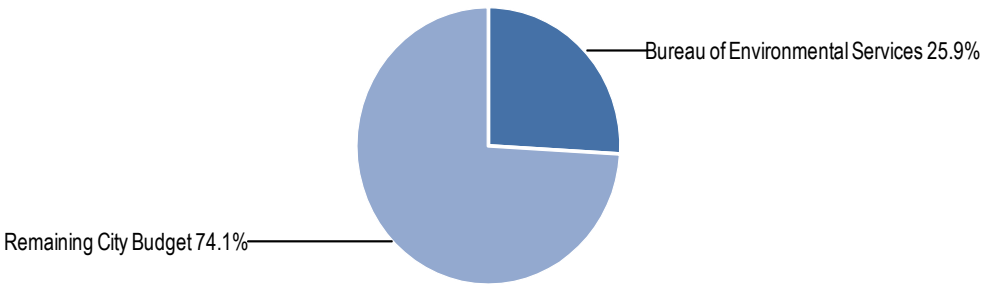
Bureau of Environmental Services

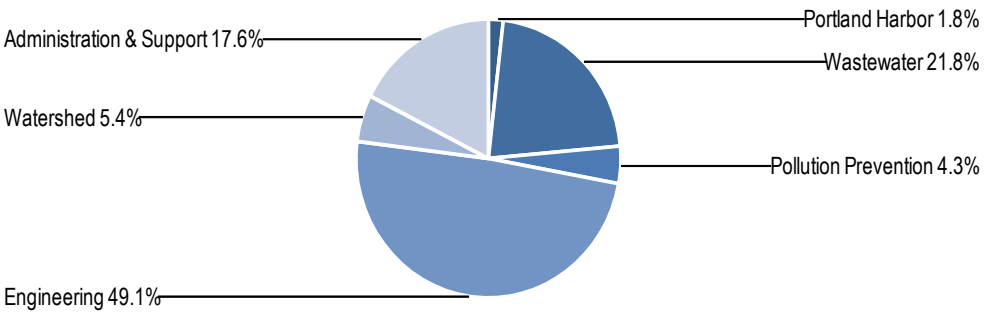
Public Utilities Service Area

Nick Fish, Commissioner-in-Charge
Michael Jordan, Director

Percent of City Budget

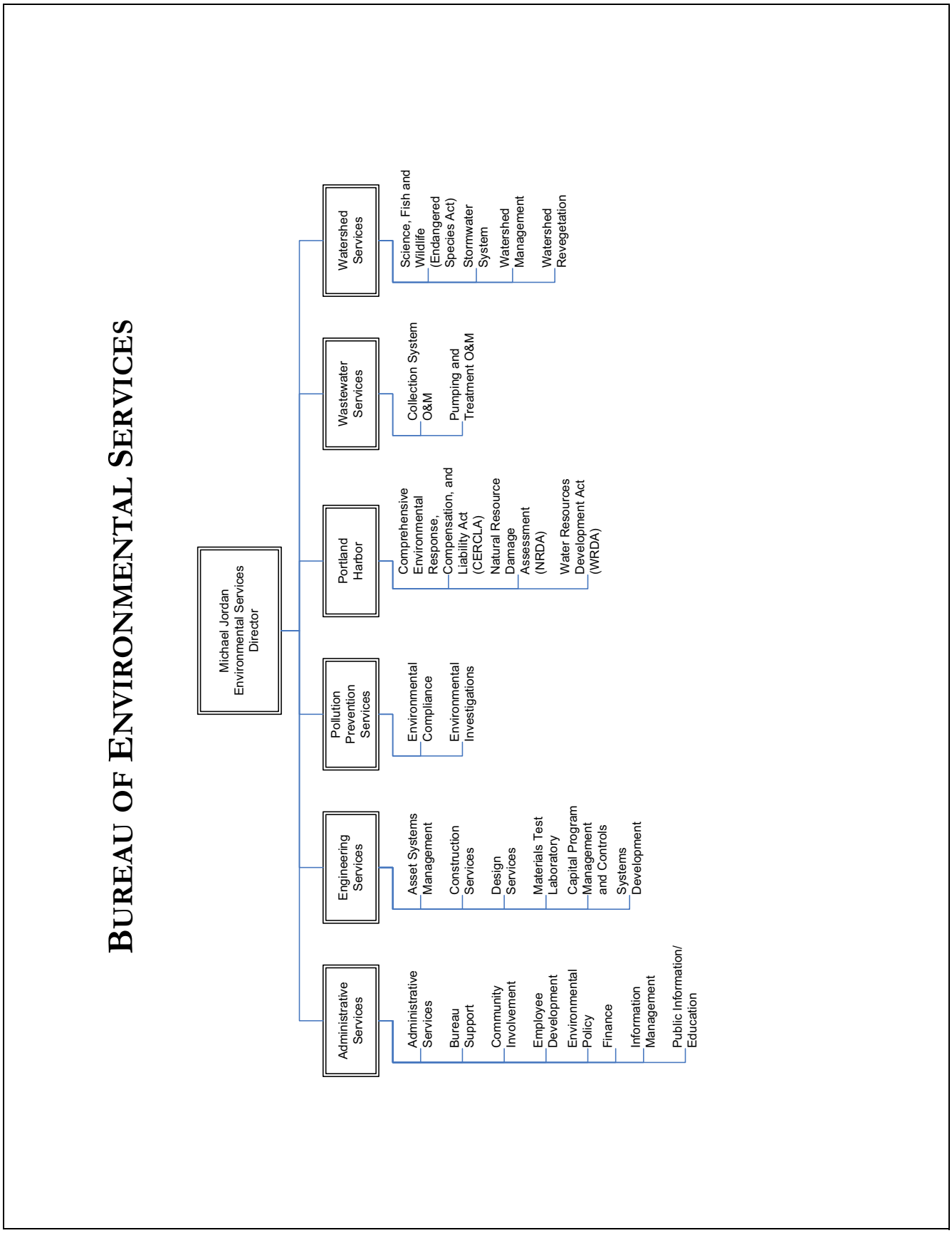


Bureau Programs



Bureau Overview

Requirements	Revised FY 2014-15	Adopted FY 2015-16	Change from Prior Year	Percent Change
Operating	914,304,295	856,181,777	(58,122,518)	(6.36)
Capital	112,445,432	104,602,000	(7,843,432)	(6.98)
Total Requirements	**1,026,749,727**	**960,783,777**	**(65,965,950)**	**(6.42)**
Authorized Positions	523.60	537.11	13.51	2.58


BUREAU OF ENVIRONMENTAL SERVICES
Michael Jordan
Environmental Services
Director
Administrative Services
Administrative Services
Bureau Support
Community Involvement
Employee Development
Environmental Policy
Finance
Information Management
Public Information/ Education
Engineering Services
Asset Systems Management
Construction Services
Design Services
Materials Test Laboratory
Capital Program Management and Controls
Systems Development
Pollution Prevention Services
Environmental Compliance
Environmental Investigations
Portland Harbor
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
Natural Resource Damage Assessment (NRDA)
Water Resources Development Act (WRDA)
Wastewater Services
Collection System O&M
Pumping and Treatment O&M
Watershed Services
Science, Fish and Wildlife (Endangered Species Act)
Stormwater System
Watershed Management
Watershed Revegetation

Bureau Summary

Bureau Mission

The Bureau of Environmental Services serves the Portland community by protecting public health, water quality, and the environment.

Environmental Services provides sewage and stormwater collection and treatment services to accommodate Portland's current and future needs.

Environmental Services protects the quality of surface and ground waters and conducts activities that plan and promote healthy ecosystems in our watersheds.

Bureau Overview

The bureau has six major functional program areas and serves a population of approximately 601,500. The bureau operates and maintains sanitary sewer and stormwater collection systems with retail sewer and stormwater charges, wholesale contract revenues from surrounding jurisdictions, and reimbursements for services provided to other bureaus. The bureau is also the City's lead agency for watershed protection and restoration and recovery of threatened salmon and steelhead species. The bureau's six primary functional program areas are: Engineering Services, Pollution Prevention Services, Watershed Services, Wastewater Services, Portland Harbor, and Administrative Services.

The FY 2015-16 Adopted Budget for operating and capital expenditures is $238.4 million. The Adopted Budget is $3.9 million - or 1.6% - lower than the FY 2014-15 Revised Budget and includes 537.11 full-time equivalent positions. The Capital Improvement Plan (CIP) decreases $7.9 million from FY 2014-15 which is primarily due to a reduction of planned construction expenditures. The operating portion, reflecting program costs, of the Adopted Budget is 3.1% or $4.0 million higher than the FY 2014-15 Revised Budget. The average single-family residential sewer and stormwater bill will increase by $2.35 per month, a 3.60% increase for FY 2015-16.

Strategic Direction

System Operations

The FY 2015-16 Adopted Budget includes $31.3 million to support the operation and maintenance, inspection, cleaning, and repair of 86 active pumping stations, 11 step systems, 3,006 miles of pipeline, 40,248 sewer access structures (manholes), 8,941 storm access structures, 8,589 stormwater sumps (Underground Injection Control), 174,303 laterals, 484,209 linear feet of ditches, 396,000 linear feet of culverts, 53,961 stormwater inlets and catch basins, 334 trash racks, 152 manufactured stormwater facilities, and 1,541 green street stormwater facilities.

Infrastructure

The FY 2015-16 Adopted Budget includes $73.2 million to support capital repair and replacement of sewer system assets to prevent catastrophic failures. More than 30% of the collection system is over 80 years old and maintenance needs are anticipated to increase significantly in the near future. The bureau has committed to providing funds for repair of structurally deficient portions of the sewer collection system, and the long-term financial forecast anticipates significant capital maintenance expenditures.

Watershed Protection, Restoration, and Remediation

The FY 2015-16 Adopted Budget includes $1.5 million in all years of the five-year CIP to fund watershed protection and restoration projects. Priority will be given to projects that leverage other funding sources, demonstrate new technologies, and address multiple watershed health goals including water quality, hydrology, physical habitat, and biological communities. The CIP also includes ongoing funding for acquiring and protecting high-priority natural areas, completion of the Crystal Springs culvert replacement program, and restoration projects in each of the City's watersheds. Funding is continued for flood management and water quality improvements in Johnson Creek and for the identification, characterization, and possible cleanup of contaminated sediment sites in the Columbia Slough, pursuant to a consent order between the City and Department of Environmental Quality (DEQ).

Water Quality Compliance

The FY 2015-16 Adopted Budget contains water quality compliance-related funding across a variety of bureau program areas, including Watershed Services, Pollution Prevention Services, and Engineering Services. Compliance with the City's National Pollutant Discharge Elimination System (NPDES) stormwater permit, along with the total maximum daily load (TMDL) regulations issued by the DEQ, requires the bureau to engage in modeling as well as the evaluation of citywide pollutant loads, stormwater runoff volumes, and the effectiveness of stormwater management program implementation. The bureau must also comply with underground injection control (UIC) regulations issued by DEQ for the City's 8,589 stormwater sumps.

Portland Harbor Superfund

The bureau represents the City's interests on the Portland Harbor Superfund site as a member of the Lower Willamette Group, funding and participating in the Portland Harbor Remedial Investigation and Feasibility Study. The bureau works with DEQ to identify and reduce sources of contamination conveyed to the Willamette River via stormwater outfalls. This information will be used in the Superfund process over the next several years to assess the City's potential liability for cleanup activities. The FY 2015-16 Adopted Budget includes $5.7 million of funding related to the Portland Harbor Superfund.

Endangered Species Act (ESA) Requirements

The bureau continues to develop and implement a comprehensive watershed framework for the protection of 13 Endangered Species Act listed salmon and steelhead species in Portland per the requirements of the Endangered Species Act. In addition, the bureau is implementing the July 2013 federal recovery plan issued by the National Marine Fisheries Services. A number of the recovery plan requirements are necessary for the bureau's compliance with permits under the Clean Water Act.

Summary of Budget Decisions

The FY 2015-16 Adopted Budget was developed with direction to submit a budget within a defined utility rate increase of 4.0%. The discrete changes below and other changes to programs reflect a utility rate increase of 3.60%. The changes to this budget have been considered by the bureau's Budget Advisory Committee (BAC). The bureau submitted a list of budget adjustments across all bureau programs, which was refined in consultation with the BAC. The increases below include the addition of 15 positions, including 12 positions in the Operating Programs and three positions in the CIP Program.

Budget Additions

The following items are additions to the bureau's budget:

Positions

- $129,948, for converting a contract (-$76,136) employee to a full time Civil Engineer position (+$76,136) for hydraulic modeling. The balance of $50,772 is within the CIP program.
- $79,416 for an Office Support Specialist III for administrative support for Wastewater Engineering. Operating funds 50% of position, with the balance a direct charge to CIP projects.
- $68,760 for an Office Support Specialist II for Front Desk Reception for the Portland Building.
- $87,372 for a Program Specialist position to support Wastewater Group training needs.
- $86,064 for a Millwright for mechanical preventive maintenance tasks to respond to an increased backlog of maintenance work orders and to effectively maintain assets that have been added over the last ten years.
- $106,656 for an Instrument Technician (Automation Support Team) for an increase in workload due to added facilities and assets and a higher demand for programmable logic controller and control systems programming due to more complex automation, reporting, and regulation.
- $103,020 for an Instrument Technician to address a back log in predictive and preventive maintenance and add the capacity to deal with an additional 600 assets to be brought on line.
- $100,392 for a Field Scientist Specialist to respond to increased workload for environmental monitoring efforts. The cost will be partially offset by the reduction of the intern budget.
- $82,512 for an Environmental Technician II (Incident Investigator) to respond to the increasing numbers of complaints related to system damage and pollution.
- $307,980 for three Instrument/Electrician Technicians to reduce the levels of overtime incurred on the implementation of CIP projects. These positions will charge directly to CIP projects.
- $178,023 for an Assistant Director to provide high-level executive and policy support for the Bureau Director. The position will assist the Director in implementing and monitoring programs to achieve bureau mission, goals, and performance measures. This position was established by using a vacant position for a net cost of $32,259.
- $94,608 for a Program Specialist to provide administrative support to the Assistant Director and the Environmental Policy section. This position will also provide data and information management services for the Portland Harbor Program.
- $94,608 for an Environmental Program Specialist to provide Clean Rivers Education programs for students in the City of Portland.
- $104,052 for a Program Coordinator to coordinate bureau emergency management in support of the City and bureau's efforts for increased emergency preparedness and resiliency.
- $72,984 for a two-year limited term position to re-measure the City's stormwater impervious area to align stormwater property assumptions to true measured area for billing purposes.

Interagencies

- $100,209 for an interagency with the City Budget Office to provide staff support to the new Portland Utility Board.
- $250,000 to inspect and provide a condition assessment of the manholes. This is a Capacity, Management, Operation, and Maintenance (CMOM) program requirement.
- $100,000 in services to the Bureau of Planning and Sustainability for sustainable restoration pre-design for the Beach Access Master Plan. BES will receive reimbursement for those activities.

Other Changes

- $120,000 for targeted outreach for the acceleration of the Bureaus equity efforts. BES is creating a new internship opportunity for Portland high school and college students from groups underrepresented at the bureau. In the pilot summer, four high school students from target schools will work as a cohort to learn about careers in the public sector while contributing to the bureau's work and developing workplace skills. Each student will be matched with two BES mentors during the eight-week program. The pilot college cohort program, launching in fall 2015, will provide a similar 8-month experience for college students.
- $150,000 for professional, technical, and expert (PTE) contract services to assist in the development of an Emergency Response and Resiliency Plan.
- $289,500 of new lease agreements reflecting income while two bureau properties are preparing to be sold on the open market.
- $2,200,000 in additional revenues from increasing Sanitary System Development Charges from the current 85% of allowed cost recovery to full cost recovery under the existing calculation methodology. This change is responsive to a recommendation by the Citizens' Utility Board.
- $143,590 of additional General Fund Overhead for FY 2015-16 budget decisions ($74,154) and carryover from FY 2014-15 ($69,436).

Capital Budget

CIP Highlights

Environmental Services estimates the replacement value of the bureau's assets at over $13 billion; with over $7 billion of that in a nearly 2,000 mile sanitary and combined sewer pipe system. While pipe is assumed to have a 100-year life, a significant amount of pipe is approaching or has passed that point. Consequently, the majority of the five-year CIP is in the Maintenance and Reliability (M&R) program (62%). The two-thirds of the M&R program is for pipe rehabilitation. It is anticipated that this will be a sizable investment on an ongoing basis well into the future. The use of video technology allows the bureau to focus the rehab program on only the very worst pipes. Also in the M&R program are a series of projects designed to address the risk of basement sewer backups.

The Sewage Treatment Systems program is 22% of the five-year CIP. This is an increase over last year's five-year plan, primarily due to the need for significant investments at the Tyron Creek Wastewater Treatment plant. This program also includes ongoing work at Columbia Boulevard Wastewater Treatment Plant, most notably a project to convert the remaining digester gas to a vehicle fuel and either provide a service station on-site or connect to the natural gas distribution system. Major renovations of some of the 100 pump stations are also budgeted in this program area. Unlike pipe, mechanical systems require reinvestment on a more regular cycle, generally every 25 to 50 years.

The remainder of the CIP is Surface Water Management (12%) an in Systems Development (4%). The Surface Water Management program continues to address high priority regulatory-driven projects that meet multiple watershed health objectives. A number of projects focus on reducing pollutants in stormwater from entering streams and rivers.

Major Issues

Environmental Services has a regular inspection program to determine pipe condition. The bureau uses capital projects and operational activities to rehabilitate or replace failing pipe. Much of the collection system pipe in the City's older neighborhoods is more than 100 years old. The March 2012 system plan element for the sanitary and combined collection systems identified an estimated $123 million in priority pipe maintenance needs. Updated inspections have identified approximately double that amount to be addressed in the near-term.

The Sewage Treatment Systems program maintains and upgrades the two wastewater treatment plants (Columbia Boulevard and Tryon Creek) and nearly 100 pump stations located throughout the collection system. As noted above, the Tryon Creek Wastewater Treatment Plant is scheduled for significant investment over the next five years. Nearly $60 million in improvements is scheduled over the next ten years. Improvements will replace obsolete facilities, increase efficiency of the overall plant processes, and prepare the plant for meeting anticipated permit requirements.

Changes from Prior Year

In comparing this proposed five-year CIP to last year's 2015-2019 CIP, the four common years (2016-2019) have increased $21 million or 5%. The increase can be attributed to a combination of minor shifts in project schedules and project priorities and a 2.11% escalation factor for future projects. While all projects in the five-year CIP are in FY 2015-16 dollars, escalation assumptions are incorporated into the five-year financial forecast.

Maintenance and Reliability

Proposed spending in this program is slightly higher than anticipated in the prior year CIP, primarily due to shifting priorities in the pipe rehabilitation and capacity projects.

Sewage Treatment System

Proposed spending in this program is slightly higher than anticipated in the prior year CIP, primarily due to the major renovation at Tryon Creek Wastewater Treatment Plant.

Surface Water Management

Proposed spending in this program is lower than anticipated as compared to the prior year CIP, primarily due to demands in Maintenance and Reliability and Sewage Treatment.

Systems Development

Proposed spending in this program is lower than anticipated in the prior year CIP, primarily due demands in Maintenance and Reliability and Sewage Treatment.

Council Goals and Priorities

Over the past few years, citizens and neighborhood committees have been more involved in the planning and development of the bureau's capital projects. This involvement has included interest in specific construction projects such as the stream restoration work and sewer replacement projects. Public involvement has also come in the forums of policy advisory groups for work elements like the update to the Portland Watershed Management Plan. In addition, there are a number of standing committees including the Stormwater Advisory Committee, the Watershed Science Advisory Committee, and the Columbia Boulevard Wastewater Treatment Plant Citizens Advisory Committee. In 2006, the bureau convened a citizen task group to review the CIP project selection criteria and CIP development strategy. This task group recommended that the bureau focus on reducing maintenance and reliability backlogs, addressing serious sewer back up problems, and advancing best management practices that have the potential to avoid future regulatory mandates. As in past years, the bureau convened a Budget Advisory Committee (BAC) as part of the FY 2015-16 budget development process. The BAC and the Portland Utility Review Board, a citizen oversight body, will by replaced by the Public Utility Board (PUB) in FY 2015-16. This new body will have dedicated staffing in the City Budget Office (CBO) and will meet year-round on budgetary and oversight issues.

Criteria

The CIP development strategy is consistent with the City's goal to improve water quality and the overall well-being of its citizens. It is focused on strategic and comprehensive program delivery and environmental protection and restoration within a prescribed regulatory framework. Priority is given to those projects mandated by federal and state laws and those projects that address City Council goals and objectives.

Capital Planning & Budgeting

Capital Planning Process

The CIP is developed using a multi-step process to identify, develop, review, score, and rank projects for funding and scheduling priority. This process ensures that the core needs of the sewer, drainage, and surface water systems and the community they serve are appropriately funded and scheduled. A cross-bureau stakeholder review team investigates, scores, and ranks all CIP projects in accordance with identified CIP criteria. CIP weighted criteria, scoring instructions, scheduling guidelines, estimating procedures, and project request forms are used to ensure each project is developed, reviewed, and scored based on detailed and consistent information. A CIP development strategy guides project selection and scheduling. Projects are reviewed by managers in finance, program areas, operations, and

engineering to ensure financial resources are expended effectively and appropriately. The CIP management team evaluates all the information from the process, meets with selected bureau project and program managers to refine cost and schedule data, and submits a recommendation to the bureau director. The bureau director reviews the findings and approves the CIP plan.

City Comprehensive Plan

The City's Comprehensive Plan guides future development through a set of goals and policies across a broad range of urban issues. One of those policy areas is public facilities and services which provides guidance on how the City spends money to maintain and construct physical facilities and public services necessary to support the approved land use patterns. The sanitary and stormwater facilities goal and policies state that facilities be provided in an efficient and adequate manner to support the needs of the public while also meeting federal, state, and local clean water requirements. Specific policies address preventative maintenance, control of combined sewer overflows, sewer connection priorities, operation of treatment plants, master planning for stormwater management, and the limit of impervious surfaces. The CIP reflects a commitment to improving the water quality in Portland and to meeting the Comprehensive Plan's sanitary and stormwater facilities policies.

The Maintenance and Reliability program continues to repair and replace segments of the system in order to protect the City's infrastructure investment for current and future system users. Reliability is critical to effective service and protection of public health and the environment. Increased application of internationally accepted utility asset management principles has focused the bureau's attention on assets with the highest risk and highest likelihood of failure.

The Systems Development program is intended to support the implementation of the 2040 Plan. Using asset management principles, the bureau has identified neighborhoods where sewer service is unavailable and where the existing on-site disposal facilities are at risk of failure.

In the last few years, the bureau has built multi-objective systems to address stormwater management, enhance fish and wildlife habitat, and create recreational benefits to the surrounding waters. Historically, drainage systems were constructed only to address flooding and standing water problems. Now, stormwater management projects are developed in a manner that integrates watershed health and system infrastructure needs. This multi-objective approach is incorporated into CIP projects.

Management Direction

In 2011, the bureau updated its Strategic Plan, incorporating an increased emphasis on asset management principles. The CIP development strategy is built on the bureau's strategic plan, input from the 2006 Citizen Task Group, updates to the systems plan, and the regulatory framework. The CIP is shaped by strategic directives and the regulatory environment. It stresses the need for comprehensive, multi-objective solutions and reflects the objectives of River Renaissance, the Comprehensive Plan, and the Portland Watershed Management Plan.

Financial Forecast Overview

The five-year financial forecast presents the bureau's revenue and expenditure plan for the operation, maintenance, expansion, and reconstruction of the City's sanitary sewer and stormwater systems. The operations, maintenance, and capital construction programs represented in the plan must provide for operation of the system in a safe, sound, and efficient manner as well as compliance with all applicable health, safety, and environmental laws, regulatory body rules, regulatory body orders, and court orders. Revenues from rates and other sources must be sufficient to fund the necessary operation and capital programs. Based on the most recent update of the financial forecast, the bureau forecasts annual rate increases of 3.50% to 3.60% for the next five years. These increases are due to growth in annual debt service costs resulting from the CIP, partially offset by transfers from the Rate Stabilization Fund and increases in non-rate revenues. All CIP expenditures in the financial forecast include an estimate for inflation.

Asset Management and Replacement Plan

For the 2014 Citywide Assets Report, the bureau reported an annual funding gap of $12.4 million. This gap includes rehabilitation and capacity needs in two major systems: combined sewers and stormwater conveyance and water quality facilities. The estimated gap is based on the following assumptions:

- The combined sewer system includes the network of pipelines and pump stations that collect and convey combined stormwater and wastewater.
- The extent of stormwater system needs is unknown. The estimate makes very broad assumptions from the Stephens Creek pilot for both rehabilitation and capacity needs.

Public Facilities Plan Overview

In July 2014, the Bureau of Planning and Sustainability released the Proposed Draft of the Citywide Systems Plan (CSP). Chapter 6 of this document is the Bureau of Environmental Services section of the State-mandated Public Facilities Plan. Chapter 6 of the CSP summarizes key elements of more detailed facility and systems planning documents for the two wastewater treatment plants and the combined and sanitary sewer system plan. The stormwater system plan is in early development. An update to the pump station plan is also needed, but not underway. Capital project planning includes an analysis of the capacity of the existing system as compared to the densities in the Comprehensive Plan. Capacity is determined from hydraulic analysis and a review of existing structural conditions. The CSP addresses significant or major facilities for the bureau's four types of infrastructure systems:

- The combined sewer system includes the network of pipelines and pump stations that collect and convey combined stormwater and wastewater;
- The sanitary sewer system includes the network of pipelines and pump stations that collect and convey wastewater;
- The stormwater system includes the swales, ponds, channels, creeks, sloughs, ditches, culverts, sumps, and pipe systems that convey and/or treat stormwater runoff from the land; and
- The wastewater treatment system includes two secondary wastewater treatment plants: the Columbia Boulevard and the Tryon Creek Wastewater Treatment Plants.

The CSP incorporates an integrated watershed approach to assess facility needs. In this approach, an entire watershed is analyzed as a unit to identify interrelated problems and coordinate all plans, activities, and programs. This avoids solving a problem in one area while creating another problem elsewhere. It also leverages limited funds to solve multiple problems with a single integrated solution. There are four major watersheds within the City of Portland: the Willamette River, Fanno and Tryon Creeks, Johnson Creek, and Columbia Slough/Columbia River.

Capital Programs and Projects

Capital Program Descriptions

The Capital Improvement Program is divided into four program areas: Maintenance and Reliability, Sewage Treatment Systems, Surface Water Management, and Systems Development.

Maintenance and Reliability

Projects in this program area address major maintenance requirements of the sewerage collection system including collector sewers, trunk sewers, and interceptor sewers. The City's sewerage collection and transportation system includes approximately 1,885 miles of sewer line ranging in diameter from four inches to 20 feet and over 450 miles of stormwater pipes. Much of the collection system pipe in the City's older neighborhoods is more than 100 years old. In some areas of the City, recurrent basement flooding is a major problem creating health and environmental hazards as well as property damage. Funding in this program area is focused on rehabilitation or reconstruction of the most structurally deficient portions of the collection system.

Sewage Treatment Systems

This program funds projects located at the Columbia Boulevard Wastewater Treatment Plant and the Tryon Creek Wastewater Treatment Plant as well as maintenance and repair or rehabilitation of the nearly 100 active pump stations located system wide. Both treatment plants operate within the framework of the Federal Clean Water Act. Specific requirements for removal of pollutants from wastewater before the treated effluent is discharged into the Columbia or Willamette Rivers are contained in the National Pollution Discharge Elimination System permit for each plant. High priority is given to projects that provide operating efficiency, reliability, and longevity of the facilities.

Surface Water Management

The primary objective of this program is to protect the quality of surface and ground waters by addressing watershed health and public safety concerns associated with flooding, stream erosion, and urban pollution. Projects proposed under this program include construction of various types of water quality facilities (ponds, swales, greenstreets), sump retrofits, natural area and drainage protection, and stream restoration including culvert replacement. Projects are located in the Columbia Slough, Fanno Creek, Johnson Creek, Tryon Creek, and along other tributaries and the main stem of the Willamette River. Projects are developed to meet the provisions of the Watershed Management Plan adopted by City Council in 2005 and updated in 2012. The Watershed Management Plan promotes techniques

that incorporate natural systems into the built environment. This program is also guided by the Endangered Species Act Resolution adopted in 1998, the Clean River Plan finalized in 2000, and the River Renaissance Vision adopted in 2001. This program implements projects for the City's Stormwater Management Plan, required by the Municipal Separate Storm Sewer System (MS4) Discharge Permit.

Systems Development

The primary focus of this program area is to expand the city's sewer collection system in support of the implementation of the 2040 Plan. This program carries out the bureau's commitment to provide an efficient sewerage system to residents and businesses within our service area, to support new development, and to protect public health and the environment.

Funding Sources

Planned CIP outlays total $543 million (excluding inflation) over the five-year forecast interval FY 2015-16 through FY 2019-20. A brief description of the resources needed to finance this requirement follows:

- **Fees, Charges, and Permits**. This source of funding includes an estimate of reimbursements for engineering, administration, and construction management services charged to local improvement districts and for permit sewer construction. Also included are anticipated revenues from construction and/or engineering services for projects initiated by other local government agencies such as the Portland Bureau of Transportation and the Port of Portland.
- **Line and Branch Charges**. Charges in lieu of assessment will be used to support CIP outlays. Line and branch charges are received in the form of cash and proceeds from special assessment bonds issued for property owners who elect to finance line and branch charges. Total revenues from these charges are projected to be approximately $13.9 million over the five-year forecast interval.
- **Cash Transfers from the Sewer System Operating Fund**. Current sewer system net income from service fees and charges will also be used to fund CIP outlays. The availability of current income to fund CIP expenditures is the result of meeting debt service coverage requirements on outstanding bonds. For planning purposes, the bureau maintains coverage ratios of at least 1.50 on first lien debt, 1.30 on combined first and second lien debt, and an ongoing reserve of 10% of operating expenses for unforeseen financial needs. After making debt service payments, funds in excess of those required for the 10% operating reserve are available to fund capital improvements. Cash transfers from the Operating Fund to the Construction Fund are projected to total $135.2 million over the five-year forecast interval.
- **Bond Proceeds**. Based on current planning assumptions, the bureau's five-year CIP request will require $394 million (nominal dollars) in additional borrowings over the next five fiscal years. Debt service requirements for future bond sales have been calculated assuming level debt service. Interim short-term financing may be used in lieu of or in combination with long-term financings. The forecast assumes an average annualized coupon rate of 6.5% for the bonds sold in FY 2016-17 and FY 2018-19, with the bureau's planning standard debt service coverage ratios of 1.50 and 1.30, as mentioned previously.

Major Projects

Major CIP projects include the following highlights:

Maintenance and Reliability

- **Pipe Rehabilitation Projects**: This suite of projects address failed pipe and pipes with the highest risk of failure. Nearly one-third of the pipe system is over 80 years old. These projects are focused on reducing risk from failed or failing pipes.
- **Capacity Projects**: This suite of projects is necessary to relieve risk of sewer backup and street flooding in various basins using a combination of pipe upsizing and stormwater infiltration facilities. Projects also rehabilitate pipe in very poor condition. Priority is given to projects with the highest net benefit/ cost ratio. Each year, more green street facilities are added to the inventory, creating increased pressure on the operating budget.
- **Westside Rainfall Derived Inflow and Infiltration:** In the separated sanitary system, stormwater is entering the system which is not sized to accommodate stormwater flows. This program is for projects to prevent stormwater from entering the sanitary system.

Sewage Treatment Systems

- **Pump Station Improvement Program:** This is an ongoing program to refurbish and upgrade pump stations to meet current codes, operate more reliably, upgrade facilities to meet increased demand, and replace outdated equipment.
- **Treatment Facilities - Rehabilitation and Modification:** Both the CBWTP and TCWTP are major capital assets that require ongoing investment for repair, rehabilitation, and maintenance work to protect the capital investment and enhance system reliability. This program is key to preventing violations of our NPDES permit.
- **CBWTP Lagoon Reconstruction:** To provide for better management of solids, this project will construct additional dikes in the existing lagoon to create more separation.
- **TCWTP Headworks, Dry Weather Clarifier and Odor Control Improvements:** These are recommended upgrades from the draft Facilities Plan to meet future demand and continue to meet permit requirements. The improvements are jointly funded with Lake Oswego.

Surface Water Management

- **Johnson Creek Restoration Program:** This program is implementing the recommendations of the Johnson Creek Restoration Plan (2001). The plan identifies a number of projects to mitigate flooding, improve water quality, and improve fish and wildlife habitat.
- **Columbia Slough projects**: This primary focus of the current suite of projects is to address the Remedial Action Record of Decision from the State Department of Environmental Quality. In 2010, DEQ and BES entered into an Inter-Governmental Agreement under the Voluntary Cleanup Program to control pollutant sources discharged to the Slough through City stormwater compliance.
- **Fanno/Tryon projects:** This group of projects will implement the recommendations of the Fanno/Tryon Watershed Plan and the objectives of the total maximum daily load (TMDL).

- **Green Infrastructure:** This multi-year program includes three capital improvement program elements: land acquisition for habitat and watershed health, replacement of culverts for fish passage, and development of greenstreets for more sustainable stormwater management.
- **Land Acquisition:** This multi-year program targets high priority parcels for habitat and watershed health. Funding is often leveraged with other partners such as Metro and Portland Parks & Recreation.
- **Watershed Investment Fund:** This program funds innovative watershed enhancements. Priority is given to projects that leverage other funding sources, demonstrate new technologies and/or address multiple watershed health goals.
- **Stephens Creek Improvements:** This series of projects was recommended in the stormwater systems plan pilot study for this sub-watershed.

Systems Development Major Projects

- **Party Sewers:** This program will address shared private sewer lines. Over several years, the program will provide property owners direct access to a municipal sewer line or ensure that appropriate easements have been acquired.

Net Operating and Maintenance Costs

Each project includes estimated operating and maintenance costs or savings to be included in the operating budget once the facility comes on line. The operating and maintenance estimates for costs or savings were prepared by the Wastewater Group. The basis for the estimates depends upon the type of expected impact. The four major components for treatment plant operating and maintenance are labor, energy, chemicals, and materials. Energy and chemicals are more easily predicted. The equipment projected for installation has design parameters that more clearly dictate the resource demands. If there is a direct labor application which will have changed as a result of a project, that estimate would be accurate. However, labor and material costs are more commonly based on experienced estimates with similar projects and facilities from either the City of Portland or others.

It is important to note that operating budgets have not kept pace with the growing inventory of surface stormwater management facilities. While life cycle costs have been determined to be lower and watershed health benefits are higher for surface stormwater management as compared to pipe systems, it can be much more challenging to fund the maintenance (operating budget) costs of the surface facilities.

The planned project to capture the remaining waste biogas at Columbia Boulevard Wastewater Treatment Plant is designed to produce a positive revenue stream when completed in FY 2017-18.

Administration & Support

Description

The Administration & Support program manages the Bureau of Environmental Services, coordinates the activities of the bureau's five service provider groups, and ensures timely and appropriate response to the public, ratepayers, and regulatory agencies. Coordination includes overseeing the development of the bureau's budget and managing review of programs, projects, and services offered by the bureau. The program provides supervision of the following specific service areas:

- Public Information and Community Outreach and Involvement provides public information, communication planning, public involvement, environmental education, and internal communication services required to meet several state and federal requirements.
- Environmental Policy is responsible for developing environmental policies, rules and codes, and coordinating that work within the bureau and with other city bureaus, interest groups, and federal, state, and local agencies involved in environmental planning and implementation affecting the City.
- Employee Development includes identifying training needs and solutions for managers and employees, coordinating internal and external education and training, and maintaining the bureau's database of employee training and development activities.
- Finance includes budget development, accounting, financial planning and forecasting, debt management, rate development, grants management, project tracking and year-end financial reporting, wholesale service contract development and administration, management of the Clean River Rewards stormwater discount program, and administration of the Nonconforming Sewer Conversion program.
- Information Management activities include administering the bureau's data management software and software needs.

Goals

The Administration & Support program support the following City goal of protecting the natural and built environment though the following activities:

- Public Information and Community Outreach and Involvement communicates with city residents and ratepayers through public information, education, and involvement in bureau programs and projects.
- Environmental Policy works with legislation and regulations that protect the environment.
- Bureau Support, Employee Development, and Finance perform necessary business processes, helping to enhance employee skills, acquire the necessary equipment, and secure necessary financing for bureau operating programs and capital construction.
- Information Management develops and maintains the data to support the bureau's asset management efforts.

Performance

The bureau education programs reached 14,793 students in FY 2012-13. The goal for FY 2013-14 was reduced to 6,000 students, as a result of the elimination of an environmental educator position; however the bureau bridged the staffing gap with temporary part-time staff reaching 11,271 students. For FY 2014-15, the goal is 12,000 students, to be achieved, again, with temporary part-time position support. In FY 2015-16, with the educator position restored, the goal rises to 14,000 students.

The bureau's debt service coverage ratio for all revenue bonds was 1.30 for FY 2012-13. The goal is to maintain the financial planning standard of 1.30 each year. The bureau's current bond rating is Aa3/ AA, a strong rating for sewer revenue credit. The goal is to maintain this rating.

The bureau's accident and injury incident rate (recordable incidents per 100 workers) is 2.96 for FY 2012-13 and 1.42 for FY 2013-14. The goal is 3.10 for both FY 2014-15 and FY 2015-16.

Changes to Services and Activities

Administrative Services is adding three positions in response to support needs for the bureau. One will provide reception for the bureau's front desk of the Portland Building. One Clean Rivers Education position will provide education on the bureau's program and environmental efforts to nearly 14,000 additional students. An Assistant Director position is added to provide high-level executive and policy support for the Bureau Director. The position will assist the Director in implementing and monitoring programs to achieve bureau mission, goals, and performance measures. In addition, the Administrative Services program is the bureau's lead program for equity enhancements with increased support for targeted outreach activities. The Finance program will have an interagency agreement with the City Budget Office that will fund staff support to the new Portland Utility Board. Salaries and associated costs for two staff positions (one new, one existing) will be shared between BES and Water Bureau.

FTE & Financials	Actual FY 2012-13	Actual FY 2013-14	Revised FY 2014-15	Proposed FY 2015-16	Adopted FY 2015-16
FTE	78.80	69.90	59.60	62.60	62.60
Expenditures					
Administration	1,178,448	1,206,650	1,678,973	1,547,868	1,550,868
Administration & Support	2,928	3,905	0	0	0
Bureau Support	7,931,489	8,026,412	8,896,417	9,425,309	9,493,922
Communications	919,728	775,594	980,243	956,719	956,719
Employee Development	570,918	632,794	37,220	157,220	157,220
Facilities	0	0	142,376	0	0
Finance	20,412,981	21,932,734	22,496,095	24,115,364	24,218,828
Information Management	4,939,528	5,200,573	5,307,740	5,641,039	5,489,167
Total Expenditures	**35,956,020**	**37,778,662**	**39,539,064**	**41,843,519**	**41,866,724**

Performance	Actual FY 2012-13	Actual FY 2013-14	Yr End Est. FY 2014-15	Base FY 2015-16	Target FY 2015-16
Key Performance Measure					
Average single family household bill as a percent of median income	1.40%	1.43%	1.45%	1.46%	1.46%
Effectiveness					
Maintain the bureau's first lien debt service coverage ratio at 1.5 or greater	1.94	1.95	2.21	2.28	2.28
Maintain bureau's combined first and second lien debt service coverage ratio at 1.3 or greater	1.30	1.30	1.30	1.30	1.30
Efficiency					
Amount of time loss, in hours, due to injury	2.96	1.42	3.10	3.10	3.10

Performance	Actual FY 2012-13	Actual FY 2013-14	Yr End Est. FY 2014-15	Base FY 2015-16	Target FY 2015-16
Workload					
Number of student contacts provided with bureau education programs	14,793	11,271	12,000	12,000	14,000

Engineering

Description

Engineering Services serves the community by managing the planning, design, and construction of public improvements necessary to protect public health and watersheds. Engineering Services provides analyses, design, construction management, technical standards, documentation of best management practices, protection and enhancement of the system, development review and permitting, CIP program and budget management, and implementation of programs to protect infrastructure. Engineering implements system plans and policies that protect water resources and stream integrity. Engineering Services is divided into six programs that include the following:

- Program Management and Controls develops the bureau's annual capital budget and five-year capital improvement plan, monitors the budget and program, and provides support functions for program delivery.
- Asset Systems Management provides short- and long-term engineering analyses and planning for combined, sanitary, and stormwater facilities and watersheds using an asset management framework. It is responsible for developing and leading improvement to the bureau's asset management program. It also manages the Combined Sewer Overflow (CSO) Program, which works with the Wastewater Group to ensure the CSO and Capacity, Management, Operation, and Maintenance (CMOM) requirements of the City's NPDES waste discharge permit are met in a timely, cost effective, and functional manner.
- Design Services provides project management and engineering design services, and is responsible for ensuring each assigned project accomplishes its intended purpose on schedule, within budget, at best value, and in a manner consistent with City and bureau missions and values.
- Construction Services provides construction management and inspection services for bureau projects, development projects, and projects managed by other City bureaus for assets that become part of the bureau's infrastructure.
- Materials Testing Lab provides quality control and quality assurance of materials used in the construction of bureau assets. This involves testing, inspection, and geotechnical services during construction, as well as evaluation of emerging technologies and products. The lab is an independently certified lab and it provides a vital service for both bureau projects and projects managed by other City bureaus.
- Systems Development assists developers and other customers and supports City development goals by reviewing and approving plans, issuing permits and inspecting private stormwater facilities.

Goals

Engineering Services supports the City goal of protecting and enhancing the natural and built environment by preserving, protecting, and enhancing infrastructure. Engineering Services develops and improves wastewater and stormwater assets to preserve and enhance the value of the community's investment; aggressively controls sewer overflows and basement flooding; explores and evaluates innovative technologies and solutions; and integrates natural system concepts into design, construction, and maintenance of systems that retain or improve the current service level.

Performance

Construction management costs are forecasted to be 12% of total construction costs. More than 99% of pipe identified as highest priority for repair or replacement is incorporated into funded CIP or operating projects.

Changes to Services and Activities

The Bureau is in the process of developing a Stormwater System Plan which will provide strategic, proactive, and transparent direction for managing the City's stormwater system in a way that reduces risk and meets levels of service. Concurrently, the bureau is revising the Stormwater Management Manual to better meet regulatory, system, and development needs. These efforts are integrally connected to Watershed Services' work, in particular the work of the watershed teams and the Sustainable Stormwater Division. Therefore, engineering staff leading the programs in Stormwater Systems planning and Stormwater Retrofits moved to Watershed Services January 1, 2015. This allows the bureau to more strategically focus resources and to better support the functions and outcomes of system planning and the stormwater management manual. The restructuring combined resources to best meet the work needs and to better serve emerging priorities for the Bureau. The Asset Systems Management program is converting a contract position to an FTE, adding an FTE for engineering administrative support for the Wastewater Engineering Support Facility (Columbia Building), and $150,000 Professional, Technical, and Expert support for the Emergency (Earthquake, Landslides and Flood) Response and Resiliency Plan. The CIP Program, reflected in Engineering Services, is adding two Instrument Technicians and one Electrician at the Wastewater Treatment Plant to provide support for CIP projects. Due to the continued need for this work on Wastewater Treatment and Pump Station CIP projects (including Rehabilitation, Reliability, and Maintenance program projects), there is an opportunity to create a more sustainable work strategy and improve work coordination by adding the three positions.

FTE & Financials	Actual FY 2012-13	Actual FY 2013-14	Revised FY 2014-15	Proposed FY 2015-16	Adopted FY 2015-16
FTE	169.80	170.38	190.05	192.88	195.71
Expenditures					
Asset Systems Management	37,011,160	28,690,221	3,007,268	3,119,571	3,124,621
Capital Program Mgmt & Controls	57,639,348	70,460,710	114,707,350	105,319,942	105,475,692
Construction Services	1,558,555	1,598,062	707,355	864,462	864,462
Design	2,007,516	1,726,969	1,167,522	1,158,170	1,158,170
Downspout Disconnection	116,593	110,027	121,049	0	0
Engineering	1,271,073	1,046,516	1,692,175	1,326,210	1,296,210
Materials Test Lab	1,321,302	1,318,230	1,531,060	1,588,355	1,612,595
Stormwater Retrofit	515,032	514,968	1,096,789	0	0
Systems Development	4,976,781	4,667,332	3,249,114	3,381,537	3,364,305
Total Expenditures	**106,417,360**	**110,133,035**	**127,279,682**	**116,758,247**	**116,896,055**

Performance	Actual FY 2012-13	Actual FY 2013-14	Yr End Est. FY 2014-15	Base FY 2015-16	Target FY 2015-16
Effectiveness					
Percentage of pipe identified as highest priority for repair or replacement incorporated into funded Capital Improvement Plan or Op. proj.	99%	99%	99%	99%	99%

Performance	Actual FY 2012-13	Actual FY 2013-14	Yr End Est. FY 2014-15	Base FY 2015-16	Target FY 2015-16
Efficiency					
Construction management costs as a percentage of total construction costs	12%	9%	12%	12%	12%

Pollution Prevention

Description

Pollution Prevention Services includes two programs: Environmental Investigations and Environmental Compliance. This service area also includes the Portland Brownfield Program.

- Environmental Investigations provides wastewater, stormwater, surface water, groundwater, industrial wastewater, gases, soils and sediment sampling and monitoring services. It provides a full-service environmental laboratory, conducts environmental site analysis as well as environmental project management. The group provides consultation, data analysis, and reporting for the bureau, other City bureaus, and outside agencies.
- Environmental Compliance manages the bureau's regulatory enforcement process including industrial pretreatment, stormwater, and other environmental regulations under the bureau's authority. This service area also ensures bureau compliance with state and federal regulatory obligations including permits governing wastewater collection and treatment, influences environmental policy and regulations developed by other entities, and manages the City's stormwater and groundwater permits under the Clean Water Act and the Safe Drinking Water Act.
- Portland Brownfield program provides assistance for assessment and cleanup of contaminated properties through use of federal brownfield grants, matching funds from public agencies, and investment by private sector partners. Program services address soil and water contaminants to protect human and watershed health. Brownfield program projects return contaminated sites to productive economic and community use through partnership with neighborhoods and businesses.

Goals

Pollution Prevention Services supports the City goal of protecting and enhancing the natural and built environment by increasing innovative pollution prevention strategies. Pollution Prevention Services achieves this goal by providing technical assistance to City staff and to industrial and commercial operators and homeowners to prevent pollution through effective permit management, installation and maintenance of best management practices, technical assistance and education, and establishing partnerships with individuals and organizations to control pollution at the source to prevent impacts to water quality and the City storm and sewer collection systems.

Performance

In FY 2014-15, 99.8% of industrial enforcement tests are expected to be in full compliance, which is an increase in the performance of prior years. The goal for FY 2015-16 is to work with customers to maintain this level of performance. Site investigations and remediation will require an average expenditure of $12,500 per site in FY 2015-16. Total costs per project range from around $3,000 to $100,000.

The Water Pollution Control Laboratory estimates it will perform 55,000 lab analyses in FY 2015-16. This figure is slightly above the 51,000 analyses done during FY 2013-14 but less than the 62,500 analyses projected for the FY 2014-15. The bureau is projecting the lesser number for FY 2015-16 because the FY 2014-15 total reflects a one-time increase in analyses in the final year of the current Underground Injection Control (UIC) permit. This decrease, however, will be partially offset by an increase in work coming from outside municipalities.

Changes to Services and Activities

The Environmental Compliance program is adding one FTE to adequately staff the Spill Control/Citizen Response (SPCR) section. There has been a steadily increasing number of complaints received by SPCR, including a 70% increase from FY 2012-13 to FY 2013-14. Due to the development of the Fats, Oils, & Grease (FOG) program, an existing staff member was moved out of traditional complaint response work to coordinate the FOG program full-time. This loss of staff resources, coupled with increasing numbers of complaints related to system damage and pollution, left SPCR without sufficient staff to respond timely or adequately to the complaints. This FTE would be primarily responsible for Incident Response and the direct and necessary protection of the collection and treatment systems.

The Environmental Investigations program is adding one FTE to cover workloads that have been increasing steadily since 2006. In addition to other water quality work, the team is providing support to expanded sewer rehabilitation work. Efficiencies have allowed most work coverage, but in the last year the section manager has had to fill in for staff shortages on 44 working days (21% of the time), taking the supervisor from regular managerial assignments and creating conflict with union contracts.

FTE & Financials	Actual FY 2012-13	Actual FY 2013-14	Revised FY 2014-15	Proposed FY 2015-16	Adopted FY 2015-16
FTE	87.33	85.50	85.00	87.00	87.00
Expenditures					
Env. Monitoring & Investigation	2,194,485	2,069,921	1,878,583	2,316,438	2,316,438
Environmental Compliance	4,239,833	4,174,886	7,773,733	7,607,931	7,607,931
Pollution Prevention	214,626	340,708	720,636	394,835	400,835
Source Control	3,091,044	2,464,324	0	0	0
Total Expenditures	**9,739,988**	**9,049,839**	**10,372,952**	**10,319,204**	**10,325,204**

Performance	Actual FY 2012-13	Actual FY 2013-14	Yr End Est. FY 2014-15	Base FY 2015-16	Target FY 2015-16
Key Performance Measure					
Number of sanitary sewer overflows	130	226	120	120	120
Effectiveness					
Percentage of industrial enforcement tests in full compliance	99.5%	99.6%	99.8%	99.8%	99.8%
Efficiency					
Average resources spent in site investigations and cleanup, per site investigated or remediated	$11,212	$11,820	$13,000	$12,500	$12,500
Workload					
Number of lab analyses performed each year	53,300	52,915	48,000	55,000	55,000

Portland Harbor

Description

The Portland Harbor Superfund program is managed through the Office of the Director and is budgeted in the Environmental Remediation Fund. The existence of the bureau's Superfund program is recognition by City Council that a strong City presence in the Superfund cleanup is critical. The bureau's Environmental Policy Manager oversees the Portland Harbor Superfund program and reports to the bureau director. The Environmental Policy Manager represents the City in the Lower Willamette Group (LWG), with the tribal governments and federal and state agencies, and coordinates with City Council on the progress of the work.

The City is a member of the LWG, composed of private and public entities who have signed a formal Consent Order agreement with the Environmental Protection Agency (EPA) to fund a contaminated sediment investigation. The City is also a member of the River Mile 11E Group that is working under an EPA order to collect additional data at River Mile 11E. Program staff work also support the City's response to the Portland Harbor Natural Resources Damages Assessment.

Goals

The Superfund program supports the City goal of protecting and enhancing the natural and built environment by actively participating in the Superfund cleanup. City involvement will promote ensuring liability is fairly allocated among all responsible parties.

Performance

- In January 2014, Environmental Services delivered to the DEQ the City of Portland Municipal Stormwater Source Control Report for Portland Harbor. The report summarizes over 10 years of work and describes the potential for the City's 39 outfalls in Portland Harbor to convey contaminants from upland drainage areas to harbor sediments.
- Staff continue to participate as members of both LWG and River Mile 11E Groups to complete obligations under EPA orders.
- The program will continue to work with DEQ to review investigations of upland properties that could convey contaminants to the City's stormwater conveyance system and, ultimately, the river.

Changes to Services and Activities

The program has included reductions for outside legal support ($100,000), support for Natural Resource Trustee ($204,000) as Portland Harbor Trustees have finished their phase of the work. Slightly over $1.0 million will be returned to the Oregon Department of Transportation (ODOT) for a refund of funds received in FY 2010-11 for partnering on remediation projects. Since no projects came to fruition or are planned, the funds will be returned to ODOT. The program includes an additional $300,000 for LWG efforts, assuming the Portland Harbor Record of Decision (ROD) will be issued in FY 2015-16, and investigation activities ($500,000) at River Mile 11E (RM11E) to allow for design and construction of a project after a ROD. The RM11E project is 80% funded by the Water and Transportation Bureaus. One FTE is added that will provide support to the new Assistant Director, as well as provide additional resources to the Environmental Policy division. A significant increase in legally sensitive public records requests is expected as the Portland Harbor project transitions to an allocation phase.

There are no significant service delivery impacts resulting from these changes. The reductions could have an effect on the City's role in cleanup or resource restoration. The investigation for River Mile 11E project is a continuing effort within this program.

FTE & Financials	Actual FY 2012-13	Actual FY 2013-14	Revised FY 2014-15	Proposed FY 2015-16	Adopted FY 2015-16
FTE	4.00	3.00	3.00	4.00	4.00
Expenditures					
CERCLA (Superfund)	181	290,123	1,400,000	1,794,608	1,794,608
Portland Harbor	2,750,602	3,521,983	2,802,173	2,501,140	2,502,140
Total Expenditures	**2,750,783**	**3,812,106**	**4,202,173**	**4,295,748**	**4,296,748**

Wastewater

Description

Wastewater Services protects public health, water quality, and the environment by effectively administering, operating, and maintaining wastewater and stormwater collection, pumping, and treatment facilities and by managing related programs in a manner that assures compliance with all applicable permits, regulations, and contracts. In addition to two wastewater treatment plants, the system includes 89 active pumping stations, 11 step systems, 2,344 miles of pipeline, 662 miles of lateral, 40,248 manholes, 8,589 stormwater sumps, 485,209 linear feet of ditches, 53,961 stormwater inlets and catch basins, 334 trash racks, 152 manufactured stormwater facilities, and 1,541 "green" stormwater facilities. Additional services provided by Wastewater Services include biosolids reuse, residuals management, odor control, methane utilization, vector control, and emergency response repairs.

Inspection, cleaning, maintenance, and repair for most sewer and stormwater collection facilities as well as collection system customer response and utility locating services are provided through an interagency agreement with the Portland Bureau of Transportation Maintenance Operations (PBOT-MO) Environmental Services Division.

This program also manages services that support the operation, maintenance, and engineering needs of wastewater infrastructure. These services include administrative support, asset management system administration and data management, reporting and analysis, facilities and property management, inventory management, and procurement services.

Goals

Wastewater Services supports the bureau and City goal of operating infrastructure in a way that meets regulatory requirements and protecting, rehabilitating, and maintaining existing assets for long-term reliability.

Performance

The treatment process at each of the two treatment plants continues to achieve removal of 96.6% of total suspended solids and biochemical oxygen demand from the wastewater compared with the 85% regulatory performance required in the National Pollutant Discharge Elimination System (NPDES) permits. Wastewater Services plans to sustain this level of performance in FY 2015-16.

Collection and treatment facilities delivered and processed 28.4 billion gallons of wastewater during FY 2013-14, a slight decrease from the previous year. Factors affecting total volume include the degree of water conservation by customers, how much stormwater and groundwater was kept out of the system, the volume of captured Combined System Overflow (CSO), and rainfall in the service area. It is expected that wastewater conveyed and treated will total approximately 28.5 billion gallons in FY 2014-15.

The operating and maintenance cost of wastewater treatment was approximately $618 per million gallons treated for FY 2013-14, driven up by lower-than-expected flows. This is projected to increase in FY 2014-15 to about $655 per million gallons treated and then remain stable for FY 2015-16 at $655 per million gallons treated.

In an effort to continue to preserve system capacity and prevent sanitary sewer overflows in the collection system, over 800,000 feet of sewers were inspected and over 1.5 million feet cleaned, totaling over 2.3 million feet that was inspected and cleaned in FY 2013-14. This is projected to remain approximately the same in FY 2014-15.

Changes to Services and Activities

The Wastewater Services program is adding one FTE to provide training services in support of efficiency, knowledge transfer and retention goals and one FTE to coordinate bureau emergency management response in support of the City and Bureau's efforts for increased emergency preparedness and resiliency.

The Treatment program is adding three positions (one Millwright and two Instrument Technicians) to maintain current levels of services to the bureau's customers. The additions are in response to an increased workload due to the increased number of facilities and assets to maintain and an increased demand for automation, reporting, and regulation. As these assets age, they require additional predictive and preventative maintenance (PM) to ensure a failure does not occur. The Instrument shop has experienced an increased work load due to the increased number of facilities and assets. An additional 2,308 instrumentation assets have been added since 2005 from the completion of CIP projects.

The Collections System program is adding an additional Manhole Inspections two-person crew through the interagency with PBOT-MO. The manhole inspections is a Capacity, Management, Operation, and Maintenance (CMOM) program requirement. As detailed to the Oregon Department of Environmental Quality in the bureau's CMOM cleaning and inspection plan, these inspections will be detailed in nature and will provide a condition assessment of the manhole which can be used to support rehabilitation efforts. Detailed condition assessments are necessary for a maintenance and repair plan that schedules maintenance, repairs, and replacements in order to minimize long-term ratepayer costs.

FTE & Financials	Actual FY 2012-13	Actual FY 2013-14	Revised FY 2014-15	Proposed FY 2015-16	Adopted FY 2015-16
FTE	135.00	135.00	128.95	133.95	133.20
Expenditures					
Collection System	30,136,468	29,022,409	30,049,150	32,300,280	31,329,058
Treatment	16,741,429	17,544,192	18,328,022	19,379,784	19,290,216
Wastewater	815,834	910,935	1,443,653	1,186,962	1,193,162
Total Expenditures	**47,693,731**	**47,477,536**	**49,820,825**	**52,867,026**	**51,812,436**

Performance	Actual FY 2012-13	Actual FY 2013-14	Yr End Est. FY 2014-15	Base FY 2015-16	Target FY 2015-16
Key Performance Measure					
Number of combined sewer overflow events	2	4	4	4	4
Percentage of urgent public health and safety related service requests responded to within two-hour timeframe	98%	98%	90%	90%	90%
Effectiveness					
Percentage of biochemical oxygen demand removed	97.0%	96.6%	85.0%	85.0%	85.0%
Number of flooding events	113	104	100	100	100
Percent of biochemical oxygen demand and total suspended solids removed during the treatment process	97%	97%	96%	96%	96%
Efficiency					
Cost to operate and maintain the treatment plants in million gallons per day	$582	$618	$655	$655	$655

Performance	Actual FY 2012-13	Actual FY 2013-14	Yr End Est. FY 2014-15	Base FY 2015-16	Target FY 2015-16
Workload					
Amount of wastewater processed in million gallons annually	28,569	28,433	28,000	28,500	28,500

Watershed

Description

Watershed Services plans, implements, and monitors projects and programs to improve watershed health. The group works closely with Engineering Services and other bureau workgroups on the design and construction of capital projects and with other City bureaus and local, regional, state, and federal agencies to protect and restore our rivers, streams, and watersheds. Watershed Services fosters community stewardship of watersheds and partners with other organizations and agencies to leverage resources and protect the bureau's investment in green and grey infrastructure.

These actions, implemented under guidance from the Portland Watershed Management Plan (PWMP), enable the City to protect water quality, manage stormwater sustainably, protect and restore habitat, and maintain public health and safety through built and natural infrastructure. Watershed Services provides scientific and technical expertise and implementation to help the City to comply with regulations under the Clean Water Act, the Safe Drinking Water Act, the Endangered Species Act, and the Comprehensive Environmental Response Compensation Liability Act (Superfund), as well as to address stormwater management needs and meet local environmental and livability goals.

Watershed Services includes four programs:

- Watershed Management leads geographically-based watershed planning and implementation for Portland's five watersheds: Columbia Slough, Fanno Creek, Tryon Creek, Johnson Creek, and the Willamette River and tributaries. The division supports the bureau's stormwater and sanitary system planning, leads implementation of watershed enhancement, protection, and restoration projects under the Watershed Investment Program and other capital projects, and monitors post-construction performance. The division spearheads the Watershed Health Index, a data-driven tool designed to communicate citywide progress toward watershed health goals. Watershed Management also oversees implementation of the City's adopted Invasive Species Strategy, the Columbia Slough Sediment Program, and works with a variety of community partners on environmental protection and stewardship activities, including the Community Watershed Stewardship grant program.
- Stormwater System program (formerly Sustainable Stormwater Management) provides policy and technical assistance, education and outreach, project design, and implementation for sustainable stormwater projects including green street facilities, rain gardens, ecoroofs, and tree canopy. Due to these efforts, Environmental Services is recognized as a national leader for developing approaches to integrate green infrastructure into the design of urban built environments as a way to cost-effectively reduce the volume of stormwater entering the sewer system, mitigate impacts to sensitive habitats, and reduce stormwater pollutants while benefiting overall environmental and community health. The Stormwater System program tests and implements new technologies and demonstrates effective approaches for public and private property that can be integrated into large-scale stormwater system improvements. Stormwater System staff lead the Bureau's Stormwater System planning work.

- Science, Fish and Wildlife provides the scientific data, analysis, and policy recommendations essential to the bureau's compliance with state and federal regulations and city environmental mandates. This information supports program and project requirements for PWMP implementation, best management practices, and adaptive management of bureau assets. Using the services of BES Pollution Prevention Services, it monitors changes in watershed health over time to inform policy, program, and project decisions. It coordinates federal, state, and local environmental permitting and compliance for in-water construction permits for all City bureaus. It also is responsible for citywide compliance with the Endangered Species Act.
- Watershed Revegetation program reforests city natural areas and adjacent lands, plants and maintains City green streets, stormwater management facilities, and bureau capital projects to improve the urban forest canopy and enhance the functional ability of urban watersheds. This program is managed by the Wastewater Services Group.

Goals

Watershed Services supports the City goal of protecting and enhancing the natural and built environment by improving and protecting watershed health within the urban area. Watershed Services leads the City's response to compliance with relevant regulations using a natural systems approach and green infrastructure to meet multiple objectives, minimize costs, and provide maximum benefits. It leads the bureau's Stormwater System planning efforts. The group's work supports the Climate Action Plan, Climate Preparation Strategy, the River Plan, the Portland Plan, and the update to the City's Comprehensive Plan.

Performance

Watershed Services and the Watershed Revegetation program restored more than 27,000 feet of stream bank during FY 2013-14. The bureau's target for FY 2014-15 and FY 2015-16 is to restore an additional 25,000 feet each year. The annual amount of stream bank restoration reported each year varies based on timing of project completion and the varying size and nature of capital projects.

In FY 2013-14, 13,170 people contributed thousands of volunteer hours on projects organized or catalyzed by the Community Watershed Stewardship program and other watershed stewardship programs. For FY 2014-15 and FY 2015-16 the number of participants is targeted to be around 9,000 per year, although participation levels vary due to the type of volunteer projects that are selected for funding.

The bureau and partners planted nearly 44,000 trees in FY 2013-14. Most of those were seedlings planted as part of natural area revegetation projects, and 5,394 were new street and yard trees planted to help manage stormwater runoff from streets and private property. In FY 2014-15, approximately 34,200 trees will be planted, and the target for FY 2015-16 is 32,300 trees. The lower targets are due to reductions in the Environmental Services Tree program budget since 2013, reduced staff capacity, and fewer spaces to plant new trees due to continued program success.

Changes to Services and Activities

January 1, 2015, the Stormwater System program of Engineering Services merged with the Sustainable Stormwater program of Watershed Services and formed the Stormwater System program. This transfer included seven staff along with stormwater planning budget support effective FY 2015-16. These organizational changes bring needed staff resources and increased efficiency and integration to the Stormwater System Plan work.

A reduction of $71,000 to the Stormwater System program urban canopy effort will reduce the number of street trees which will be planted in FY 2015-16. The funding shift provides for a required once-a decade sampling and analysis of fish tissue in the Columbia Slough. One-time support for Zenger Farms was moved to the Bureau of Planning & Sustainability budget. Modest increases for stormwater projects, such as the Laurelhurst School stormwater retrofit, a Green Wall on SE 15th that will expand the knowledge base for vertical stormwater management, and support for Portland States ecoroof simple retrofit on Fourth Ave. from an existing rock ballast roof to one seeded with sedum cuttings.

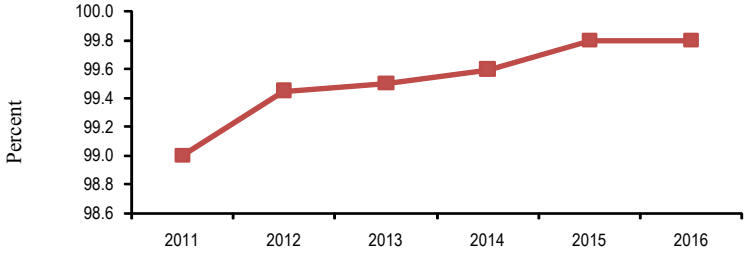
FTE & Financials	Actual FY 2012-13	Actual FY 2013-14	Revised FY 2014-15	Proposed FY 2015-16	Adopted FY 2015-16
FTE	58.80	57.30	57.00	56.68	54.60
Expenditures					
Science, Fish & Wildlife	1,080,291	1,121,321	1,176,846	1,274,432	1,274,432
Sustainable Stormwater	2,092,172	1,861,760	1,552,939	2,941,162	2,929,302
Watershed	479,065	524,900	744,386	637,238	608,438
Watershed Management	4,629,878	4,156,696	4,043,151	4,075,830	3,899,614
Watershed Revegetation	3,057,683	3,077,811	3,298,290	2,770,395	4,242,879
Total Expenditures	**11,339,089**	**10,742,488**	**10,815,612**	**11,699,057**	**12,954,665**

Performance	Actual FY 2012-13	Actual FY 2013-14	Yr End Est. FY 2014-15	Base FY 2015-16	Target FY 2015-16
Key Performance Measure					
Watershed Health Index for water quality	NA	4.40	4.40	4.40	4.40
Workload					
Number of individual participants in projects catalyzed or hosted by the Stewardship Program	10,634	13,170	9,000	9,000	9,000
Number of trees planted	41,223	43,784	34,200	32,300	32,300
Feet of streambank restored (not cumulative)	29,587	27,397	25,000	25,000	25,000

Performance Measures

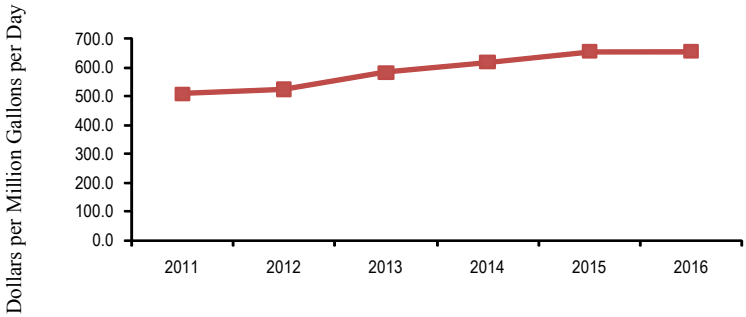
Enforcement Tests

Percent of industrial enforcement tests in full compliance.



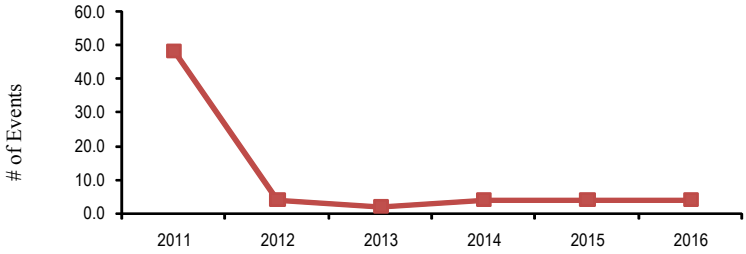
Wastewater Processing Cost

Cost to operate and maintain the wastewater treatment plants reflected in costs per million gallons. When flow is low, as in a "dry year," cost per unit increases.



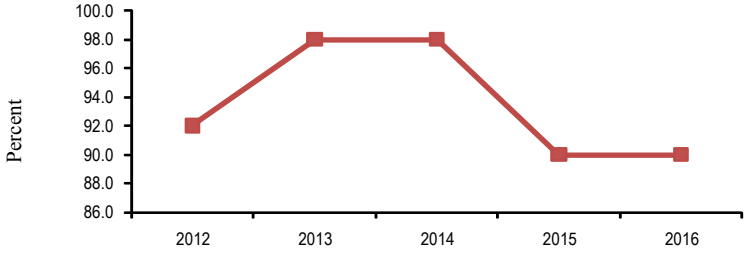
Combined Sewer Overflow (CSO) Events

The number of storm events that caused a combined sewer overflow (CSO) to either the Willamette River or the Columbia Slough. Over 100 events occurred annually prior to the start of construction of the CSO system in 1990 and 48 occurred the year before the system was completed in 2011.



Health and Safety Related Service Requests

Percent of urgent health and safety related service requests responded to within two-hour timeframe.



	Actual FY 2012-13	Actual FY 2013-14	Revised FY 2014-15	Proposed FY 2015-16	Adopted FY 2015-16
Resources					
External Revenues					
Licenses & Permits	1,405,704	1,739,676	1,692,159	1,980,000	1,980,000
Charges for Services	279,135,507	303,135,463	314,638,800	329,343,227	329,343,227
Intergovernmental	2,510,150	1,823,477	3,014,003	298,000	298,000
Bond & Note	78,912,308	234,659,218	235,190,000	0	0
Miscellaneous	2,177,940	1,995,335	1,553,790	1,885,000	1,935,000
Total External Revenues	**364,141,609**	**543,353,169**	**556,088,752**	**333,506,227**	**333,556,227**
Internal Revenues					
Fund Transfers - Revenue	246,357,393	292,685,613	325,011,859	321,473,024	321,473,024
Interagency Revenue	3,800,540	2,377,538	2,017,116	1,679,526	1,779,526
Total Internal Revenues	**250,157,933**	**295,063,151**	**327,028,975**	**323,152,550**	**323,252,550**
Beginning Fund Balance	103,633,639	97,892,846	143,632,000	285,375,000	303,975,000
Total Resources	**$717,933,181**	**$936,309,166**	**$1,026,749,727**	**$942,033,777**	**$960,783,777**
Requirements					
Bureau Expenditures					
Personnel Services	58,134,233	58,344,546	61,453,661	64,046,012	64,184,724
External Materials and Services	64,415,851	58,673,610	56,544,784	59,425,539	59,440,799
Internal Materials and Services	43,067,578	43,087,210	42,507,860	42,721,477	42,722,658
Capital Outlay	48,883,406	58,896,960	81,524,003	71,589,773	71,803,651
Total Bureau Expenditures	**214,501,068**	**219,002,326**	**242,030,308**	**237,782,801**	**238,151,832**
Fund Expenditures					
Debt Service	150,813,205	271,169,198	167,519,272	176,942,228	176,942,228
Contingency	0	0	226,088,132	139,844,785	157,971,600
Fund Transfers - Expense	254,726,062	297,251,778	327,232,015	325,688,963	325,763,117
Debt Service Reserves	0	0	63,880,000	61,775,000	61,955,000
Total Fund Expenditures	**405,539,267**	**568,420,976**	**784,719,419**	**704,250,976**	**722,631,945**
Ending Fund Balance	97,892,846	148,885,864	0	0	0
Total Requirements	**$717,933,181**	**$936,309,166**	**$1,026,749,727**	**$942,033,777**	**$960,783,777**
Programs					
Administration & Support	35,956,020	37,778,662	39,539,064	41,843,519	41,866,724
Assessments & Improvements	0	73	0	0	0
Engineering	106,417,360	110,133,035	127,279,682	116,758,247	116,896,055
Franchise Management	0	1,022	0	0	0
Healthy Working Rivers	604,097	7,565	0	0	0
Pollution Prevention	9,739,988	9,049,839	10,372,952	10,319,204	10,325,204
Portland Harbor	2,750,783	3,812,106	4,202,173	4,295,748	4,296,748
Wastewater	47,693,731	47,477,536	49,820,825	52,867,026	51,812,436
Watershed	11,339,089	10,742,488	10,815,612	11,699,057	12,954,665
Total Programs	**214,501,068**	**$219,002,326**	**$242,030,308**	**$237,782,801**	**$238,151,832**

This table summarizes project expenses by capital programs. Only projects that are budgeted within the five-year capital plan are displayed.

Bureau Capital Program / Project	Prior Years	Revised FY 2014-15	Adopted FY 2015-16	Capital Plan FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	5-Year Total
Maintenance and Reliability								
Alder: Buckman East Reconstruction/Greenstreet	0	0	0	0	294,000	872,000	2,913,000	4,079,000
Alder: Eastside Industrial Recon/ Greenstreets	0	0	0	0	244,000	1,572,000	3,600,000	5,416,000
Alder: Ladd's Addition South Reconstruction/Greenstreets	0	0	0	229,000	543,000	1,931,000	1,965,000	4,668,000
Alder: Sunnyside East South Recon Greenstreets	91,721	103,000	365,000	2,411,000	0	0	0	2,776,000
Alder: Sunnyside North Recon/ Greenstreet	0	0	809,000	1,053,000	5,127,000	4,266,000	0	11,255,000
Alder: Sunnyside South Recon/ Greenstreet	0	0	0	260,000	828,000	2,716,000	2,763,000	6,567,000
Beech Essex CP-G	8,265	0	0	0	0	0	378,000	378,000
Beech Essex CP-K	0	53,000	0	0	299,000	1,140,000	0	1,439,000
Beech-Essex CP-J	0	0	0	0	0	57,000	897,000	954,000
Burlingame Basin Infiltration and Inflow	4,348,321	2,934,000	3,436,000	200,000	50,000	2,650,000	1,000,000	7,336,000
Capital Maintenance - non-process facilities	0	250,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
Combined Sewer Overflow Pressure Relief	25,594	165,000	300,000	500,000	0	0	0	800,000
Fanno Basin System Improvement	106,678,301	11,730,000	6,092,000	0	0	0	0	6,092,000
Fanno Creek Infiltration and Inflow	668,295	1,056,000	350,000	3,100,000	3,800,000	0	0	7,250,000
Hollywood Stormwater Solutions	1,149,300	105,000	226,000	0	0	0	0	226,000
Large Diameter Sewer Rehabilitation	0	100,000	1,000,000	1,000,000	1,000,000	5,000,000	5,000,000	13,000,000
Maintenance Capital - Construction	21,525,534	230,000	230,000	240,000	240,000	240,000	240,000	1,190,000
Maintenance Capital - Contract	77,507,786	2,700,000	2,800,000	3,000,000	3,000,000	3,000,000	3,500,000	15,300,000
NWN: BCC Support Project	664,171	1,581,000	1,670,000	0	0	0	0	1,670,000
NWN: Central Tanner	0	0	100,000	600,000	1,073,000	4,443,000	4,000,000	10,216,000
NWN: East Nicolai	0	0	0	0	524,000	3,399,000	3,140,000	7,063,000
NWN: Far North Nicolai	519,287	2,090,000	4,500,000	0	0	0	0	4,500,000
NWN: North Tanner Pipe Construction	25,933	0	700,000	0	0	0	0	700,000
NWN: Northeast Fremont	0	0	0	0	0	500,000	529,000	1,029,000
NWN: Northwest Thurman Street	0	0	0	0	421,000	2,112,000	9,000	2,542,000
NWN: Southeast Tanner	0	0	0	335,000	975,000	2,499,000	0	3,809,000
NWN: Southwest Tanner	0	0	0	0	520,000	677,000	2,992,000	4,189,000
Owner Controlled Insurance Program Phase IV	4,143,072	800,000	500,000	300,000	0	0	0	800,000
Phase 2 Pipe Rehabilitation	37,493,401	41,028,000	32,252,000	28,713,000	4,703,000	0	0	65,668,000
Pipe Rehab Phase 3	0	0	3,121,000	17,418,000	28,455,000	18,410,000	18,000,000	85,404,000
SE Interceptor Rehabilitation	224,439	495,000	3,500,000	6,000,000	4,000,000	0	0	13,500,000
Stark HSS-17	0	0	0	0	0	984,000	1,278,000	2,262,000
Structural Rehab Taggart Outfall 30	200,230	1,405,000	650,000	1,630,000	7,250,000	4,000,000	0	13,530,000

This table summarizes project expenses by capital programs. Only projects that are budgeted within the five-year capital plan are displayed.

Bureau Capital Program / Project	Prior Years	Revised FY 2014-15	Adopted FY 2015-16	Capital Plan FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	5-Year Total
Taggart Basin Relief & Reconstruction TG-3	0	0	0	186,000	93,000	2,897,000	6,000	3,182,000
TGD: Richmond Neighborhood Sewer Rehabilitation	0	0	160,000	612,000	1,890,000	2,000,000	0	4,662,000
TGD: SE Division Stormwater & Pipe Reconstruction	5,454,083	500,000	50,000	50,000	0	0	0	100,000
TGD: SE Hawthorne Greenstreet and Pipe Reconstruction	1,096,516	898,000	4,500,000	200,000	85,000	0	0	4,785,000
TGD: SE Powell Green Street and Pipe Reconstruction	998,648	1,600,000	3,800,000	90,000	92,000	0	0	3,982,000
TGD:SE Clinton-Caruthers System Improvements	1,565,421	950,000	50,000	50,000	0	0	0	100,000
Tryon SS Protection 1A TCWTP to Hwy 43	1,034,794	640,000	1,000,000	1,400,000	0	0	0	2,400,000
Wheeler WHE-04	75,443	0	300,000	515,000	3,000,000	4,039,000	500,000	8,354,000
Total Maintenance and Reliability	**265,498,555**	**71,413,000**	**73,461,000**	**71,092,000**	**69,506,000**	**70,404,000**	**53,710,000**	**338,173,000**
Sewage Treatment Systems								
CBWTP Access/Egress	0	0	0	0	0	0	767,000	767,000
CBWTP Biogas Utilization	321,000	435,000	6,704,000	3,200,000	0	0	0	9,904,000
CBWTP Biosolid Dryer	0	0	0	0	0	0	121,000	121,000
CBWTP Dewatering Improvements	0	0	0	0	0	335,000	1,908,000	2,243,000
CBWTP Digester Improvements	0	0	470,000	0	0	0	0	470,000
CBWTP Lagoon Reconstruction	16,430,307	2,598,000	3,300,000	3,600,000	3,006,000	333,000	336,000	10,575,000
CBWTP Outfall Diffuser	0	100,000	100,000	485,000	1,484,000	0	0	2,069,000
CBWTP Reuse System Replacement	0	0	0	0	405,000	411,000	2,369,000	3,185,000
CBWTP Secondary Treatment Expansion	0	0	0	533,000	3,202,000	3,458,000	7,312,000	14,505,000
CBWTP Seismic Improvements	0	0	0	0	213,000	533,000	1,694,000	2,440,000
CBWTP Thickened Waste Activated Sludge Piping	17,680	120,000	526,000	400,000	0	0	0	926,000
Pump Station Improvements	65,104,145	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	20,000,000
Repair, Rehabilitation, and Modification	56,491,543	2,000,000	2,000,000	2,000,000	2,500,000	2,500,000	2,500,000	11,500,000
TCWTP Headworks, Dry Weather Clarifier & Odor Control	0	2,588,000	1,000,000	6,500,000	10,800,000	14,400,000	3,000,000	35,700,000
TCWTP Secondary Process Improvements	0	0	200,000	210,000	595,000	1,156,000	3,218,000	5,379,000
Tryon Creek Wastewater Treatment Plant Improvements	514,121	268,000	0	0	11,000	438,000	0	449,000
Total Sewage Treatment Systems	**138,878,796**	**12,109,000**	**18,300,000**	**20,928,000**	**26,216,000**	**27,564,000**	**27,225,000**	**120,233,000**
Surface Water Management								
Columbia Slough Outfalls	428,893	150,000	581,000	1,854,000	1,981,000	1,300,000	4,000,000	9,716,000
Culvert Replacement Phase 2	1,234,191	1,207,000	2,000,000	0	0	0	0	2,000,000

This table summarizes project expenses by capital programs. Only projects that are budgeted within the five-year capital plan are displayed.

Bureau Capital Program / Project	Prior Years	Revised FY 2014-15	Adopted FY 2015-16	Capital Plan FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	5-Year Total
FT: Boones Ferry Culvert	540,229	1,277,000	237,000	2,000,000	0	0	0	2,237,000
FT: Fanno BvrtnHills Hwy	268,257	161,000	479,000	500,000	500,000	1,000,000	1,000,000	3,479,000
FT: Fanno Tryon Drainage Shoulder Improvements	0	220,000	200,000	500,000	500,000	1,012,000	1,000,000	3,212,000
FT: Fanno/Tryon WQF 2	0	0	0	36,000	278,000	278,000	72,000	664,000
FT: Jackson Middle School Creek Daylight	4,944	0	173,000	958,000	304,000	0	0	1,435,000
FT: SW 45th Ave Culvert	60,503	329,000	148,000	1,120,000	0	0	0	1,268,000
Green Infrastructure Rehab	0	0	0	0	0	0	206,000	206,000
Green Infrastructure: Land Acquisition	18,596,474	2,000,000	2,000,000	500,000	0	0	0	2,500,000
JC: Brunkow	132	100,000	200,000	470,000	0	0	0	670,000
JC: Community Restoration Partnership	199,476	150,000	100,000	200,000	800,000	20,000	20,000	1,140,000
JC: Freeway Land Floodplain Restoration	86,101	0	50,000	100,000	200,000	1,000,000	1,500,000	2,850,000
JC: Johnson Creek Willing Seller Phase 2	5,816,572	500,000	500,000	500,000	500,000	500,000	500,000	2,500,000
JC: Oxbow	18,438	142,000	185,000	972,000	50,000	0	0	1,207,000
JC: Springwater Wetland	393,384	50,000	100,000	250,000	1,000,000	30,000	30,000	1,410,000
JC: West Lents Flood Mitigation	0	0	0	312,000	562,000	2,843,000	2,903,000	6,620,000
Oaks Bottom Culvert Replacement	1,294,631	0	90,000	142,000	210,000	0	0	442,000
SE Platt Ave Water Quality Facility	58,325	0	150,000	0	0	0	0	150,000
Stephens Creek Ph 1 Improvements	107,293	1,162,000	383,000	254,000	927,000	471,000	2,005,000	4,040,000
Watershed Investment	4,049,528	2,000,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000
Watershed Land Acquisition Prog Ph 2	0	0	0	1,500,000	2,000,000	2,000,000	2,000,000	7,500,000
Total Surface Water Management	**33,157,371**	**9,448,000**	**9,076,000**	**13,668,000**	**11,312,000**	**11,954,000**	**16,736,000**	**62,746,000**
Systems Development								
Drainage Improvement	6,195,929	250,000	250,000	250,000	250,000	250,000	250,000	1,250,000
Milw Light Rail Ext	1,628,970	332,300	120,000	0	0	0	0	120,000
Party Sewers	7,276,357	2,400,000	2,000,000	2,000,000	2,000,000	1,000,000	1,000,000	8,000,000
PBOT Interagency Reimbursement	17,419,973	350,000	350,000	350,000	350,000	350,000	350,000	1,750,000
Permit Reimbursement	2,412,255	45,000	45,000	45,000	45,000	45,000	45,000	225,000
Public Works Permit Projects	31,327,326	500,000	500,000	500,000	500,000	500,000	500,000	2,500,000
Sewer Easements on Existing Sewers	55,539	50,000	50,000	50,000	50,000	50,000	50,000	250,000
Sewer Extensions to Properties with High Risk Septic Systems	213,669	638,000	200,000	200,000	900,000	1,600,000	2,000,000	4,900,000
SW Terwilliger Blvd & Powers Ct Sewer Extension	635,776	2,300,000	250,000	2,500,000	100,000	0	0	2,850,000
Total Systems Development	**67,165,794**	**6,865,300**	**3,765,000**	**5,895,000**	**4,195,000**	**3,795,000**	**4,195,000**	**21,845,000**
Total Requirements	**504,700,516**	**99,835,300**	**104,602,000**	**111,583,000**	**111,229,000**	**113,717,000**	**101,866,000**	**542,997,000**

Class	Title	Salary Range		Revised FY 2014-15		Proposed FY 2015-16		Adopted FY 2015-16	
		Minimum	Maximum	No.	Amount	No.	Amount	No.	Amount
30000063	Accountant II	53,248	67,038	4.00	266,196	4.00	267,681	4.00	267,681
30000064	Accountant III	58,635	73,757	1.00	73,752	1.00	73,752	1.00	73,752
30000434	Administrative Assistant	48,256	74,339	4.00	268,454	4.00	276,261	4.00	276,261
30000433	Administrative Specialist, Sr	44,949	69,181	5.00	318,942	5.00	322,841	5.00	322,841
30000437	Administrative Supervisor II	61,506	81,994	1.00	61,500	1.00	63,188	1.00	63,188
30000104	Automotive Equip Oper II: Tractor-Trailr	46,405	55,890	1.00	55,896	1.00	55,896	1.00	55,896
30000671	Biosolids/Reuse Program Manager	74,734	100,443	1.00	100,440	1.00	100,440	1.00	100,440
30000315	Botanic Spec I-Generalist	54,933	70,138	1.00	70,140	1.00	70,140	1.00	70,140
30000320	Botanic Spec II-Generalist	57,845	73,778	2.00	138,878	2.00	142,107	2.00	142,107
30000321	Botanic Spec II-Ntrl Resource Ecologist	57,845	73,778	6.00	442,656	6.00	442,656	6.00	442,656
30000441	Business Operations Manager	80,413	107,099	2.00	208,278	2.00	212,067	2.00	212,067
30000442	Business Operations Manager, Sr	99,861	139,464	1.00	99,864	1.00	139,464	1.00	139,464
30000440	Business Operations Supervisor	71,302	95,389	2.00	166,692	2.00	173,640	2.00	173,640
30000447	Business Systems Analyst, Assistant	48,256	74,339	1.00	74,340	1.00	74,340	1.00	74,340
30000449	Business Systems Analyst, Sr	67,850	90,605	4.00	357,888	4.00	360,534	4.00	360,534
30000329	CAD Technician II	54,267	69,243	13.00	892,767	13.00	897,627	13.00	897,627
30000330	CAD Technician III	65,915	84,178	5.00	420,900	5.00	420,900	5.00	420,900
30000689	Capital Program Mgmt & Controls Manager	92,976	125,986	1.00	120,292	1.00	124,315	1.00	124,315
30000399	Capital Project Manager I	65,915	84,178	1.00	84,180	1.00	84,180	1.00	84,180
30000686	Capital Project Manager II	71,302	95,389	2.00	164,586	2.00	171,070	2.00	171,070
30000700	Communications Engineer	71,302	95,389	2.00	174,180	2.00	176,332	2.00	176,332
30000491	Community Outreach & Informtn Assistant	48,256	74,339	2.00	107,832	2.00	111,342	2.00	111,342
30000492	Community Outreach & Informtn Rep	58,573	78,083	2.00	156,168	2.00	156,168	2.00	156,168
30000493	Community Outreach & Informtn Rep, Sr	64,605	86,154	2.00	152,076	2.00	154,776	2.00	154,776
30000455	Contracts Dev & Review Administrator	71,302	95,389	1.00	95,388	1.00	95,388	1.00	95,388
30000672	Data Acquisition & Mgmt Supervisor	74,734	100,443	1.00	100,440	1.00	100,440	1.00	100,440
30000733	Development Services Manager	86,466	115,149	1.00	115,152	1.00	115,152	1.00	115,152
30000333	Development Services Technician II	54,267	69,243	1.00	69,240	1.00	69,240	1.00	69,240
30000836	Development Supervisor II	74,734	100,443	2.00	188,608	2.00	192,288	2.00	192,288
30000576	Economist, Sr	71,302	95,389	1.00	95,388	1.00	95,388	1.00	95,388
30000635	Electrical/Instrumentation Supervisor	74,734	100,443	1.00	100,440	1.00	100,440	1.00	100,440
30000116	Electrician	68,910	74,381	7.00	520,632	7.00	520,632	7.00	520,632
30000121	Electrician/Instrument Technician	71,011	76,648	6.00	459,864	6.00	459,864	6.00	459,864
30000401	Electronic Systems Technician	56,389	71,926	3.00	215,784	3.00	215,784	3.00	215,784
30000683	Engineer, Chief	109,886	157,310	1.00	157,308	1.00	157,308	1.00	157,308
30000682	Engineer, Principal	100,402	133,869	3.00	370,549	3.00	374,763	3.00	374,763
30000680	Engineer, Sr	86,902	115,856	13.00	1,428,484	13.00	1,436,103	13.00	1,436,103
30000681	Engineer, Supervising	93,413	124,550	10.00	1,214,340	10.00	1,218,168	10.00	1,218,168
30000365	Engineer-Civil	86,653	105,310	27.00	2,817,240	27.50	2,861,002	27.50	2,879,662
30000366	Engineer-Electrical	86,653	105,310	3.00	297,998	3.00	302,366	3.00	302,366
30000367	Engineer-Geotechnical	86,653	105,310	1.00	86,652	1.00	86,652	1.00	86,652
30000368	Engineer-Mechanical	86,653	105,310	1.00	105,312	1.00	105,312	1.00	105,312
30000358	Engineering Associate, Sr-Civil	74,922	95,534	10.00	912,816	10.00	918,464	10.00	918,464
30000359	Engineering Associate, Sr-Electrical	74,922	95,534	1.00	87,013	0.00	0	0.00	0
30000360	Engineering Associate, Sr-Geotechnical	74,922	95,534	1.00	95,532	1.00	95,532	1.00	95,532
30000353	Engineering Associate-Civil	61,589	82,514	12.00	886,298	12.00	902,690	12.00	902,690
30000324	Engineering Technician I	40,498	54,267	1.00	40,500	1.00	42,012	1.00	42,012
30000325	Engineering Technician II	54,267	69,243	22.00	1,483,524	22.00	1,490,996	22.00	1,490,996
30000326	Engineering Technician III	65,915	84,178	8.00	652,048	8.00	658,414	8.00	658,414
30001659	Env Svcs OCIP, Risk & Safety Officer	80,413	107,099	1.00	107,100	1.00	107,100	1.00	107,100

		Salary Range		Revised FY 2014-15		Proposed FY 2015-16		Adopted FY 2015-16	
Class	Title	Minimum	Maximum	No.	Amount	No.	Amount	No.	Amount
30001736	Environmental Compliance Mgr	86,466	115,149	1.00	115,152	1.00	115,152	1.00	115,152
30001735	Environmental Investigations Mgr	86,466	115,149	1.00	115,152	1.00	115,152	1.00	115,152
30000669	Environmental Monitoring Svcs Group Mgr	99,861	139,464	1.00	139,464	1.00	139,464	1.00	139,464
30000459	Environmental Policy Analyst	67,850	90,605	1.00	90,600	1.00	90,600	1.00	90,600
30000678	Environmental Policy Manager	92,976	125,986	1.00	125,988	1.00	125,988	1.00	125,988
30000662	Environmental Program Coordinator	64,605	86,154	7.00	571,798	8.00	666,664	8.00	666,664
30000663	Environmental Program Manager	71,302	95,389	10.00	932,102	10.00	942,310	10.00	942,310
30000664	Environmental Program Manager, Sr	80,413	107,099	4.00	425,544	3.00	321,294	3.00	321,294
30000661	Environmental Program Specialist	58,573	78,083	2.00	136,656	3.00	201,156	3.00	201,156
30000419	Environmental Services Director	138,986	199,160	1.00	199,164	1.00	199,164	1.00	199,164
30000339	Environmental Specialist-Generalist	65,915	84,178	26.00	2,119,154	26.00	2,137,426	26.00	2,137,426
30001359	Environmental Svcs Public Affairs Mgr	80,413	107,099	1.00	107,100	1.00	107,100	1.00	107,100
30000337	Environmental Technician I	40,498	54,267	1.00	41,004	1.00	43,053	1.00	43,053
30000338	Environmental Technician II	54,267	69,243	30.00	2,021,817	33.00	2,207,361	33.00	2,207,361
30000712	Facilities Services Specialist	58,573	78,083	1.00	71,439	1.00	74,366	1.00	74,366
30002037	Field Science Specialist	65,915	84,178	1.00	84,180	2.00	153,420	2.00	153,420
30002038	Field Science Technician	54,267	69,243	7.00	465,840	7.00	469,760	7.00	469,760
30000569	Financial Analyst, Principal	80,413	107,099	3.00	321,300	3.00	326,652	3.00	326,652
30000341	GIS Technician I	40,498	54,267	1.00	40,500	1.00	40,500	1.00	40,500
30000342	GIS Technician II	54,267	69,243	2.00	135,156	2.00	137,095	2.00	137,095
30000343	GIS Technician III	65,915	84,178	3.00	252,540	3.00	252,540	3.00	252,540
30000373	Graphics Designer III	65,915	84,178	1.00	76,296	1.00	79,230	1.00	79,230
30000340	Hydrogeologist	74,734	95,347	1.00	95,352	1.00	95,352	1.00	95,352
30000126	Industrial Machinist	55,619	62,275	1.00	62,280	1.00	62,280	1.00	62,280
30000157	Industrial Maintenance Millwright	55,619	62,275	28.00	1,730,520	29.00	1,798,398	29.00	1,798,398
30000114	Industrial Painter	55,078	61,630	1.00	61,632	1.00	61,632	1.00	61,632
30000218	Inf Syst Analyst, Principal-Gen	80,413	107,099	2.00	214,200	2.00	214,200	1.00	107,100
30000880	Inf Syst Analyst, Principal-GIS,Vertical	80,413	107,099	1.00	80,412	1.00	80,412	1.00	80,412
30000606	Inf Syst Mgr-Enterprise Database Mgr	86,466	115,149	1.00	86,460	1.00	90,012	1.00	90,012
30001510	Inf Syst Tech Analyst VI-Vertical GIS	71,302	95,389	1.00	95,388	1.00	95,388	1.00	95,388
30000239	Instrument Technician	68,910	74,381	9.00	669,384	14.00	1,028,460	14.00	1,028,460
30001108	Internal Business Services Director	109,886	157,310	0.00	0	1.00	133,596	1.00	133,596
30001283	Laboratory Analyst II	48,984	64,646	6.00	350,520	6.00	360,684	6.00	360,684
30001284	Laboratory Analytical Specialist	55,848	74,152	5.00	361,344	5.00	365,524	5.00	365,524
30001285	Laboratory Coordinator	57,949	81,765	3.00	236,220	3.00	241,326	3.00	241,326
30000670	Laboratory Manager	80,413	107,099	1.00	107,100	1.00	107,100	1.00	107,100
30000644	Maintenance Planner/Scheduler	58,573	78,083	5.00	373,536	5.00	379,252	5.00	379,252
30000451	Management Analyst	61,506	81,994	2.00	143,508	2.00	143,508	2.00	143,508
30000453	Management Analyst, Principal	80,413	107,099	1.00	97,044	1.00	101,030	1.00	101,030
30000452	Management Analyst, Sr	67,850	90,605	5.00	413,123	5.00	423,256	5.00	423,256
30000450	Management Assistant	48,256	74,339	1.00	74,340	1.00	74,340	1.00	74,340
30000692	Maps & Records Supervisor	64,605	86,154	1.00	64,608	1.00	84,072	1.00	84,072
30000345	Materials Testing Technician II	54,267	69,243	4.00	267,785	4.00	270,743	4.00	270,743
30000346	Materials Testing Technician III	65,915	84,178	1.00	84,180	1.00	84,180	1.00	84,180
30000012	Office Support Specialist II	33,738	48,443	4.00	190,221	5.00	236,308	5.00	236,308
30000013	Office Support Specialist III	43,160	57,200	4.00	214,776	5.00	280,872	5.00	280,872
30000677	Portland Harbor Superfund Technical Mgr	80,413	107,099	1.00	107,100	1.00	107,100	1.00	107,100
30000464	Program Coordinator	64,605	86,154	3.00	233,549	4.00	311,845	4.00	311,845
30000465	Program Manager	67,850	90,605	4.00	341,272	4.00	359,200	4.00	359,200
30000466	Program Manager, Sr	80,413	107,099	1.00	107,100	1.00	107,100	1.00	107,100

Class	Title	Salary Range Minimum	Salary Range Maximum	Revised FY 2014-15 No.	Revised FY 2014-15 Amount	Proposed FY 2015-16 No.	Proposed FY 2015-16 Amount	Adopted FY 2015-16 No.	Adopted FY 2015-16 Amount
30000463	Program Specialist	58,573	78,083	1.00	58,572	3.00	181,644	3.00	181,644
30000462	Program Specialist, Assistant	48,256	74,339	2.00	141,842	2.00	144,608	2.00	144,608
30000698	Property Acquisition & Services Manager	67,850	90,605	1.00	90,600	1.00	90,600	1.00	90,600
30000495	Public Information Officer	67,850	90,605	1.00	90,600	1.00	90,600	1.00	90,600
30000691	Public Works Inspection Manager	71,302	95,389	1.00	95,388	1.00	95,388	1.00	95,388
30000690	Public Works Inspection Supervisor	67,850	90,605	1.00	90,600	1.00	90,600	1.00	90,600
30000228	Public Works Inspector	60,882	69,576	16.00	1,106,273	16.00	1,111,577	16.00	1,111,577
30000229	Public Works Inspector, Sr	66,040	77,792	10.00	777,960	10.00	777,960	10.00	777,960
30000828	Records Specialist	33,738	48,443	1.00	47,284	1.00	48,444	1.00	48,444
30000481	Risk Specialist	58,573	78,083	1.00	65,688	1.00	67,704	1.00	67,704
30000482	Risk Specialist, Sr	64,605	86,154	1.00	86,148	1.00	86,148	1.00	86,148
30000485	Safety & Risk Officer I	67,850	90,605	1.00	90,600	1.00	90,600	1.00	90,600
30001958	Statistician	67,850	90,605	1.00	90,600	1.00	90,600	1.00	90,600
30000054	Storekeeper/Acquisition Specialist II	46,155	56,451	3.00	159,048	3.00	163,908	3.00	163,908
30000056	Storekeeper/Acquisition Specialist III	52,146	64,834	1.00	52,152	1.00	52,152	1.00	52,152
30000468	Stores System Supervisor II	61,506	81,994	1.00	81,996	1.00	81,996	1.00	81,996
30001078	Sustainable Stormwater Division Mgr	86,466	115,149	1.00	112,860	1.00	115,140	1.00	115,140
30000675	Wastewater Collections System Manager	92,976	125,986	1.00	125,988	1.00	125,988	1.00	125,988
30000676	Wastewater Operations Group Manager	99,861	139,464	1.00	139,464	1.00	139,464	1.00	139,464
30000163	Wastewater Operations Specialist	57,408	66,914	4.00	265,692	4.00	266,833	4.00	266,833
30000161	Wastewater Operator II	49,982	62,275	41.00	2,479,080	41.00	2,506,334	41.00	2,506,334
30000674	Wastewater Treatment Manager	92,976	125,986	2.00	224,220	2.00	231,457	2.00	231,457
30000673	Wastewater Treatment O&M Supervisor	71,302	95,389	5.00	432,009	5.00	441,894	5.00	441,894
30000656	Water Resources Program Manager	71,302	95,389	5.00	459,426	4.80	457,860	4.80	457,860
30000659	Watershed Division Manager	86,466	115,149	1.00	115,152	1.00	115,152	1.00	115,152
30000667	Watershed Revegetation Program Manager	71,302	95,389	1.00	78,024	1.00	80,684	1.00	80,684
30000666	Watershed Revegetation Program Supvr	64,605	86,154	1.00	86,148	1.00	86,148	1.00	86,148
30000660	Watershed Services Group Manager	99,861	139,464	1.00	114,858	1.00	119,568	1.00	119,568
TOTAL FULL-TIME POSITIONS				515.00	40,889,719	531.30	42,386,883	530.30	42,298,443
30000321	Botanic Spec II-Ntrl Resource Ecologist	57,845	73,778	0.90	66,396	0.88	64,920	0.88	64,920
30000358	Engineering Associate, Sr-Civil	74,922	95,534	0.90	85,980	0.50	45,492	0.50	45,492
30000339	Environmental Specialist-Generalist	65,915	84,178	0.90	75,756	0.70	60,312	0.70	60,312
30000464	Program Coordinator	64,605	86,154	0.90	77,544	0.90	77,544	0.90	77,544
TOTAL PART-TIME POSITIONS				3.60	305,676	2.98	248,268	2.98	248,268
30000433	Administrative Specialist, Sr	44,949	69,181	0.00	0	0.00	0	1.00	46,788
30000359	Engineering Associate, Sr-Electrical	74,922	95,534	0.00	0	0.83	75,820	0.83	75,820
30000353	Engineering Associate-Civil	61,589	82,514	1.00	63,114	1.00	66,258	1.00	66,258
30000325	Engineering Technician II	54,267	69,243	1.00	54,264	1.00	56,024	1.00	56,024
30000662	Environmental Program Coordinator	64,605	86,154	1.00	86,160	0.00	0	0.00	0
30000338	Environmental Technician II	54,267	69,243	2.00	113,808	0.00	0	0.00	0
TOTAL LIMITED TERM POSITIONS				5.00	317,346	2.83	198,102	3.83	244,890
GRAND TOTAL				523.60	41,512,741	537.11	42,833,253	537.11	42,791,601

This chart shows decisions and adjustments made during the budget process. The chart begins with an estimate of the bureau's Current Appropriations Level (CAL) requirements.

Action	Amount			FTE	Decision
	Ongoing	One-Time	Total Package		
FY 2015-16	235,783,574	0	235,783,574	521.70	FY 2015-16 Current Appropriation Level
CAL Adjustments					
	0	0	0	0.00	None
Mayor's Proposed Budget Decisions					
	488,448	0	488,448	7.00	Increases to maintain current service level
	250,000	0	250,000	0.00	Manhole inspections
	160,204	0	160,204	2.00	Environmental compliance and monitoring
	0	0	0	3.00	Capital program support
	132,310	0	132,310	1.00	Administrative enhancements
	214,608	0	214,608	1.00	Equity enhancements
	254,052	0	254,052	1.00	Emergency preparedness
	100,209	0	100,209	0.00	CBO interagency for PUB
	(133,392)	0	(133,392)	0.41	Tech adjustments - Sewer System Operating Fund
	1,025,000	0	1,025,000	0.00	Return of funds to ODOT - No project planned
	(500,000)	0	(500,000)	0.00	Eliminate double-budgeted item
	7,788	0	7,788	0.00	Tech adjustments - Environmental Remediation Fund
Approved Budget Additions and Reductions					
	72,984	0	72,984	1.00	Limited term created in FY 2014-15
	179,610	0	179,610	0.00	Personnel services adjustments
	15,000	0	15,000	0.00	Technical adjustments
Adopted Budget Additions and Reductions					
	36,455	0	36,455	(1.00)	Tech adjustments - Sewer System Operating Fund
	64,982	0	64,982	0.00	Tech adjustments - Environmental Remediation Fund
	2,368,258	**0**	**2,368,258**	**15.41**	**Total FY 2015-16 Decision Packages**
			238,151,832	**537.11**	**Total Adopted Budget**