After consultation with the District's financial advisor, the assumed rate are 1.0% and 1.5% for the SRF bonds for the years 2020-21 and 2022-2024, respectively, and 2.5% and 3.0% for General bonds for the years 2020-21 and 2022-2024, respectively.

The Capital Improvement Plan assumes the following funding of future projects.

Fund(s)	-2020-	-2021-	-2022-	-2023-	-2024-	-Total-
Renewal and Replacement	\$5,696,000	\$6,655,000	\$5,280,000	\$4,800,000	\$6,125,000	\$28,556,000
Bond General Program	\$7,430,000	\$11,230,000	\$8,675,000	\$15,665,000	\$8,900,000	\$51,900,000
Bond State Revolving Loan	\$14,950,000	\$1,940,000	\$1,700,000	\$5,550,000	\$5,375,000	\$29,515,000
Grand Total	\$28,076,000	\$19,825,000	\$15,655,000	\$26,015,000	\$20,400,000	\$109,971,000

Capital Expenses are forecasted to increase between 3.7% and 9.4% in the upcoming years.



2021 to 2024 Financial Forecast (continued)

Bond Limits

The District has no legal limits of debt. A board-approved policy establishes a target maximum level of debt service to 35% of total fund budget and minimum debt service ratio of 1.25. The table indicates the status and projected status. The projected status is based on the projection included at the end of the Revenue section and includes bond financed capital projects as noted in the 5-year capital plan in the Capital Expenditures section.

Percent of Budget Dedicated to Debt Service – Target: Not to Exceed 35%

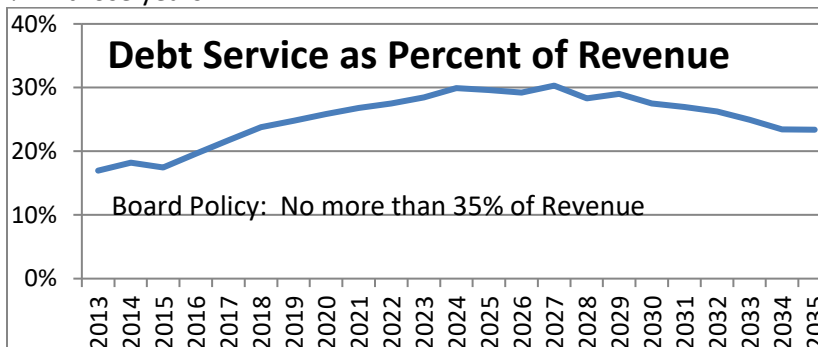
Funds	2018	2019	2020	2021	2022	2023	2024
Water	21%	22%	23%	23%	25%	26%	28%
Wastewater							
Cape Elizabeth	15%	15%	17%	21%	23%	22%	22%
Cumberland	33%	34%	31%	32%	32%	31%	30%
Gorham	31%	34%	32%	34%	42%	41%	40%
Portland	21%	20%	19%	18%	21%	20%	21%
Westbrook	17%	19%	21%	23%	32%	31%	30%
Windham	35%	38%	35%	38%	39%	39%	43%

Debt Service Ratio – Target: Greater or Equal to 1.25

Funds	2018	2019	2020	2021	2022	2023	2024
Water	1.82	1.51	1.57	1.57	1.53	1.49	1.44
Wastewater							
Cape Elizabeth	1.65	1.49	1.52	1.41	1.36	1.39	1.39
Cumberland	1.03	1.19	1.28	1.17	1.16	1.17	1.17
Gorham	1.12	1.25	1.30	1.29	1.20	1.20	1.21
Portland	1.50	1.36	1.53	1.52	1.42	1.45	1.42
Westbrook	1.81	1.67	1.56	1.47	1.29	1.30	1.30
Windham	0.96	1.19	1.29	1.25	1.23	1.22	1.19

Long-Term Water Fund Target

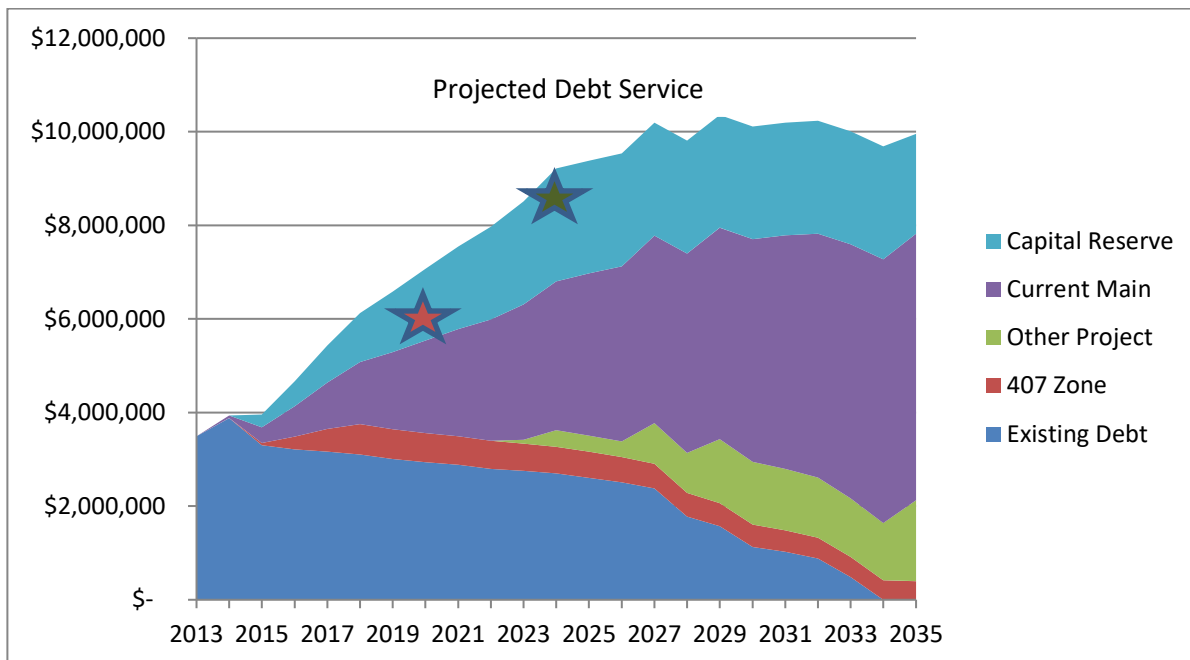
The long-term water fund target was established in 2013. Projected 2020-2024 is below the established target at 22-27% in those years.



2021 to 2024 Financial Forecast (continued)

Projected Water Debt

The Water Fund has significant future bond financing needs including completing the 407 zone system upgrade and main renewals. In 2011, the Board adopted the policy to double the investment in main renewal by incrementally increasing the amount spent by \$500,000 until reaching an annual level of \$4 million in 2016. Starting in 2014, an additional annual investment of \$2 million was bonded to pay for main renewal and funded through the capital reserve. Other major projects include the installation of a new meter reading system and transmission line projects.



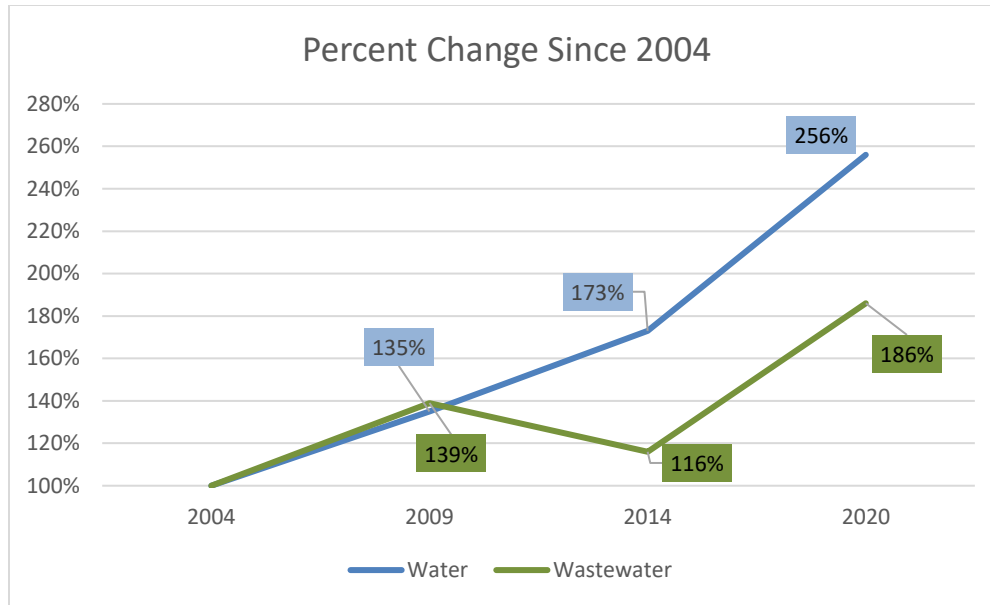
★ The 2020 Budget requests \$6.1 million of debt service, below the long-term plan

★ The updated multi-year projection indicates debt service payments will be \$9.2 million in 2023, \$200,000 below 2013 target.

2021 to 2024 Financial Forecast (continued)

Outstanding Debt by Fund Trends

The proposed 2020 budget results in outstanding debt increasing by 256% and 186% higher than 2004 for the water and wastewater funds, respectively. Between 2004 and 2009, significant bonded capital projects including the connecting the Little Falls area in Windham and Gorham to the Westbrook Regional Treatment facility and upgrades at the treatment facilities. Investments in water main renewal, water 407 zone and water and wastewater treatment plants & pump stations are driving the more recent increase.



Outstanding Debt By Fund

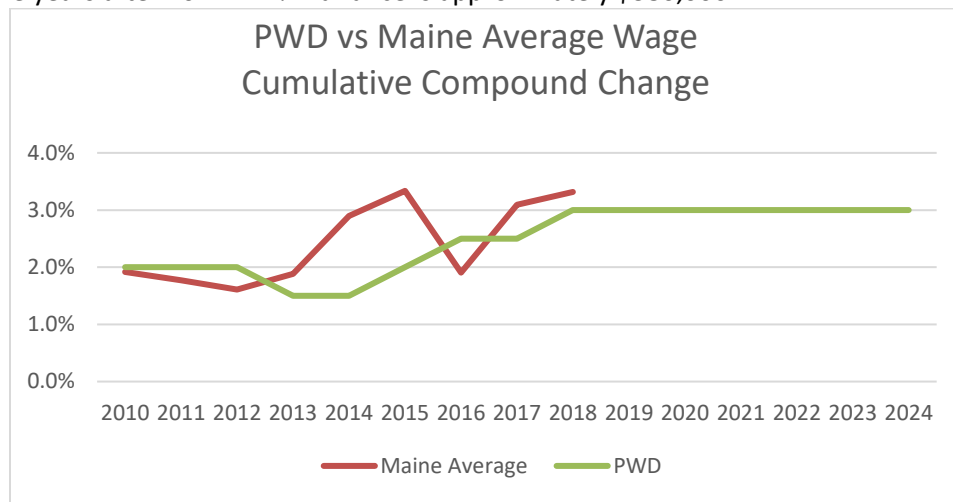
	2004	2009	2014	2020
Water	\$22,940,000	\$30,950,023	\$39,645,214	\$58,814,558
WW- Cape Elizabeth	839,000	159,250	2,276,000	4,251,950
WW- Cumberland	147,600	130,850	75,000	37,500
WW- Falmouth	0	0	0	3,846,000
WW- Gorham	590,081	5,552,894	4,042,816	3,007,525
WW- Portland	19,914,857	19,263,106	15,517,561	24,623,670
WW- Westbrook	1,792,859	5,325,885	3,645,084	6,326,869
WW- Windham	37,736	1,925,071	1,414,740	1,221,843
Total	\$ 46,262,133	\$ 63,307,079	\$ 66,616,415	\$ 102,129,915

2021 to 2024 Financial Forecast (continued)

Salaries and Wages

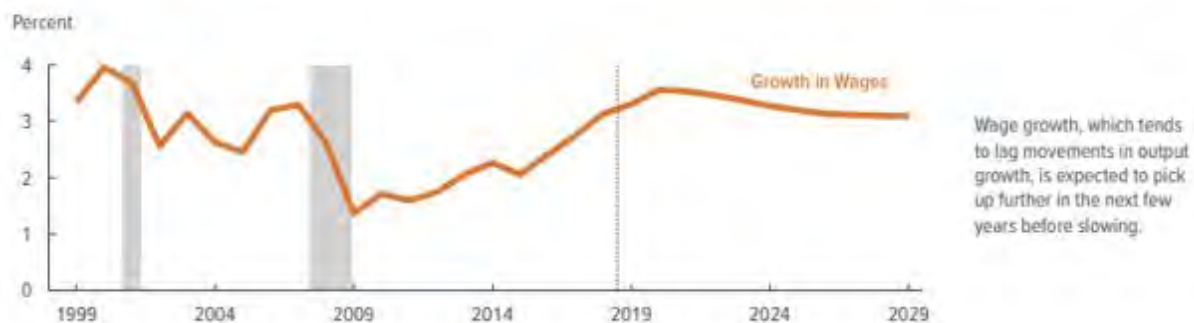
The second largest expense category is Salaries and Wages. One of our Corporate Goals is optimize the number of employees for the workload. For 2020, a decision was made to increase staffing levels by 4 full-time employees – 2 water operations, 1 information services and 1 employee services employees. The increases emphasize the need to allocate more resources maintaining our water infrastructure, computer system, and employees. Looking ahead, the forecast assume 1 additional employee for Engineering Services – emphasizing the continued efforts on asset management.

Given the historic low unemployment attracting and retaining employees has been challenge. Competitive wages are an important in those efforts. The chart bellows indicate we have given wage at a rising and competitive rate compared to others in Maine. Looking ahead, the recently approved union contract calls for increases of 3% through most of 2021. As the second chart indicates wages increases are expected to be around 3% in the years after 2021. A 1% variance is approximately \$380,000.



AN UPDATE TO THE BUDGET AND ECONOMIC OUTLOOK: 2019 TO 2029

AUGUST 2019



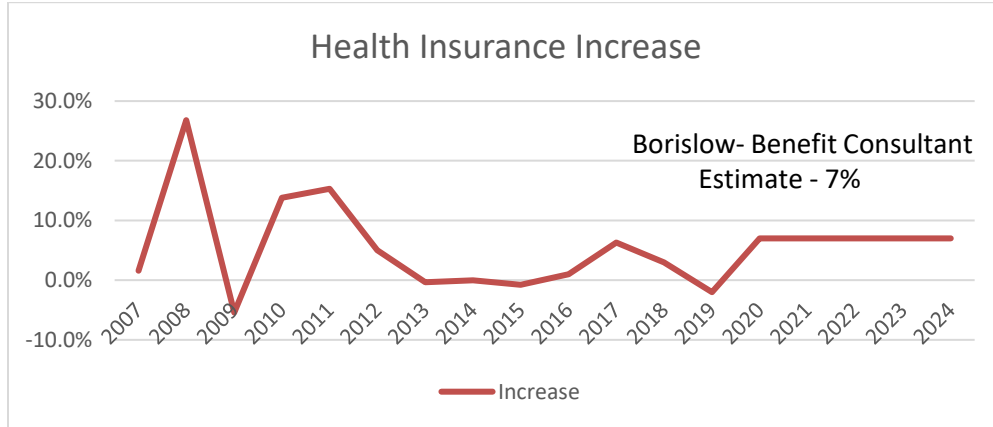
Sources: Congressional Budget Office; Bureau of Economic Analysis; Bureau of Labor Statistics; Federal Reserve.

2021 to 2024 Financial Forecast (continued)

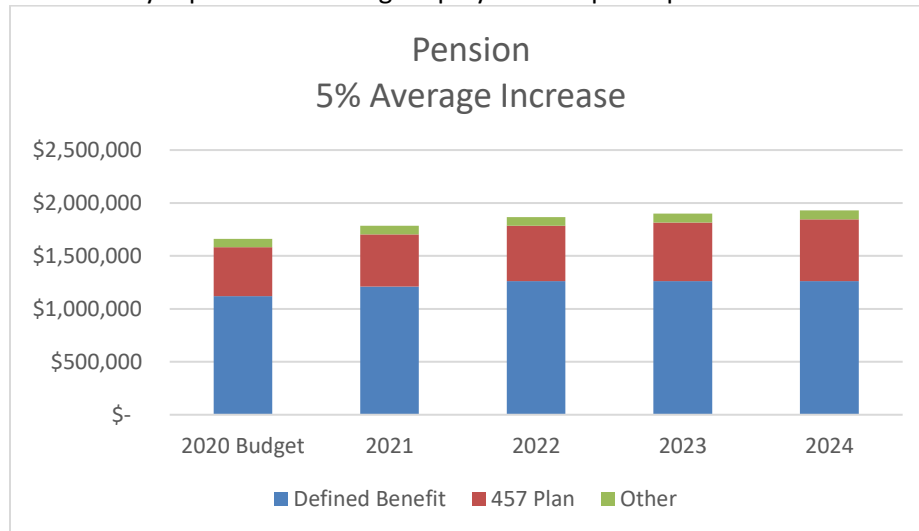
Benefits

The third largest line is Employee Benefits. Benefits consist of 3 major components – Health Insurance , Pension and All Other Benefits.

Health Insurance. For 2020, a small decline in premium was negotiated. In 2019, employee share of the costs was increased to 9% from 8%. For the upcoming years, no change in the co-payment has been forecasted. The District's Benefit consultant has estimated premiums should increase by 7% in the future years. To assist in reducing the costs, Employee Services has developed a employee wellness program and an increase in the amount paid to employees who opt out of the District's plan has been increased.



Pension. The District has a closed defined benefit plan and continues to Board adopted policy of funding 100% of the amount calculated by the actuary. The 457 Plan cost is expected to increase by \$30,000 to match the new hire contribution as they replace the retiring employees that participate in the defined benefit plan.

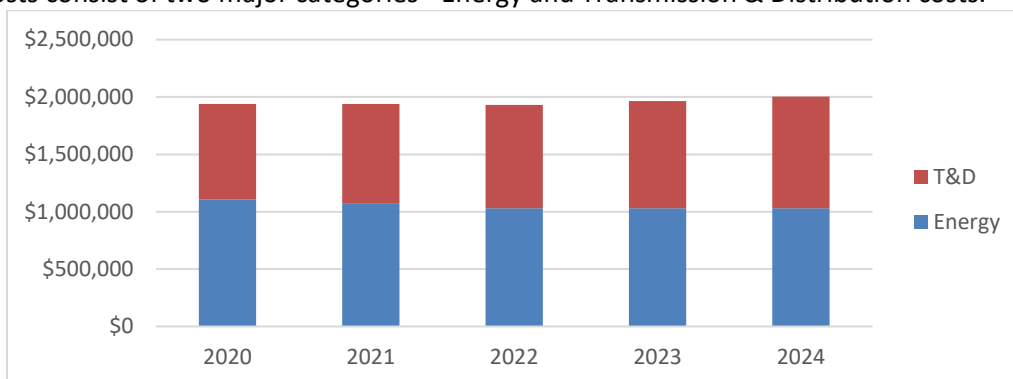


All other benefits are assumed to increase by 2% resulting in an average 2021-2024 increase in Benefits of 5%.

2021 to 2024 Financial Forecast (continued)

Purchased Power

Electricity Costs consist of two major categories - Energy and Transmission & Distribution costs.

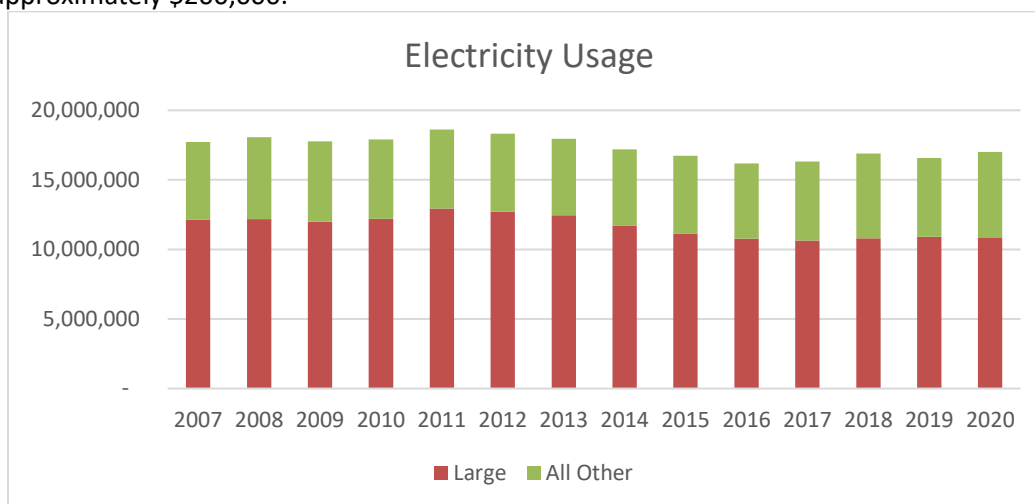


Energy costs are currently purchased from Constellation Energy. Contracts have been signed through the end of 2022 with an overall decrease of 7% from the 2020 costs. No increase is anticipated in 2023 and 2024.

T&D costs are charged by Central Maine Power. CMP cost increases are unknown however they have indicated they will strive to keep it increases in the 3% range. For every 1% difference, costs would be approximately \$9,000 higher per year.

The combined anticipated change is 0.0%, -0.6% ,1.9% & 1.9% for the years 2021 through 2024.

The forecast assumes the same level on consumption assumed in the 2020 Budget. Actual consumption varies based on weather conditions, which impact the amount of drinking water produced and wastewater processes. Since 2007, the variance between the highest and lowest amount of electricity is 11%, which would impact the budget by approximately \$200,000.



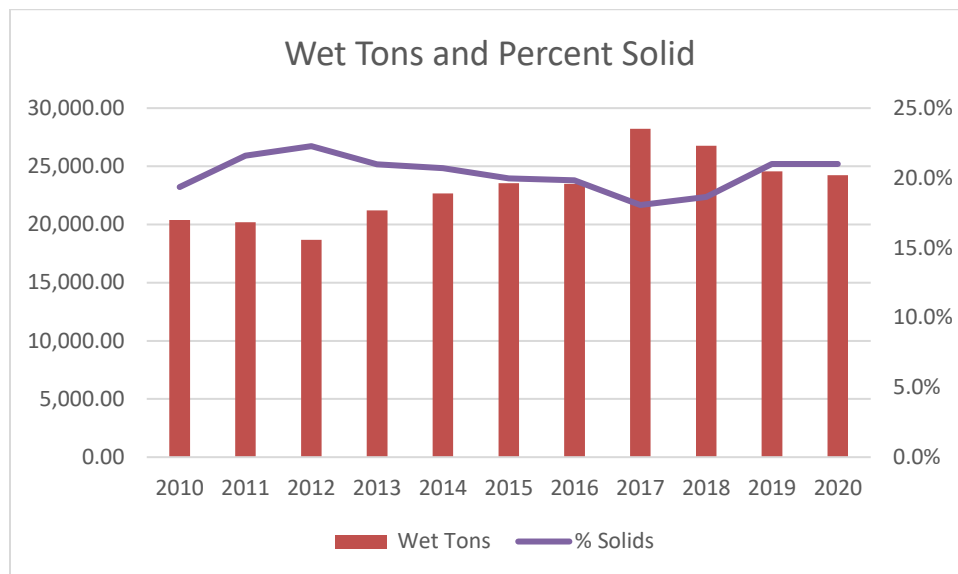
2021 to 2024 Financial Forecast (continued)

Biosolids

Biosolids cost is based on the number of wet tons disposed. The amount disposed is dependent on the amount of water that can be removed from the material generated at the end of the wastewater treatment process as represented by the percent of solid - the lower the percent the more wet tons to be disposed. The 2021-2024 forecast assumes the same amount of wet tons produced as included in the 2020 budget.

Unit price increases each year by 80% of the CPI up to 5%, per the contract with the vendor. The 2021-2024 forecast assumes unit prices increase by 1.8% - 80% of the estimated CPI increase.

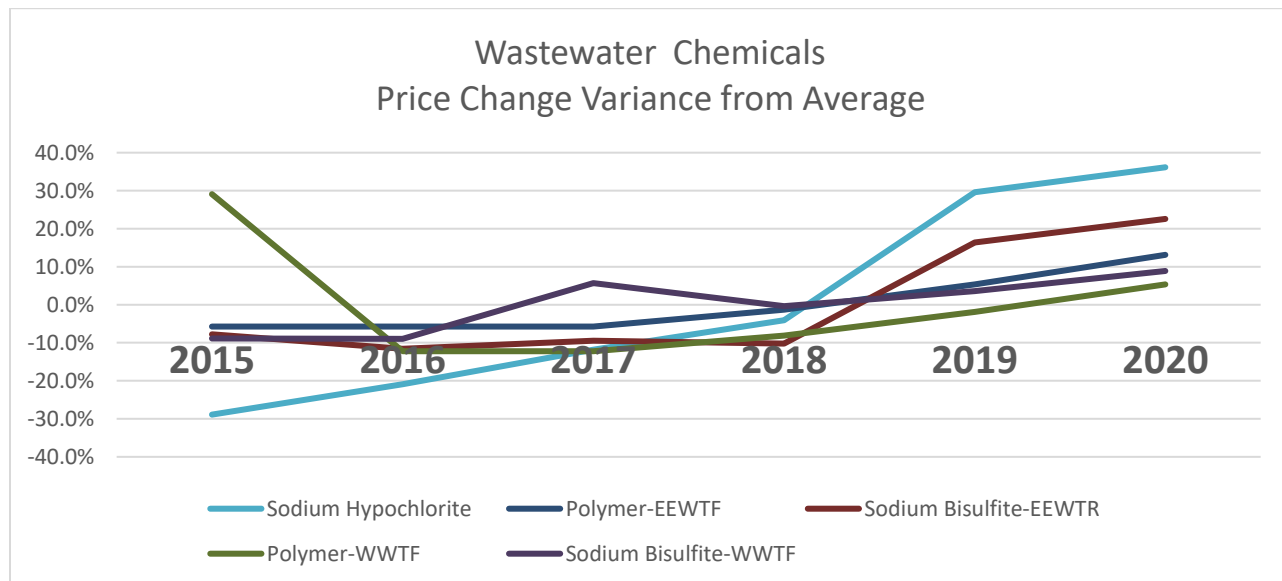
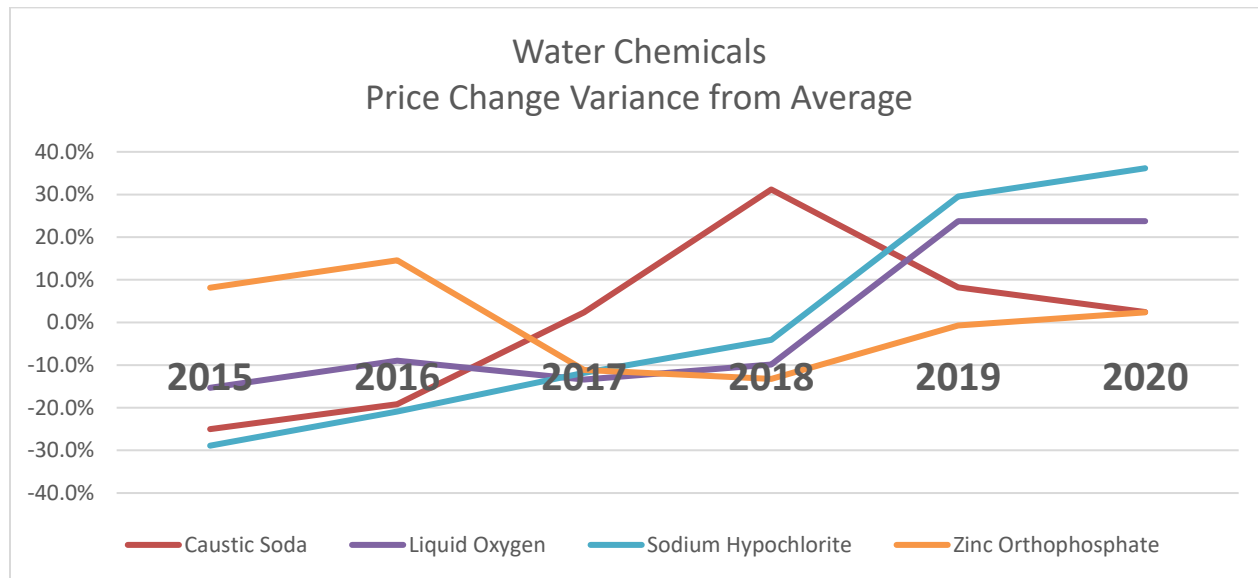
The contract will be extended in 2021 if both parties agree to mutually extend for an additional 5-years. Recent general industry concerns with relations to PFAS in biosolids and its impact on how biosolids is disposed has created some doubt as to whether the current service provider will want to extend on the current terms. The impact could be significant. Every 10% increase in unit price impacts the District by approximately \$180,000.



2021 to 2024 Financial Forecast (continued)

Chemicals

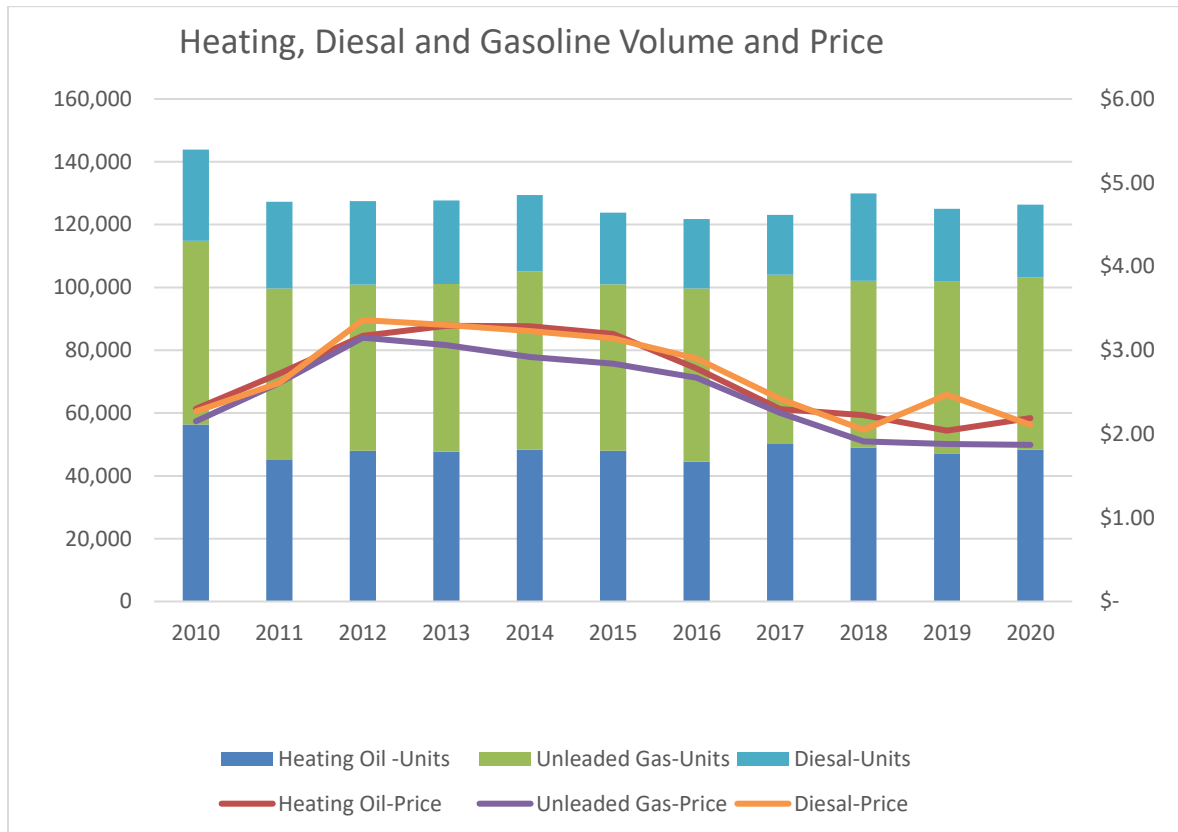
Chemicals are the sixth largest cost line item. As the charts indicate, the unit prices for the chemicals have been volatile over the past years due to change expectation on transportations costs and demand for the chemicals. The forecast assumes a 3% increase each year to reflect anticipated higher transportation costs (see Heat/ Fuel Oil page).



2021 to 2024 Financial Forecast (continued)

Heat/Fuel Oil

Heating fuel, Gasoline and Diesel volume have average close to 125,000 gallons. We currently have the price locked in for 2020 at around \$2 per gallon. Prices beyond 2020 are uncertain - include a 6 cents or 3.5% increase in the future years, as recommended by Maine Power Options. The District has taken a number of steps to reduce the volume heat and fuel.



2021 to 2024 Financial Forecast (continued)

Other Expenses including Contracted Services and Materials

Combined all other expenses total \$7.7 million and consists of many and variety of services and materials. The forecast assumes an increase over 2020 levels of 2.3 as estimated by International Monetary Fund and Congressional Business Office.

Projected annual inflation rate in the United States from 2010 to 2024

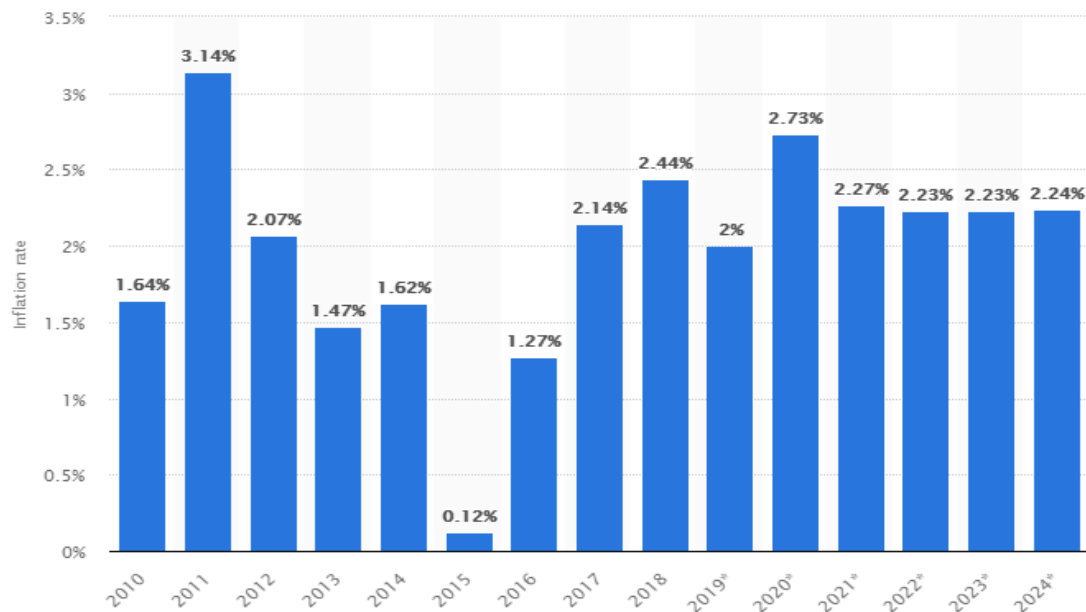
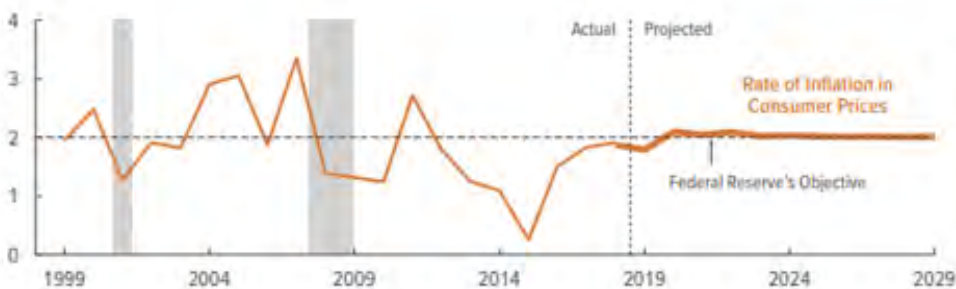


Figure 2-1.

Continued

CBO's Economic Forecast in Brief






Percent



After 2019, CBO expects a number of factors, including strong demand for labor, to temporarily push inflation above the Federal Reserve's 2 percent long-run objective.

Maine Measures of Growth 2019 Scorecard



FUNDAMENTAL PERFORMANCE INDICATORS

-  **1. Gross Domestic Product** pg 3
Maine's Gross Domestic Product grew by 1.9% from 2016 to 2017, from \$54.6 to \$55.6 billion. GDP growth in Maine trailed the national average of 2.2% and surpassed the New England rate of 1.4%.
-  **2. Per Capita Personal Income** pg 4
From 2016 to 2017, per capita income in Maine grew by 3.7% to \$46,455. Income grew in Maine at nearly the same rate as the U.S. and New England averages and slightly better than the EPSCoR average growth of 3.0%.
-  **3. Value Added per Worker** pg 5
Value added per worker in Maine increased from \$94,017 in 2016 to \$96,729 in 2017. Worker productivity in Maine has been about 25% lower than the U.S. average for the past seven years.
-  **4. Employment** pg 6
Maine total employment exceeded the pre-recession level for the first time in 2017, and another 4,500 jobs were added in 2018 for a total of 628,500 jobs.
-  **5. Poverty** pg 7
Poverty in Maine dropped from 12.3% to 11.3% in 2017, below the pre-recession level of 12.2% in 2007. The national and New England poverty rates are still slightly above their pre-recession rates.





ECONOMY

Business Innovation

-  **6. Research and Development Expenditures** pg 9
In 2016, Maine's total spending on R&D was approximately \$483 million, down from \$508 million in 2015 and \$757 million in 2009, the high point of the past decade. R&D spending in Maine represents 0.8% of total GDP, which ranks 45th of the 50 states.
-  **7. International Exports** pg 10
After declining from 2016 to 2017, Maine exports increased by 4.2% from 2017 to 2018, while U.S. exports increased by 7.6%.

-  **8. Broadband Connectivity** pg 11
While 90% of Mainers are served by basic broadband—close to the national rate of 92%—only 30% have broadband subscriptions, compared with 53% nationally. About one in ten Mainers (11%) subscribe to high-speed broadband, compared with 44% nationwide.
-  **9. Entrepreneurship** pg 12
Maine jumped from a 50-state ranking of 37th on the early stage entrepreneurship index in 2016 to 6th in 2017. Maine's strong 2017 performance was driven by the highest first-year survival rate in the country, 88%.

Skilled and Educated Workers

-  **10. Fourth Grade Reading Scores** pg 13
In 2017, 36% of Maine 4th graders were proficient in reading, equal to the national average and trailing the New England average by seven points.
-  **11. Eighth Grade Math Scores** pg 14
The proportion of Maine 8th-graders proficient in math increased from 34% in 2007 to 40% in 2013 but has since fallen to 36% in 2017. Maine 8th grade math proficiency is two points above the national average but trails the New England rate by three percentage points.
-  **12. Postsecondary Educational Attainment** pg 15
Maine's postsecondary educational attainment improved from 40% in 2016 to 42% in 2017, just above the national average of 41%, but well below the New England average of 48%.
-  **13. Working Age Population** pg 16
Maine's working-age population percentage fell to 61% in 2017 from 61.5% in 2016 and 63.4% in 2010. In 2014, Maine's proportion of working-age population fell below the U.S. average, which now stands at 61.8%.

Business Climate





-  **14. Cost of Doing Business** pg 17
Maine's cost of doing business index value has been stable at 110 since 2012. In 2017, Maine's cost of doing business index ranked 8th highest in the U.S., up from 10th in 2015.
-  **15. Cost of Health Care** pg 18
In 2017, health care spending in Maine stood at 17.8% of all personal expenditures, above the 2007 rate of 16.3%, but at a stable level since 2015. Health care spending in New England dropped below the national average of 17.1%, and stood at 16.8%, a full percentage point below the Maine rate.

Source: Maine Economic Growth Council, see details: <https://www.mdf.org/wp-content/uploads/2019/04/MOG-ExecutiveSummary2019-FNL.pdf>

Why is this of significance to Portland Water District? Ability to hire new skilled employees will be a challenge in the future. Cost of doing business in Maine is high, which might inhibit the ability to continue to increase water rates.

Maine Measures of Growth 2019 Scorecard





Business Climate



-  **16. Cost of Energy** pg 19
The industrial price of electricity in Maine declined slightly from 9.2 to 9.06 cents per kilowatt hour from 2017 to 2018, while the average New England price increased from 12.54 to 12.96 cents and the U.S. average increased from 6.88 to 6.93 cents.
-  **17. State and Local Tax Burden** pg 20
State and local tax burden is higher in Maine than the New England average, and has remained around 12% since 2009. Maine ranks 3rd highest of the 50 states in taxes as a percent of income and 14th highest in taxes paid per capita, about \$5,200 in 2016.
-   **18. Transportation Infrastructure** pg 21
In 2017, two-thirds (67%) of Maine's most-traveled highway miles were graded A, B or C, and 33% received grades of D or F. This was an improvement over 2016 but indicates a small decline since 2012.






COMMUNITY

Civic Assets

-  **19. Safety (NEW)** pg 23
 Maine's crime rate in 2017, 16.3 per 1,000 residents, was 40% below the national rate of 27.5 and among the lowest of the 50 states.
-  **20. Housing Affordability** pg 24
Housing is more affordable in Maine than the national and Northeast averages. But after improving from 2007 to 2014, housing affordability in Maine has been declining slightly in each subsequent year.
-  **21. Gender Income Disparity** pg 25
After improving from 79% in 2014 and 2015 to 84% in 2016, women's income as a percentage of men's in Maine dropped to 82% in 2017.

-  **Exceptional Performance**
Very high national standing and/or established trend toward significant improvement.
-  **Needs Attention**
Very low national standing and/or established trend toward significant decline. The indicator may show improvement but is still viewed as needing attention.







Health and Wellness




-  **22. Wellness and Prevention** pg 26
Nearly two-thirds of Maine adults—65%—were overweight or obese in 2017. While Maine's rate has grown slightly from 63% in 2007, it decreased in both 2016 and 2017, and is now two points below the national average of 67%.
-  **23. Health Insurance Coverage** pg 27
In 2017, 91.9% of Mainers had health insurance, slightly above national average of 91.3%. An estimated 106,000 people in Maine do not have health insurance coverage.
-  **24. Food Security** pg 28
14.4% of Maine households were food insecure in 2017, a substantial decline from 16.4% in 2016. Food insecurity in Maine is well above the U.S. (12.3%) and New England (11.4%) averages.



ENVIRONMENT

Environmental Quality

-  **25. Air Quality** pg 30
 In 2018, there were 29 moderate air quality days and 3 days were rated unhealthy for sensitive groups, the lowest figures to date.
-  **26. Water Quality** pg 31
 Since 2006, Maine's water quality has remained steady and well above national averages, with 95% of rivers and streams and 91% of lakes achieving category 1 or 2 ("good") in 2016.
-  **27. Sustainable Forest Lands** pg 32
 Since 2010, Maine has maintained net forest growth to removals ratios slightly in favor of growth over harvest. The growth to harvest ratio rose slightly from 1.43 in 2016 to 1.47 in 2017.

-  Movement toward the benchmark since the last available data.
-  No significant movement relative to the benchmark since the last available data.
-  Movement away from the benchmark since the last available data.

Why is this of significance to Portland Water District? Electricity is 4% of budget, the declining costs will be helpful. Housing affordability is high. Rising water/sewer rates will cause further increase in affordability. Water quality is recognized as important to measure and maintain. Support for our efforts from ratepayers is strong.

Water Benchmark Data

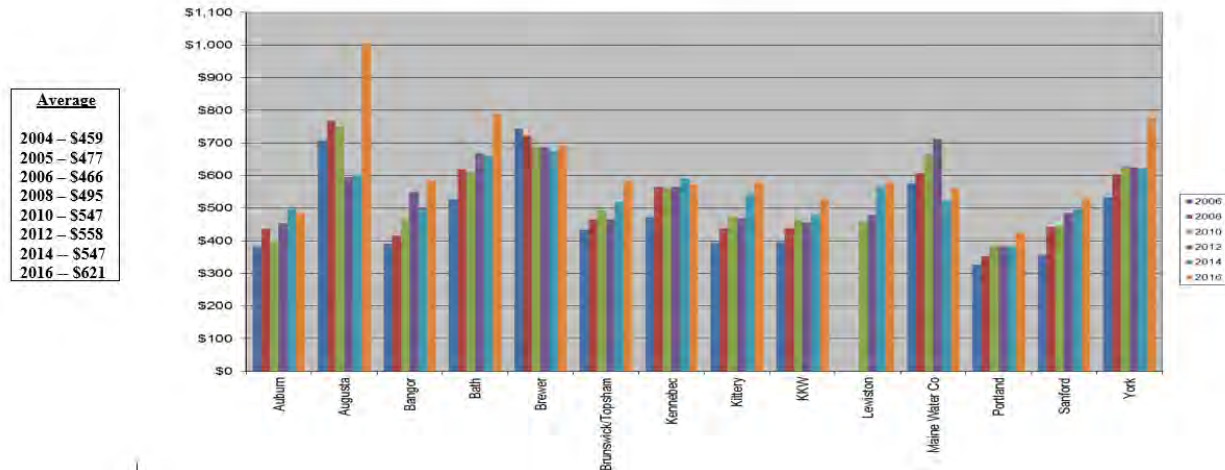
Maine Water Utilities Survey Results

The District participates in a survey of Maine water utilities. Two selected items surveyed are average customer revenue per thousand and debt per capita.

Key Ratio: **Average Customer Revenue**

Significance: Important to understand customer revenue for rate purposes.

Calculation: *PUC Annual Report Page F-4 Operating Revenue divided by W-3 Number of Customers*

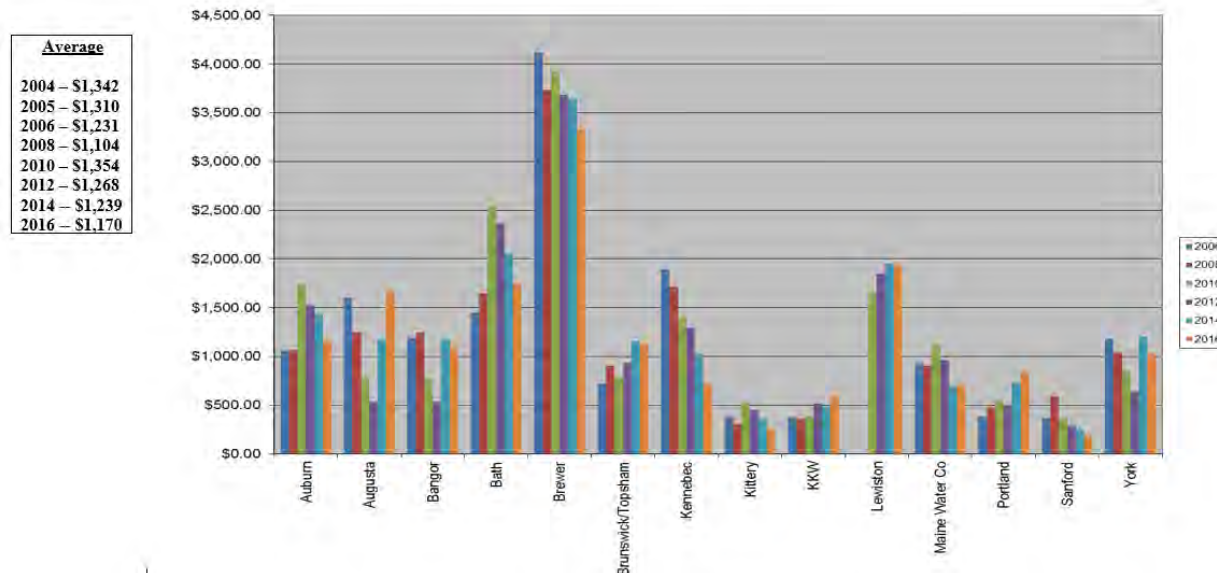


District's average revenue collected per customer is lower than other utilities indicating the relative efficiency of the District's operation.

Key Ratio: **Total Debt Per Capita**

Significance: Measures debt burden relative to service area population.

Calculation: *PUC Annual Report Page F-2 Account 221/232 Bond/Notes Payable divided by W-3 Number of Customers*



District has relatively lower debt service costs per capita, indicating the relative higher ratepayer capacity to pay for additional debt financing.

Water Benchmark Data (continued)

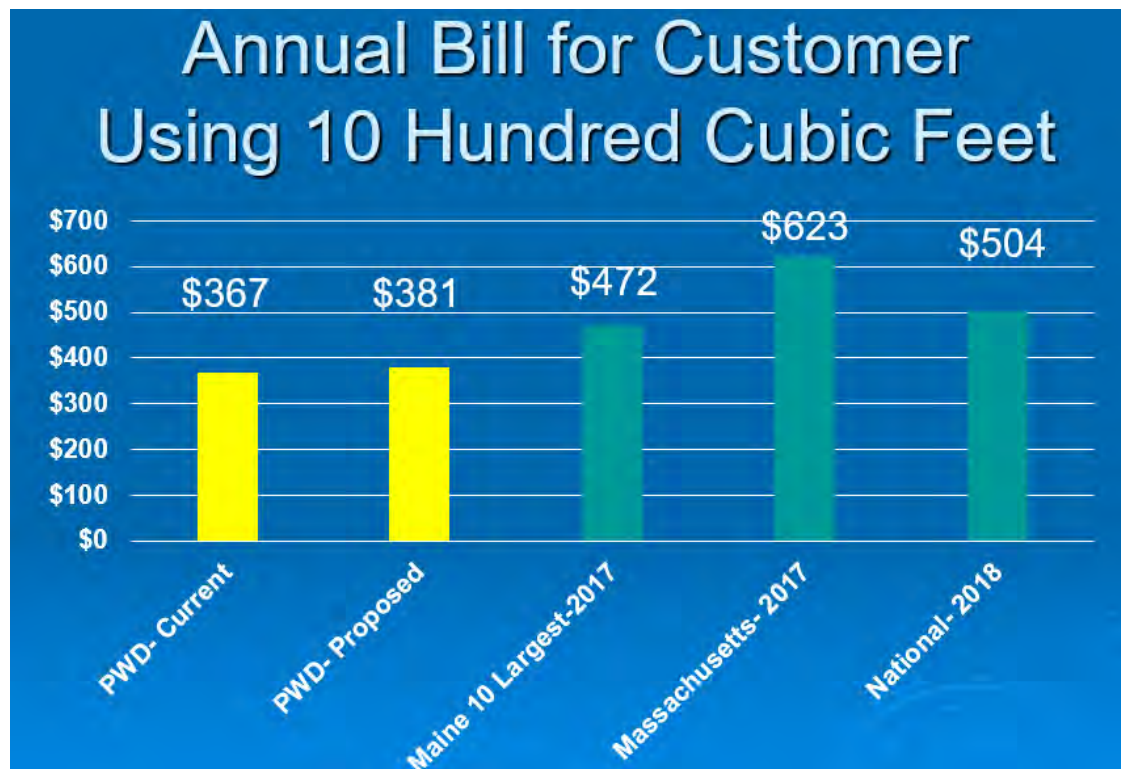
Water Rates

The District's

The rates are well below the Environmental Protection Agency's affordability standard – water rates should not exceed 2% of median income. The District's service territory is a subset of Cumberland County and is the primary reason Cumberland County's rates are the lower than other Maine counties.

	Maine Median Income (MSHA) 2010-2016				Percent of Median Income			
	2010	2012	2014	2016	2010	2012	2014	2016
Androscoggin	\$40,653	\$45,699	\$44,921	\$47,537	1.06%	1.02%	1.19%	1.12%
Cumberland	\$52,459	\$57,267	\$57,461	\$60,051	0.84%	0.74%	0.79%	0.84%
Kennebec	\$44,668	\$46,904	\$46,808	\$46,917	1.47%	1.24%	1.28%	1.68%
Penobscot	\$40,301	\$43,601	\$43,734	\$44,271	1.43%	1.42%	1.34%	1.44%
Sagadahoc	\$54,754	\$56,865	\$56,733	\$53,298	1.21%	1.27%	0.58%	1.38%
York	\$54,134	\$56,552	\$57,348	\$57,919	0.93%	0.90%	0.93%	1.04%
Averages	\$47,828	\$51,148	\$51,168	\$51,666	0.99%	0.94%	0.87%	1.07%
Portland Water District	\$48,123	\$47,841	\$44,487	\$46,280	0.65%	0.67%	0.72%	0.69%

The District's water rates for a typical household are relatively lower than other Maine, Massachusetts and National utilities.



Portland Water District Rate Sheet Summary

A summary of Portland Water District's Water Rates and Municipalities' Sewer Rates as of October 1, 2019 is presented below. Water and Sewer is billed based on actual water consumption for all communities except Falmouth Wastewater customers. The chart shows the typical usage by the number of occupants in the household.

PORTLAND WATER DISTRICT RATE SHEET

Typical monthly consumption and charges for Residential users with 5/8" meter on daily usage of 60 gallons per person

Usage is rounded to nearest hundred cubic feet (hcf). 1 HCF = 748 gallons.

WATER RATES				
Effective Date		05/01/19		
# OF PEOPLE	GALLONS = HCF	MEMBERS	NON-MEMBERS	
1	1,800 =	2	12.19	14.02
2	3,600 =	5	19.51	22.45
3	5,400 =	7	24.39	28.07
4	7,200 =	10	31.71	36.50
5	9,000 =	12	36.59	42.12
6	10,800 =	14	41.47	47.74
7	12,600 =	17	48.79	56.17
8	14,400 =	19	53.67	61.79
9	16,200 =	22	60.99	70.22

SEWER RATES						
07/01/19	09/01/18	07/01/19	03/01/16	01/01/19	04/01/09	11/01/06
PORTLAND	CUMBERLAND	SOUTH PORTLAND	CAPE ELIZABETH	WESTBROOK	WINDHAM	GORHAM
20.80	47.96	10.40	55.18	18.06	48.84	20.03
52.00	64.52	26.00	72.22	37.65	48.84	38.90
72.80	75.56	36.40	83.58	50.71	55.32	51.48
104.00	92.12	52.00	100.62	70.30	65.04	70.35
124.80	103.16	62.40	111.98	83.36	71.52	82.93
145.60	114.20	72.80	123.34	96.42	78.00	95.51
176.80	130.76	88.40	140.38	116.01	87.72	114.38
197.60	141.80	98.80	151.74	129.07	94.20	126.96
228.80	158.36	114.40	168.78	148.66	103.92	145.83

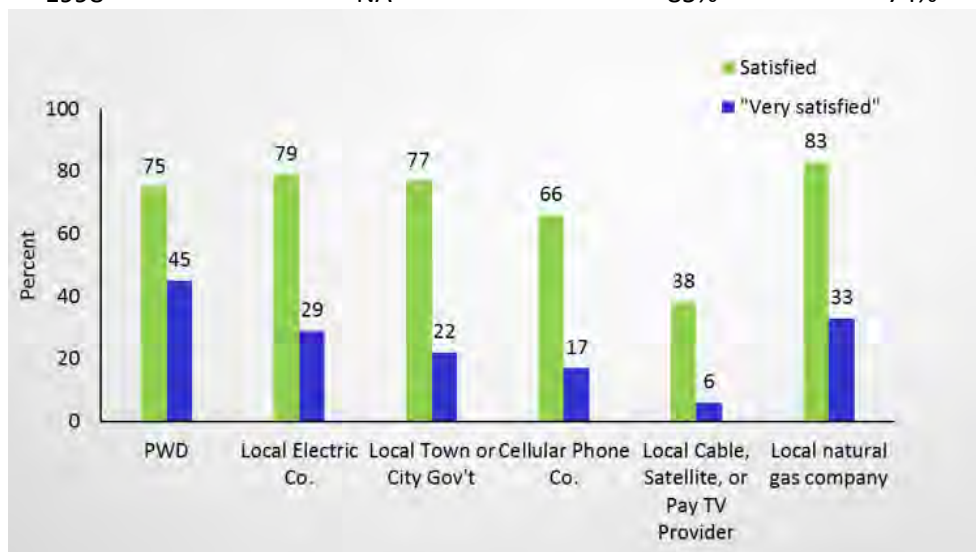
WATER RATES	Min Charge includes 1 HCF	Per additional HCF 2-30 HCF	Per additional HCF 31-100 HCF	Lifeline Water Rate (Reduction in Monthly Minimum Charge)	Minimum includes 1 HCF
MEMBERS	9.75	2.44	2.13	MEMBERS	2.44
NON-MEMBERS	11.21	2.81	2.47	NON-MEMBERS	2.81

SEWER RATES	Min HCF	MIN CHARGE	HCF	Municipal Contacts for Sewer	
PORTLAND	1	10.40	10.40	Rachel Smith	874-8833
CUMBERLAND	0	36.92	5.52	Pam Bosarge	829-2207
SOUTH PORTLAND	1	5.20	5.20	Colleen Mitchell	767-7675
CAPE ELIZABETH	1	49.50	5.68	Mike McGovern	799-5251
WESTBROOK	1	11.53	6.53	Eric Dudley	854-9105 x222
GORHAM	1	13.74	6.29	Freeman Abbott	222-1608
				Laurie Nordfors	222-1675
WINDHAM	5 hcf per unit	48.84	3.24	Anthony Plante	892-1907
FALMOUTH eff 07.01.2019	RATE PER LIVING UNIT	Commercial Fixtures > 17	SCHOOLS	Diane Moore	781-4462
	\$44.19 x # of units (Residential)	(\$44.19 x # of units) + (# of fixtures - 17 fixtures x \$2.09) (Com'l combination of fixtures)	\$39.06 for every 15 students (Schools)	Note: These are the most common sewer rates, but this is not a complete list.	

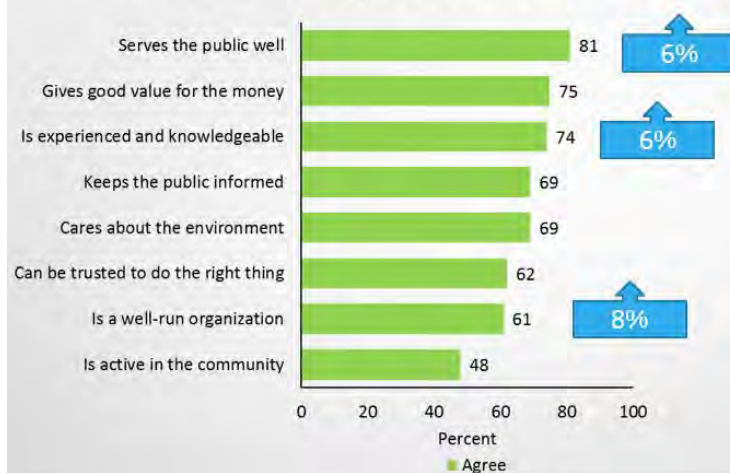
Customer Satisfaction Survey

A periodic customer satisfaction survey is conducted. The last survey was conducted in 2017. A summary of the results is below and indicate that overall satisfaction remains high relative to other local utilities.

Year	Overall	Water Service/Quality	Sewer
2017	75%	89%	85%
2014	82%	88%	70%
2011	87%	92%	71%
2008	85%	90%	76%
2005	88%	89%	78%
2002	89%	90%	83%
2000	89%	91%	79%
1998	NA	85%	74%



General Reputation Trends



Generally, respondents (92%) feel very positive about the Portland Water District.

7%

Proposed Board of Trustees' Orders and Resolutions



Portland Water District
From Sebago Lake To Casco Bay

BOARD OF TRUSTEES / AGENDA ITEM SUMMARY

Agenda Items:

Date of Meeting: November 25, 2019

Subject: Proposed Budget Orders

Presented By: Carrie Lewis

The Administration and Finance, Operations and Planning Committees reviewed the 2020 Budget and CIP for which they have jurisdiction. Below are the recommended motions to be considered at the regular meeting.

The proposed motion accepts the 2020 budget and authorizes billing the municipalities for wastewater and billing services.

Order 19-035

ORDERED that the 2020 Budget and Wastewater Assessments as presented by the General Manager are accepted and adopted and shall be filed with the minutes of this meeting; and pursuant to Section 12 of the District's Charter, to assess for 2020 the participating municipalities for wastewater related costs as follows:

Town of Cape Elizabeth	\$ 1,705,380
Town of Cumberland	965,292
Town of Falmouth	314,112
Town of Gorham	1,160,676
City of Portland	12,863,340
City of Westbrook	2,820,768
Town of Windham	389,004

and to assess non-participating municipal corporations for billing-related costs as follows:

City of South Portland	\$ 201,132
Scarborough Sanitary District	11,328

The motion accepts the proposed capital improvement plan and authorizes staff to implement the 2020 projects within the restrictions stated below and in compliance with the purchasing policy guidelines.

Order 19-036

ORDERED that the 2020-2024 Capital Improvement Plan is hereby adopted and the General Manager is authorized to solicit bids or proposals for the year 2019 projects and to authorize the General Manager to award contracts for approved projects to the lowest bidder if the bid is within the project budget.;

BE IT FURTHER ORDERED that the General Manager shall solicit bids or proposals and to partner with Municipalities, MDOT and Developers for the year 2020 for the replacement and extension of water mains, services, valves and hydrants as outlined in the Water Distribution Systems Upgrades Program and to authorize the General Manager to award and enter into contracts if the bid or partnering proposals are within the overall program budget.

Before approving water rate adjustment, staff will provide additional information for the Board's consideration. Additionally, if the Board decides a rate adjustment is necessary, public notice will be provided to all customers and a public hearing will be held.

Order 19-037

ORDERED that the Board of Trustees directs the General Manager and Treasurer to undertake the preliminary steps necessary to prepare a rate adjustment of approximately 3.5% for further Board consideration.

In compliance with Internal Revenue Service (IRS) regulation, an 'intent to borrow' motion must be approved by the Board before expenditures are incurred on a project that may be financed with tax-exempt financing. Resolutions 19-016 to 19-019 are intent to borrow motions for each fund. Before a bond is actually authorized or issued, a public hearing will be held. Subsequent to the hearing, the Board will consider authorizing the bond.

Resolution 19 - 016

RESOLVED the Board hereby declares its intent to issue debt to reimburse costs incurred by the District for water fund projects identified in the 2020 CIP. The full form of the resolution is attached hereto and incorporated herein by reference, and shall be part of the minutes of this meeting.

Resolution 19 - 017

RESOLVED the Board hereby declares its intent to issue debt to reimburse costs incurred by the District for the Cape Elizabeth wastewater fund projects identified in the 2020 CIP. The full form of the Resolution is attached hereto and incorporated herein by reference, and shall be part of the minutes of this meeting.

Resolution 19 – 018

RESOLVED the Board hereby declares its intent to issue debt to reimburse costs incurred by the District for the Portland wastewater fund projects identified in the 2020 CIP. The full form of the Resolution is attached hereto and incorporated herein by reference, and shall be a part of the minutes of this meeting.

Resolution 19 – 019

RESOLVED the Board hereby declares its intent to issue debt to reimburse costs incurred by the District for the Westbrook, Gorham and Windham wastewater fund projects identified in the 2020 CIP. The full form of the Resolution is attached hereto and incorporated herein by reference, and shall be a part of the minutes of this meeting.

Resolution 19-016
DECLARATION OF OFFICIAL INTENT PURSUANT TO
TREASURY REGULATION §1.150-2
(Water Fund)

WHEREAS, the Portland Water District (the “Issuer”) intends to proceed with the projects described in section 2 below (the “Projects”); and

WHEREAS, the Issuer intends to finance some or all of the costs of the Projects through the issuance of bonds or notes in anticipation thereof; and

WHEREAS, the Issuer may incur certain of the costs of the Projects prior to the issuance of such notes or bonds and the Issuer expects to be reimbursed from the proceeds thereof; and

WHEREAS, Treasury Regulation §1.150-2 requires that the Issuer declare its official intent to reimburse itself for such expenditures with the proceeds of such notes or bonds.

NOW, THEREFORE, the Issuer does hereby declare its official intent as follows:

1. **Declaration of Intent.** The Issuer reasonably expects to reimburse itself for expenditures made on the Projects with the proceeds of bonds or notes in anticipation thereof to be issued by the Issuer to finance the costs of the Projects in the maximum principal amount of \$15,415,000.
2. **General Description of Property to which Reimbursement Relates.** The following is a reasonably accurate general functional description of the type and use of the property with respect to which reimbursements will be made:
 - Construction or installation of new water mains, valves, hydrants, services and meters;
 - Acquisition of vehicles, leak detection and related equipment;
 - Renovation of various water facilities;
 - Acquisition and installation of various computer-related equipment; and
 - Building improvements at the Douglass Street facilities;
3. **Public Availability of Official Intent.** This Declaration of Official Intent shall be maintained as a public record of the Issuer.
4. **Treasury Regulations.** This is a declaration of official intent pursuant to the requirements of Treasury Regulations § 1.150-2.
5. **Authority for Declaration.** This declaration is adopted pursuant to the following action of the Issuer: Resolution adopted by the Portland Water District Board of Trustees.

Resolution 19-017
DECLARATION OF OFFICIAL INTENT PURSUANT TO
TREASURY REGULATION §1.150-2
(Cape Elizabeth Sewer Fund)

WHEREAS, the Portland Water District (the “Issuer”) intends to proceed with the projects described in section 2 below (the “Projects”); and

WHEREAS, the Issuer intends to finance some or all of the costs of the Projects through the issuance of bonds or notes in anticipation thereof; and

WHEREAS, the Issuer may incur certain of the costs of the Projects prior to the issuance of such notes or bonds and the Issuer expects to be reimbursed from the proceeds thereof; and

WHEREAS, Treasury Regulation §1.150-2 requires that the Issuer declare its official intent to reimburse itself for such expenditures with the proceeds of such notes or bonds.

NOW, THEREFORE, the Issuer does hereby declare its official intent as follows:

1. **Declaration of Intent.** The Issuer reasonably expects to reimburse itself for expenditures made on the Projects with the proceeds of bonds or notes in anticipation thereof to be issued by the Issuer to finance the costs of the Projects in the maximum principal amount of \$530,000.
2. **General Description of Property to which Reimbursement Relates.** The following is a reasonably accurate general functional description of the type and use of the property located in the Town of Cape Elizabeth with respect to which reimbursements will be made:
 - Replacement of obsolete assets or installation of new equipment at various pump stations, including Maiden Cove pump station, and
 - Replacement or installation of equipment at the treatment plant.
3. **Public Availability of Official Intent.** This Declaration of Official Intent shall be maintained as a public record of the Issuer.
4. **Treasury Regulations.** This is a declaration of official intent pursuant to the requirements of Treasury Regulations § 1.150-2.
5. **Authority for Declaration.** This declaration is adopted pursuant to the following action of the Issuer: Resolution adopted by the Portland Water District Board of Trustees.

Resolution 19-018
DECLARATION OF OFFICIAL INTENT PURSUANT TO
TREASURY REGULATION §1.150-2
(Portland Sewer Fund)

WHEREAS, the Portland Water District (the “Issuer”) intends to proceed with the projects described in section 2 below (the “Projects”); and

WHEREAS, the Issuer intends to finance some or all of the costs of the Projects through the issuance of bonds or notes in anticipation thereof; and

WHEREAS, the Issuer may incur certain of the costs of the Projects prior to the issuance of such notes or bonds and the Issuer expects to be reimbursed from the proceeds thereof; and

WHEREAS, Treasury Regulation §1.150-2 requires that the Issuer declare its official intent to reimburse itself for such expenditures with the proceeds of such notes or bonds.

NOW, THEREFORE, the Issuer does hereby declare its official intent as follows:

1. **Declaration of Intent.** The Issuer reasonably expects to reimburse itself for expenditures made on the Projects with the proceeds of bonds or notes in anticipation thereof to be issued by the Issuer to finance the costs of the Projects in the maximum principal amount of \$4,545,000.
2. **General Description of Property to which Reimbursement Relates.** The following is a reasonably accurate general functional description of the type and use of the property located in the City of Portland with respect to which reimbursements will be made:
 - Renovation and repair of equipment and facilities at the East End Treatment Plant, including projects related to the Main 12.4 kV Power Distribution Upgrades;
 - Renovation and repair of equipment and facilities at the Peaks Island Treatment Plant; and
 - Replacement of equipment at various pump stations, including Baxter Boulevard Pump Stations.
3. **Public Availability of Official Intent.** This Declaration of Official Intent shall be maintained as a public record of the Issuer.
4. **Treasury Regulations.** This is a declaration of official intent pursuant to the requirements of Treasury Regulations § 1.150-2.
5. **Authority for Declaration.** This declaration is adopted pursuant to the following action of the Issuer: Resolution adopted by the Portland Water District Board of Trustees.

Resolution 19-019
DECLARATION OF OFFICIAL INTENT PURSUANT TO
TREASURY REGULATION §1.150-2
(Westbrook, Gorham and Windham Sewer Funds)

WHEREAS, the Portland Water District (the “Issuer”) intends to proceed with the projects described below (the “Projects”); and

WHEREAS, the Issuer intends to finance some or all of the costs of the Projects through the issuance of bonds or notes in anticipation thereof; and

WHEREAS, the Issuer may incur certain of the costs of the Projects prior to the issuance of such notes or bonds and the Issuer expects to be reimbursed from the proceeds thereof; and

WHEREAS, Treasury Regulation §1.150-2 requires that the Issuer declare its official intent to reimburse itself for such expenditures with the proceeds of such notes or bonds.

NOW, THEREFORE, the Issuer does hereby declare its official intent as follows:

1. Declaration of Intent. The Issuer reasonably expects to reimburse itself for expenditures made on the Projects with the proceeds of bonds or notes in anticipation thereof to be issued by the Issuer to finance the costs of the Projects in the maximum principal amount of \$ 11,685,000.

2. General Description of Property to which Reimbursement Relates. The following is a reasonably accurate general functional description of the type and use of the property located in the City of Westbrook with respect to which reimbursements will be made:

- Replacement of obsolete assets or installation of new equipment at various pump stations, and
- Renovation and repair of equipment and facilities at the Westbrook Regional Treatment Plant, including aeration and secondary clarifier project, and
- Replacement of the Little River Bridge Force Main and related infrastructure.

3. Public Availability of Official Intent. This Declaration of Official Intent shall be maintained as a public record of the Issuer.

4. Treasury Regulations. This is a declaration of official intent pursuant to the requirements of Treasury Regulations § 1.150-2.

5. Authority for Declaration. This declaration is adopted pursuant to the following action of the Issuer: Resolution adopted by the Portland Water District Board of Trustees.

Glossary/Acronyms

Term	Description
407 Zone	A water pressure zone, supported by pump stations and water tanks, that is at an elevation above the District's water source (Sebago Lake).
ABC Project	ABC stands for "Asset, Billing & Customer Relations". It involves the replacement of the District's current asset management and customer billing/information systems.
Accurate bill index	The ratio of correct read adjustments on accounts to the total of all accounts.
Accrual Basis	The method of accounting under which revenues are recorded when they are earned (whether or not cash is received at that time) and expenditures are recorded when goods and services are received (whether or not cash disbursements are made at the time)
AMaP	Asset Management and Planning group, consisting of Engineering and Environmental Services
Amortization	The write-off of costs that has a financial benefit exceeding 1 year but is not a capital expenditure. The write-off period is determined based on an estimate of asset's useful life.
AMR	Automated Meter Reading
ARRA	American Recovery and Reinvestment Act of 2009. The federal stimulus law that provided federal subsidies for various projects in order to boost employment during a recessionary period.
Asset Information Management System	Computerized asset identification system used to document all asset maintenance schedules / procedures from day of acquisition to disposal.
AWWA	American Water Works Association

Glossary/Acronyms

BOD	Biochemical Oxygen Demand - a measure of organic material in the influent / effluent of the wastewater system expressed in lbs./ day
Bond	A written promise to pay (debt) a specified sum of money (called principal) at a specified future date (called the maturity date(s)) along with periodic interest payments at a specific percentage of principal (interest rate).
Booster Station	Water pump station
Capital Expenditure	Expenditures for a physical asset that exceeds \$5,000 and has a useful life of greater than 5 years or extends the useful life of an existing asset for more than 5 years.
CCTV	Closed Circuit Television
CEWWTF	Cape Elizabeth Wastewater Treatment Facility
CMP	Acronym for Central Maine Power, electricity provider
Combined Sewer Overflow (CSO)	CSO's are a part of a combined sewer system that contains both sanitary waste and storm water. Under high flow events, generally due to wet weather that exceed the sewer system's capacity, CSO's will discharge excess flows into nearby bodies of water.
CPE	Comprehensive Plant Evaluation
Cross Connection Fees	Fees collected for work relating to the inspection of water backflow devices.
Cryptosporidium	A one cell parasite that originates from the feces of infected animals and humans that can cause gastrointestinal illness.
Customer Activation Fees	Fees charged customer if a new billing account needs to be created; typically when a customer moves into a new home.

Glossary/Acronyms

Customer Connection Fees	Applications fees charged to customers requesting to install a new water main, service line or meter.
Customer Penalties	Disconnection fees charged to customers for non-payment of services.
CWSSP	Comprehensive Water System Strategic Plan
Deferred Costs	Costs that have been incurred for a purpose that has a beneficial period in excess of one year but does not culminate into a capital expenditure. These costs are normally written-off to operating expense over the estimated useful life of the item.
DEP	Department of Environmental Protection, State of Maine
Depreciation	The write-off of an asset based on the decrease in value of property over its estimated useful life.
DHHS	Department of Health and Human Services
EEWWTF	East End Wastewater Treatment Facility
Enterprise Fund	A proprietary fund used by governments to account for business-type activities. Such a fund is appropriately used for operations that are financed and operated in a manner similar to private business enterprise where the intent is that the costs be financed or recovered primarily through user charges.
EPA	Environmental Protection Agency, Federal Agency
ERP	Emergency Response Plan
FEMA	Federal Emergency Management Agency - a federal agency that provides financial assistance after declared national disasters.
Fire Service Outage Index	Standard to monitor hydrants returned to service within 3 business days.

Glossary/Acronyms

Force Main (Sewer)	Sewer force mains are necessary when gravity flow is not sufficient to move water runoff and sewage through a gravity line. Force mains move wastewater under pressure by using pumps or compressors located in lift stations.
Fouling	Settlement, and sometimes the growth, of undesired materials on solid surfaces in a way that reduces the efficiency of the affected part.
Fund	An independent fiscal and accounting entity with a self-balancing set of accounts recording cash and /or other resources together with all related liabilities, obligations, reserves, and equities which are segregated for the purpose of carrying on specific activities or attaining certain objectives.
Generally Accepted Accounting Principal (GAAP)	Uniform minimum standards of, and guidelines for, external financial and reporting. They govern the form and content of basic financial statements of an entity. GAAP encompasses the conventions, rules and procedures necessary to define accepted accounting practice at a particular time. The primary authoritative statements on the application of GAAP to local governments are Government Accounting Standards Board pronouncements (GASB).
HCF	Hundred Cubic Feet- the standard measure used for billing water usage, 1 HCF is equal to 748 gallons of water, 1 cubic foot of water is equal to 7.48 gallons.
Hydrogeological	Adjective of hydrogeology that means the branch of geology dealing with the waters below the earth's surface and with the geological aspects of surface waters.
Industrial Pretreatment Program	A program responsible for permitting and monitoring industrial sewer customers who discharge significant quantities of non-domestic wastewater to the collection system to ensure their activities do not impact our operation or the receiving waters.

Glossary/Acronyms

I/I	Abbreviation for Infiltration and Inflow. Inflow and infiltration are terms used to describe the ways that groundwater and storm water enter the sanitary sewer system. Inflow is water that is dumped into the sewer system through improper connections, such as downspouts and groundwater sump pumps. Infiltration is groundwater that enters the sewer system through leaks in the pipe.
Interest from Customers	Late fees charged to past due balances. An account is considered delinquent 25 days after the bill is mailed to customer.
Jobbing Revenue	Revenue for work performed by District employees which is billable to outside parties.
LOX	Liquid Oxygen, LOX is used by the District in the production of ozone which is used in the water treatment process
LTD	Long Term Debt
MDOT Cash Reserve	Funds received from Maine Department of Transportation from sales of land to be reserved for future land purchases.
MEANS	Main Extension and New Services program
MGD	Acronym for million gallons per day (Mgal/d). Measures rate of flow of liquid.
MMBB	Maine Municipal Bond Bank
Ozone	A gas formed by electrical discharge in air used as an oxidizing, deodorizing and bleaching agent in the purification of water.
PFAS	Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals potentially impacting the District's wastewater biosolids.
PI	Plant Information - a database used to automatically compile performance information on a specific asset.

Glossary/Acronyms

PIWWTF	Peaks Island Wastewater Treatment Facility
PLC	Programmable logic controller is an industrial computer control system that continuously monitors the state of input devices and makes decisions based upon a custom program to control the state of output devices
Proprietary Funds	Accounting funds established to separate assets and operational costs based on the type of system (i.e. Water or Wastewater) or Wastewater municipality.
PS	Pump Station
PUC	Public Utilities Commission, a State of Maine agency charged with regulating utilities.
Quasi-municipality	Independent government entity as defined by state law. It has many of the responsibilities and rights of a typical governmental entity.
R&R Multi-fund Assets	Assets utilized by all funds and paid for by allocations to the funds (i.e. computers, meters, administrative office space).
Renewal and Replacement Funds	A cash reserve created to fund smaller capital projects.
Sanitary Sewer Overflows (SSO)	Sewer systems that contain only sanitary flows that may discharge directly into water bodies without being treated.
SCADA	Supervisory Control and Data Acquisition
SLWTF	Sebago Lake Water Treatment Facility
SOP	Standard operating procedure
Spatial Scheduling	Use of the district's geographic information system to schedule customer appointments on a daily basis to best utilize manpower and vehicle usage.
SRF	State Revolving Fund- Maine Municipal Bond Bank program for long-term financing

Glossary/Acronyms

STD	Short Term Debt
SU	Standard units of measuring pH with a range of 1 - 14.
Sub-meters	Meters installed to measure water that will not be returned to the sewer system for disposal. This water may be used for irrigation purposes or other outside use and therefore should not be included in the calculation of wastewater disposal charges.
SWTR standards	Surface Water Treatment Rules
TCR samples	Total Coliform Rule
10th Percentile Chlorine Residual	Minimum residual found in water samples approximately 90% of the time.
TIF	Tax Increment Finance - a designated municipal fund established to fund structural improvements
TPS	Thickened Primary Sludge
Tropic State Index	Calculated measure of lake productivity with clear, clean water as the desired result. Range of less than 30 to greater than 100 with the lower the number, the better the results.
TSS	Total Suspended Solids - a measure of suspended material in the influent / effluent of the wastewater system expressed in lbs. / day
Unaccounted for Water	Water not measured by metered flow such as fire service use, main leaks, etc.
UV	UV stands for Ultra Violet. UV water or wastewater treatment systems use special lamps that emit UV light of a particular wavelength that have the ability, based on their length, to disrupt the DNA of micro-organisms.

Glossary/Acronyms

Water Outage Index	Index of the ratio of customer outage hours/million hours available. Customer outage hours are computed by taking the # of customers without water service times the number of hours the outage lasts. The hours available is derived by taking the number of customers times number of days times 24 hours per day.
Watershed	A stretch of high land dividing the areas drained by different rivers or river systems into Sebago Lake.
Watershed Reserve	PUC allowed reserve of Water revenue to be used for future land purchases to protect PWD's watershed.
Weighted average unit price	Total cost of a product divided by the total product units
WGWRWWTF	Westbrook/Gorham/Windham Regional Treatment Facility
WIMS	Water information management solution (software)
WWPS	Wastewater Pump Station
WTF	(Drinking) Water Treatment Facility
WWTF	Wastewater Treatment Facility