

ADMINISTRATION AND SUPPORT PROGRAM

Program Description & Goals

The Administration and Support Program (via the Director’s Office and Deputy Director’s Office of Strategy, Innovation and Performance) provides the organization with high-level leadership, strategic guidance and effective oversight of the bureau. It leads the bureau’s workforce development and equity plan; ensures timely and appropriate response to the public, ratepayers and regulatory agencies; and functions as the primary liaison between the bureau and the Commissioner’s Office and City Council.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target

Explanation of Services

The Bureau of Environmental Services (BES) provides critical services through its management of the City’s wastewater and stormwater infrastructure, and protection of public health and the environment. The bureau is highly regulated under the Clean Water Act, Safe Drinking Water Act, and Endangered Species Act, and as such must ensure compliance with federal and state regulators. To facilitate regulatory compliance, BES must in turn locally regulate, monitor and enforce environmental policies. The staff that provide the oversight, accountability and coordination of this critical work is organized in these two work groups and provides the following activities:

- 1) Director’s Office –
 - Policy direction and executive-level strategic planning
 - Coordination of the bureau’s twenty-eight programs within five operating groups
 - Legislative liaison with the City Council and Commissioner’s Office
 - Response to legal issues and requests for public records

- 2) Office of Strategy, Innovation and Performance -
 - Leads and consults on the implementation of the Strategic Plan
 - Implements the bureau’s equity plan which focuses on improving outcomes for internal employees in recruitment and opportunities, and improving service delivery for external communities of color and low-income households
 - Implements the bureau’s workforce development plan focused on improving training opportunities for employee growth, and improving employee recognition and well-being
 - Manages bureau communications staff who coordinate internal and external communication
 - Coordinates improvement of the internal and external code, rules and policy development work
 - Supports two utility advisory groups, the Portland Utility Board and the Citizens’ Utility Board

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Equity Impacts

The BES Equity Plan, adopted in 2016, provides measurable action plans that BES continues to implement and track toward its goal of delivering optimally equitable services. In 2018, BES reaffirmed its commitment to equity with the BES 10-Year Strategic Plan, which incorporates a greater engagement with community-based organizations and culturally specific communities, to better understand and measure the effects of BES services within these communities. As BES builds this capacity and framework, it is also developing evaluative data to support positive racial equity outcomes and equitable service levels.

The Administration and Support Program (via the Director's Office and Deputy Director's Office of Strategy, Innovation and Performance) leads the implementation of the Bureau's Equity Plan and Strategic Plan. Working with the employee Committee for Equity and Diversity, this program will assess priorities and resource needs to achieve equity outcomes throughout the year.

Changes to Programs

The FY2019-20 Requested Budget accommodates (via technical adjustments) a number of changes to the organizational reporting structure that occurred in FY2018-19. None of these changes resulted in a direct budgetary adjustment, and all changes are expected to result in improved efficiency, collaboration and ultimately, improved program outcomes.

- The Office of Strategy, Innovation, and Performance was newly defined as a body of work in the Director's office, reporting to the Deputy Director. This team will lead the bureauwide innovation and continuous improvement process to help the bureau achieve the goals and outcomes of the Strategic Plan.
- Development Services was moved from the Engineering and Pollution Prevention groups, and now reports to the Director. This change is intended to better facilitate bureauwide coordination, and efficient operation and collaboration with partner bureaus responsible for development and permit-related functions.
- The bureauwide Emergency Management program was moved to the Bureau Support program area (within the Business Services Group).

The budgetary changes in the Administration and Support Program are an addition of \$150,000 in ongoing resources to support implementation of the bureau's Strategic Plan, and \$15,000 ongoing to support an intern (via Portland State University) to support implementation of the bureau's equity objectives. These additions are expected to specifically address the bureau's strategic initiative to evaluate existing service delivery and decision-making systems to align with the Strategic Plan and to deliver services equitably.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

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Bureau Support Program

Program Description & Goals

The Bureau Support Program manages the business and administrative needs of the bureau in accordance with City administrative rules and requirements. The over-arching goal of this program is to provide the administrative and support functions that guide employees toward efficient, cost-effective processes and practices that encourage accountability, consistency and transparency, and align with the bureau's strategic goals.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Amount of time loss, in hours per employee, due to injury			

Explanation of Services

Bureau Support provides the basic services required for most administrative operations bureauwide. Within the Business Services Group, Administrative Services provides human resources administration, facility and property management, and fleet and telecommunications coordination. Risk Services provides loss prevention, safety program, and training resources and oversees the Owner Controlled Insurance Programs (OCIP). Contract Management oversees contract coordination, the Bureau's Contracting Opportunities Program, and Grant Management. Management of the Wastewater Group's fleet, stores and facilities are also included in the Bureau Support program.

The program results in coordinated decision-making regarding activities including:

- Human resources (recruitment, hiring and HR management/administration)
- Facilities management (including security and property management responsibilities)
- Management of fleet vehicles
- Contracting that meets operating, capital, City Council and community objectives
- Risk management, employee safety and the City's Owner-Controlled Insurance Program
- The bureau's emergency management program
- Centralized administrative coordination with partner bureaus and agencies, especially the Office of Management and Finance.

Equity Impacts

The Bureau Support Program manages the Contracting Opportunity Program which performs extensive outreach within the Minority, Women, and Emerging Small Business (M/W/ESB) contracting community, to support and encourage contracting and subcontracting opportunities with BES. Equity considerations are also written into grant and contract agreements which have resulted in an increase of contracts awarded to minority businesses.

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This program also works closely with the Bureau of Human Resources to promote and support recruitment and employee retention strategies to achieve Citywide and bureau equity goals.

Changes to Programs

The FY2019-20 Requested Budget accommodates (via technical adjustments) moving the bureauwide Emergency Management program from Administration and Support (in the Director's Office) to Bureau Support (within the Business Services Group). This organizational change is expected to improve the bureau's ability to advance priorities in the emergency preparation workplan by better integrating emergency activities bureauwide and by improving coordination with and among other City partners. There is no budget impact resulting from this change.

Within the Business Services group, a net increase of approximately \$150,000 is requested to accommodate additional expenses expected to be incurred to facilitate move-in to the Portland Building. While most costs are covered by the Portland Building Reconstruction Project, some costs – such as document management, specialty furniture/equipment considerations and relocating staff in the Pioneer Tower – will not be paid for from Project resources. This expense is expected to continue in FY2020-21.

Also within the Business Services Group, this budget adds \$100,000 ongoing to continue prior, successful efforts to use Parks Rangers staff (via interagency) to patrol BES-owned properties around the Springwater Corridor to prevent unauthorized camping that damages sensitive watershed areas. This service was provided via a prior interagency with Parks and was extended via one-time funding in FY2018-19. This continuation addresses the bureau's strategic initiative to utilize interbureau partnerships to maximize efficiency and effectiveness of service delivery.

Within the Wastewater Group, the Requested Budget adds \$150,000 in ongoing allocation to support making progress on a major backlog of maintenance needs at the treatment plants. Completion of this work is now feasible due to hiring of a new Facilities Services Manager in FY2018-19. This funding will also be used to develop a proactive maintenance plan and schedule, which is expected to be more cost-effective than the prior incomplete and wholly reactive maintenance approach.

This program area also reflects changes to a variety of interagencies with other City bureaus (Risk Services, OMF-Facilities, Printing & Distribution, Technology Services) and government partners (Multnomah County Drainage District). All changes in FY2019-20 are within (or below) the amounts previously forecast by the bureau.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

Communications Program

Program Description & Goals

The Communications Program employs a variety of communication tools and methods to promote awareness of and involvement in the work of the bureau. It works toward encouraging public interest and engagement with the bureau, to promote behaviors and activities that support stewardship of the public sewer and stormwater systems. This program is strongly aligned to the strategic goal area of Community Relationships which aims to build strong community relationships and be a trusted service provider.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Number of participants in community events, workshops, stewardship, and restoration events			
Number of bureau education programs delivered			

Explanation of Services

The Communications Program manages the Bureau’s internal and external communications, media relations, social media, graphic design, community outreach, and science education programs. The team provides services to BES employees to assist them in communicating with and engaging their target audiences to achieve Bureau, City, and community goals. Activities include developing and implementing strategic communications plans, messages and communications content, as well as advising on appropriate methods of information distribution to BES and City employees, City Council, and community audiences.

Benefits of frequent and open communications with the public include:

- Increased transparency about how BES uses ratepayer funding to build and maintain sewer and stormwater infrastructure, and to protect public health and the environment
- Increased public awareness of issues facing the bureau and the public sewer and stormwater system
- Building relationships and partnerships with the public
- Raising awareness of how the public can work with BES to protect sewer infrastructure and the environment (e.g. no grease down the drain, reduce pesticide use on lawns, report illegal dumping, pollution and spills)
- Increased support for bureau efforts
- Providing direct information about bureau projects and programs so that the public doesn’t have to rely solely on the media and social media to learn about bureau activities

Equity Impacts

The Communications Program works directly with Portland’s communities of color and persons with disabilities to ensure and improve access to BES services. Demographic data of participation at public involvement events and other outreach efforts is collected by race/ethnicity and disability, and it is reported when any disparities exist to ensure that services are provided proportionately and successfully to historically underserved communities.

Changes to Programs

Changes in the media landscape, community expectations regarding access to information, and potential changes in regulatory requirements necessitate ongoing review of communications strategies and tactics. In addition, internal communications have significantly increased in priority and workload in response to the strategic plan's implementation needs.

Portland's demographics are changing. As a result, engagement and outreach efforts need to be responsive to the needs of a wide range of communities. This has resulted in a significant increase for enhanced cultural responsiveness, language resources, and culturally-specific outreach and engagement.

There are no major discretionary budgetary changes to the Communications Program requested in FY2019-20.

Program Budget

Resources:

Expenses:

Staffing:

Assets and

Liabilities:

Employee Development Program

Program Description & Goals

The Employee Development Program is directly aligned with the Strategic Goal of Workforce Development of developing, retaining and attracting highly skilled, diverse, and knowledgeable employees that can meet the challenges ahead. This program identifies and coordinates training needs and solutions for managers and employees, manages the employee recognition program, and ensures employees complete required safety trainings.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target

Explanation of Services

The bureau's Strategic Plan identifies Workforce Development as one of the six key goal areas. To achieve strategic outcomes, a highly engaged and committed workforce is needed. Nearly one quarter of the bureau's workforce will be eligible to retire over the next five years. In addition, new ways of working require that employees to be trained in current processes, best practices and technology. Cross training and information sharing, as well as training the new generation of workers, is critical to ensuring the long-term success of the bureau.

Another critical goal is ensuring the safety of our employees as well as the public. This program works closely with the bureau's Risk Services division to develop and update the bureau's list of required safety trainings. Trainings are offered to employees annually, and completion is tracked and reported quarterly.

The bureau's Strategic Plan has also identified professional development and cross-training opportunities as one of the bureau's strategic initiatives. This program aims to research key training needs for each job classification and identify appropriate training opportunities.

BES has a successful onboarding program (implemented in FY2017-18) and employee recognition program that help employees understand the bureau's varied, interconnected work and how their work supports our mission. The bureau's PEER program improves BES culture and empowers employees to address workplace and personal challenges.

Equity Impacts

This program monitors and reports on the BES Equity Plan's participation goal that all employees complete 8 hours of racial equity and workplace diversity training to build skills and understanding around these issues.

Changes to Programs

There are no requested budgetary changes to the Employee Development Program in FY2019-20. However, future increases are possible as the bureau's Strategic Plan emphasizes Workforce

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Development as one of the six primary goal areas, with expanding options and implementing professional development and cross-training opportunities as strategic initiatives. Additionally, the City's Bureau of Human Resources (BHR) recently implemented a new training application for employees, which has increased bureau responsibilities for entering and tracking data within the system. The Employee Development program will be working closely with BHR to ensure that BES managers and employees know what trainings are required and whether they have been completed, as well as provide training on how to use the new system.

Currently, many activities related to employee development are dispersed throughout various individual program budgets. The bureau anticipates this to be reconsidered in future year budget requests.

Program Budget

Resources:

Expenses:

Staffing:

Assets and

Liabilities:

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Finance Program

Program Description & Goals

The Finance program includes budget development, accounting, financial forecasting, debt management, rate and fee development, project tracking, year-end financial reporting, wholesale service contract administration, management of the Clean River Rewards stormwater discount program, and support for the Nonconforming Sewer program (managed by the Systems Development Program). The Finance program budget also includes required Utility License Fee payments. The Finance Program monitors, manages and administers over \$950 million in transfers for the payment of legally required debt service, transfers to and from the Rate Stabilization Fund, transfers to and from the Construction Fund, and fund contingency.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Maintain the bureau's first lien debt service coverage ratio at 1.5 or greater			
Average single-family household bill as a percent of median income (KPM)			

Explanation of Services

The Finance Program (within the Business Services Group) consists of multiple centralized services and functions. The three primary components are Financial Planning, Revenue Programs and Accounting.

The Financial Planning division manages tools and processes to ensure that resources are available to fund the core mission of BES. There are three key functions within Financial Planning. First, working with Groups throughout the Bureau, Financial Planning is responsible for the coordination, assembly, monitoring, and adjustment of the annual budget, including coordination with other bureaus Citywide and communication with the Portland Utility Board, Citizens' Utility Board and other public interests. The second is management of the system forecast to project revenue and spending over a long-term horizon to ensure that current financial plans are sustainable, and the bureau remains financially stable. The third key responsibility is the annual development of rates and fees which allows the bureau to recover certain costs and ensure sufficient resources are available to meet operational and capital needs. In addition to the key functions, Financial Planning provides financial policy analysis and recommendations, monitors cash flow and ensures payment of outstanding debt, provides legally required disclosure information for bonds, manages wholesale service contracts, and performs ad hoc financial analysis as necessary.

The Revenue Programs division provides technical and financial assistance related to the provision of stormwater and sewer services to internal customers (namely the Water Bureau, non-conforming sewer program, CIP and City Auditor's Office) and external customers (e.g., ratepayers, property owners and neighboring sewer districts). The primary mission is to collect fees for service, approve credits and loans and compel conforming public sewer connections in a fair and equitable manner (e.g., correct billing errors, incentivize private stormwater management and remedy failed septic and nonconforming sewer connections). Revenue Programs manages six distinct City-wide programs: Clean River Rewards (stormwater discount program), GreenBucks (green infrastructure maintenance program), stormwater measure/re-measure program, storm sewer urban services, required sewer connection and sewer loan programs. Additionally, this team is responsible for identifying and communicating to the Water Bureau all starts, stops and corrections to storm sewer provisions on utility bills. Revenue Programs also conducts Administrative Reviews and facilitates hearings in response to customer appeals.

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BES Accounting Services division provides for all the accounting needs of the bureau. Major functions include maintaining the bureau's financial structure, capital project and fixed assets accounting, grants accounting, revenue and accounts receivable, accounts payable and preparing BES audit assignments for the City's audited Comprehensive Annual Financial Report. The division is also responsible for payroll and time management for the bureau and timekeeping for employees.

Equity Impacts

The Finance Program manages the bureau's financial assistance programs that include low-interest, deferred loans to qualifying low-income homeowners for mandatory and nonconforming sewer connections. BES works with financially impacted communities to minimize any hardships or dislocations caused by sewer connections requirements.

Changes to Programs

The primary budgetary change requested in the Finance Program for FY2019-20 is an addition of \$250,000 in funding to continue work on a comprehensive rate study. The prior comprehensive rate study was completed nearly 20 years ago, during which time community demographics, bureau priorities and rate methodology best practices have changed. The bureau (via the Financial Planning division) will be hiring an outside consultant to conduct the comprehensive rate study. A Request for Proposal process is currently underway with an expectation that the consultant's work can begin in FY 2018-19. The study is expected to take place in three phases with the bulk of the work being completed in FY2019-20. Once due diligence is completed and consultant recommendations are developed, the final phase (anticipated in FY2020-21) will include public discussions in advance of implementation of a potentially updated rate structure for FY 2021-22. This request supports multiple strategic initiatives including reforming the budget and financial process, delivering services equitably and proactive engagement with community stakeholders.

The FY2019-20 Requested Budget also increases the bureau's ongoing cost for purchases of Renewal Energy Credits by \$50,000, as a result of updated usage/cost calculations provided by the Bureau of Planning and Sustainability to comply with City Council Resolution No. 36983 and the 2015 Climate Action Plan. This request supports the bureau's strategic initiative to integrate City goals into our culture, operations and decision-making.

There are no discretionary budget changes in FY2019-20 for the Revenue Programs division or Accounting division.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

Information Management Program

Program Description & Goals

The Information Management Program is comprised of the Mapping, Data and Application Services (MDAS) division within the Business Services Group. MDAS provides high-level, 24/7/365 technical support and consulting for the bureau's information and technology solutions, including mapping, data, project management, and asset management software applications. This program actively supports the bureau strategic initiative to optimize IT and data management systems to prioritize responsive governance, information access and data security.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target

Explanation of Services

MDAS provides IT/Data-related; business process review, consulting, project management, application development / maintenance, and database services for the bureau and a variety of bureau-specific applications. The MDAS Division Manager works with the BES management team and subject matter experts to identify business needs, IT requirements and data management strategies; and liaises with BTS (and peers in other City bureaus) to plan for solutions and services related to the ongoing operations and improvements of the bureau's technology infrastructure.

While the focus is primarily on run and maintain of current systems, innovation(s) and proposed IT/Data-related initiatives are typically evaluated and managed by MDAS staff, in collaboration with the requesting group, and prioritized in accordance with BES' Strategic Plan and leadership review/authorization.

The MDAS Mapping unit creates and maintains asset-specific information related to BES' Sanitary and Stormwater Collection System, which includes the mapping and attribution of Collection System assets and the creation/chronicling of As-Builts and other pertinent records. MDAS also helps to create and/or administer several other BES-related GIS layers, which are both authoritative (distributed via the corporate GIS hub) or non-authoritative (work products in various stages of completeness).

Equity Impacts

This program aims to deliver services equitably Citywide, in alignment with the BES Strategic Plan.

Changes to Programs

In FY2018-19 the MDAS division hired for a newly created Data Strategist position to develop and manage a strategy to efficiently collect and utilize bureauwide data. This multi-year effort will direct future Information Management priorities and budgetary decisions. Other initiatives in FY2018-19 to improve

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Information Management decision-making and performance include formation of an IT Governance Committee (including representation from all work groups), and the introduction of new project management tools (e.g. Trello and SmartSheets).

General Fund decisions that impact the Bureau of Technology Services (BTS) inevitably affect the amount of bureau-level effort and/or resources required of the MDAS division. While no major resource increases are submitted in this FY2019-20 Requested Budget, reductions (or limited increases) to BTS resources negatively impact the ability of the BES Information Management program to meet service expectations.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

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Asset Systems Management Program

Program Description & Goals

The Asset Management Program (ASM) program identifies and appropriately prioritizes BES asset system improvements and investment strategies needed to continue to maintain and improve the service levels and reliability of wastewater and stormwater system infrastructure, including balancing the need to meet regulatory requirements. This work identifies, clarifies and communicates the levels of service related to physical system assets, and the related decision-making processes to put those assets into service for customers. The program is aligned with BES Strategic Initiative to optimize information technology and data management systems to prioritize responsive governance, information access and sharing, employee support and training, and data security.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Construction management costs as a percentage of total construction costs			

Explanation of Services

The Asset Management Program provides analysis, interpretation and an in-depth, functional understanding of how BES system assets interact with each other. This is done at all evaluation scales, from the city-wide scale down through the local/project scale. This function is necessary to identify and prioritize BES system improvements and asset investment strategies to maintain and improve the service and reliability of the city's wastewater and stormwater infrastructure as cost effectively as possible, and to protect public health and safety systemwide. ASM is the only program in the Bureau that performs this essential function. ASM is sometimes requested to support and assist other workgroups by collaborating on new system-related initiatives or through technical review of work.

Equity Impacts

This program area is responsible for incorporating equity considerations into the risk evaluation and project prioritization processes for the combined and sanitary sewer system assets. The current risk process uses census information on vulnerable communities and the ASM Program is working with other BES work groups to expand how we can incorporate equity into the broader strategic planning space, such as establishing targets for levels of service.

Changes to Programs

The demand for ASM resources has doubled since FY2015-16, specifically in the areas of spatial analysis and modeling analysis, alongside major strategic planning efforts initiated over the past two fiscal years. As the limited-term consultant services to support the strategic planning efforts come to an end by FY2020-21, the expectations on internal staff will further increase. While limited-term contracts have helped initiate the strategic planning efforts, the internal staffing resources necessary to implement and

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sustain the improvements have not advanced. The increased workload burden on staff has demonstrably resulted in increased overtime and observed instances of sick time.

ASM has begun implementing process efficiencies and improvements to available tools to increase productivity (e.g., creating project tracking and actively leveling work load, automation of previously manually completed tasks, etc.). While these efforts can optimize the work outputs, they do not provide the necessary support to sustainably conduct the essential functions of the ASM program now and into the future. ASM looks to increase by one Engineering FTE in FY2019-20 to support the modeling team. With increased and improved capital planning efforts bureauwide, requests for modeling support from ASM nearly doubled in FY2018-19. Where feasible, ASM has been utilizing contracted resources to meet this workload, but adding an in-house FTE will create more productive and cost-effective outputs over the long-term.

The FY2019-20 Requested Budget decreases allocation for spending on the multi-year Continuous Collection System Plan update as result of delays in contracting that occurred in FY2018-19. The total cost of the multi-year project (anticipated for completion in FY2020-21) remains unchanged at \$1.5 million.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

Capital Program Management and Controls Program

Program Description & Goals

The Capital Program Management and Controls Program oversees the bureau's Capital Improvement Program (CIP). This program manages the planning process, develops the annual capital budget, tracks project delivery performance and recommends long range capital investment strategies that align with the bureau's Strategic Plan and ratepayer expectations.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Linear feet of sanitary and combined sewer pipe repaired or replaced to improve condition and capacity			
Construction management costs as a percentage of total construction costs			

Explanation of Services

The Capital Program Management & Controls program has overall responsibility for the bureau's \$100+ million annual CIP. This program provides information that guides the processes for evaluating and prioritizing infrastructure investments with a balance of prioritized system needs and financial capacity.

The activities and roles of the Capital Program Management & Controls Program include:

- Development of BES's annual capital budget and five-year CIP
- Monitoring and adjusting the capital budget and program
- Providing change control and other support functions for CIP delivery
- Coordinating the implementation of CIP projects with other BES work groups
- Providing technical standards, best practices documentation, and training support

Equity Impacts

Equity impacts are a critical factor in the evaluation and prioritization process of the bureau's Capital Improvement projects. In the system/facilities planning process for both the combined sewer collection system, and the stormwater system, projects are ranked and prioritized against all other needs within that system, with the additional consideration of equity impacts. Then, when priority projects from each system plan or regulatory driver are evaluated against each other in the annual CIP Development Process, scoring includes impacts to human health and safety, business and residential customers, and impacts to public infrastructure such as streets. New for FY2019-20, a triple bottom line approach to scoring was performed by an independent team, made up of staff from various divisions. This scoring criteria included a section dedicated to Bureau and city strategic plan initiatives, with equity being the main focus. In the prioritization of projects, more consideration was given to projects in disadvantaged communities or communities of color.

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Changes to Programs

Collectively, the overall quality of sewer and stormwater infrastructure has declined as the bureau prioritized completion of the \$1.4 billion Combined Sewer Overflow project during the 1990s through the early 2010s. Additionally, the market for materials and labor has recently experienced increased volatility. Within a resource-constrained environment, the bureau has been challenged in recent years to ensure capital investment is optimized to prevent service interruptions and minimize inefficiencies. Beginning in FY2017-18, the bureau set a target to significantly increase CIP output to ensure sustainable reinvestment in infrastructure over the long-term. The FY2019-20 annual CIP budget request is \$177.6 million, a 33% increase over budgeted FY2018-19. Nearly all this increase is driven by accelerating the bureau's \$37 million contribution to the Portland Building Reconstruction project one fiscal year earlier per request of the Office of Management and Finance. The total 5-year CIP is currently targeted at \$783 million (approximately \$157 million annually on average).

As the bureau improves our capital investment strategy, and in support of the bureau's strategic initiative to align budget, CIP and financial planning process to align with priorities in the Strategic Plan, we cannot expect to deliver efficiently using the legacy program controls methodology. There is a need for sophistication, which we are pursuing via a combination of major process improvements, reconsideration of responsibilities bureauwide, and staffing increases over multiple years. Beginning in FY2018-19, dozens of process improvements have already been incorporated into the CIP implementation procedures and an ongoing revamping of project scheduling is underway (as are multiple other process improvements).

Beyond specific capital project changes, the major budgetary change within the Capital Program Management and Controls Program in the FY2019-20 Requested Budget is adding \$600,000 in ongoing operating resources to fund the bureau's required contribution to the Citywide Community Opportunities Enhancement Program (COEP) as authorized by City Council via Resolution No. 37331 adopted on July 12, 2017. Resources contributed to the COEP are aimed at increasing diversity and equity in contracting Citywide and providing opportunities for minorities and women in the workforce as well as for disadvantaged, minority-owned, women-owned, and emerging small businesses (D/M/W/ESB), which is consistent with the bureau's strategic priorities. Bureau contribution amounts are based upon the total value of construction contracts, which BES estimates for FY2019-20 will be \$60 million. The bureau will adjust the budgeted amount annually as needed to match CIP construction contract expectations and meet this City requirement.

Additionally, the bureau requests conversion in FY2019-20 of a limited-term employee (Training Coordinator) to an FTE. This position was originally created to focus on training needs related to implementation of the bureau's Heron capital project management software. However, as the bureau aims to improve capital project management processes – including optimal use of software – this position has been identified as critical to providing both support in training for use of the Heron tool, but also implementation of those new processes and best practices.

Program Budget

Resources:

Expenses:

Staffing:

Assets and

Liabilities:

Construction Services Program

Program Description & Goals

The Construction Services Program (within the Engineering Services Group) provides construction management and inspection services for BES projects, development projects, and projects managed by other City bureaus for assets that become part of BES's infrastructure. This program area ensures the construction of safe, high-quality, and cost-effective projects that aim for completion on schedule and within budget, and with minimum disruption to the public.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Construction management costs as a percentage of total construction costs			

Explanation of Services

The BES Capital Improvement Program (CIP) is funded at approximately \$100M annually. The Construction Services Program currently has approximately \$113M in active construction projects Citywide. The Program oversees installation of capital infrastructure, such as pipes, to ensure they are installed properly and safely. The Bureau owns and maintain most constructed assets, so quality control during installation ensures asset life can be maximized. Safety assurance ensures City staff and the contractor's workers can go home to their families at the end of the day and the City is not subject to injury or disability claims. The Construction Services Program is also making twice monthly progress payments to contractors, negotiating compensation for additional scope of work added to the contract and navigating any disagreements or arguments that ensue between the City and contractor.

Key activities include the following:

- Development and management of project scopes, schedules, and budgets
- Review and determination of constructability for all projects during design
- Development and execution of project construction work plans
- Management and documentation of project decisions, meetings, and changes
- Inspection of construction projects for safety and quality compliance
- Construction contract progress payments to contractors
- Management of projects in accordance with BES's CIP Implementation Manual, Quality Control Manual, and project management/document control software and process (i.e., Heron)
- Preparation of council documents as needed for construction-related procurement processes, agreements, contracts and right-of-way acquisition and permits

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In addition, Construction Services contributes cost estimating and budgeting functions via CIP development input, historical bid analysis, construction staff input, budget preparation, and monitoring of economic conditions in the construction industry.

Equity Impacts

As part of its management of construction contracts, the Construction Services group ensure that contractors are complying with the minority sub-contracting requirements including participation from Minority, Women, and Emerging Small Business (M/W/ESB) and other City equity-driven contracting opportunities.

Changes to Programs

As Portland grows and more homes and business are added to the City's sewer and stormwater system infrastructure, more and larger pipes and related infrastructure are needed to ensure service capacity is maintained. As existing infrastructure continues to age, assets require replacement to avoid system inefficiencies and failures. In addition to "hard" infrastructure such as pipes and pump stations, natural areas need to be improved or restored, culverts need to be replaced and watershed areas need to remain managed and protected. In recent years, increases in traffic and street infrastructure requiring maintenance and upkeep has created expanded public constraints resulting in frequent increases in construction timelines and complexity.

Due to a relatively healthy economy, it has been difficult in recent years to retain qualified construction program staff as promotional opportunities (higher pay rates) in the private sector has led to high levels staff turnover in thus program, including a completely new management team. While the program has previously pursued FTE increases in prior years, we continue to rely on contract staff to lead/complete projects. However, contract staff training requirements, lack of retained knowledge and experience, and the efficiency of project delivery are all negatively affected by not having in-house expertise.

BES recently started using an improved software solution (Heron) for capital project management, which is eliminating paper-based redundancy and inefficiencies. Also, construction inspectors have been outfitted with iPads which enables more efficient use of time in the field. The new management team is actively and more consistently monitoring performance and developing training and support resources to ensure all staff can do their work as efficiently and effectively as possible.

Despite the staffing challenges and increases in delivery expectations described above, no major discretionary budget adjustments are requested in FY2019-20.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

Design Services Program

Program Description & Goals

The Design Program (within the Engineering Services Group) provides project management and engineering design services for capital projects. The goal of the Design Program is to plan and deliver projects that improve the reliability and capacity of the bureau’s treatment infrastructure, and wastewater and stormwater conveyance system, and protect and improve water quality and watershed health. Projects are identified through planning efforts bureauwide based on risk, condition and consequence of failure for existing assets and on new requirements, such as regulatory, or capacity needs.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Number of combined sewer overflow events			
Construction management costs as a percentage of total construction costs			

Explanation of Services

The Design Program provides project management and engineering design services for capital projects ranging from pipe rehabilitation to stormwater facilities and stream restoration. Activities include the following:

- Completing designs in accordance with professional and BES standards
- Completing engineering calculations
- Meeting City and regulatory requirements (including technical analyses)
- Requesting, coordinating, securing, and incorporating information gathered and provided by internal and external stakeholders and service providers
- Preparing and professionally sealing contract documents, including technical specifications and design plans and details
- Managing projects through design phase.
- For the Treatment & Pumping Systems Engineering Division, Design Services also manages planning efforts for the treatment plants and the construction phase of project delivery, as well as providing technical engineering support for Operations and Maintenance staff.

Equity Impacts

The Design Program delivers projects that benefit human health and safety and the environment. Infrastructure investments are identified through planning efforts based on risk, condition and

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consequence of failure for existing assets and on new requirements such as regulatory, or capacity needs. An equity lens is applied to a project to inform Bureau infrastructure decisions.

Changes to Programs

Despite process improvements currently underway, demand for work from the Design Services Program far exceeds available resources as the bureau aims to improve and increase collaborative project planning and delivery outcomes to ensure sustainable long-term capital investment. The number of identified capital projects requiring assignment of Design Services staff continues to grow, leading to project delay.

This program added three FTEs in the FY2018-19 Adopted Budget in response to a need to improve Design Services delivery. However, staff retirements and turnover have limited the anticipated improvements from yet fully materializing. Staff are relying on consultant expertise for program delivery support when feasible, and are utilizing on-call construction contracts to be more responsive and timely in constructing design solutions. When appropriate, The Design Services program is expanding use of alternative project delivery methods (in lieu of the standard design-bid build process) to meet program goals. These adjusted solutions often require increased up-front effort and communication but are expected to reduce overall project delivery schedules.

Recently, the Design Services Wastewater Engineering Section became a new division called the Treatment & Pumping Systems Division (TPSD). This new division included staff from both Design Services and Construction Services that previously worked on wastewater treatment plant, pump station and force main assets.

The Design Services program is requesting three additional FTEs in FY2019-20:

- **Structural Engineer within TPSD.** BES has no structural engineer on staff, despite owning significant treatment and pumping facilities, and there has been an on-going need for structural support for projects in the Repair, Rehabilitation & Modification Program (RR&M) and Pump Station Improvement Program. Historically, this need has been met with minimal success using on-call professional technical expert (PTE) contracts. However, these contracts have resulted in inconsistent service outcomes and significant project delays. While increasing the existing on-call contract remains an alternative, it is an expensive option (current billing rates are \$135-\$200/hour) and this remains an ongoing, long-term need. An in-house staff person is additionally expected to maximize efficiency as they will specialize in bureau assets, processes and outcomes, thereby improving structural assessments and project delivery.
- **Automation & Controls Engineer within TPSD.** There is a current and ongoing need for project and O&M support related to controls and automation at Columbia Boulevard and Tryon Creek Wastewater Treatment Plants, and for the bureau's 98 pump stations. This Engineering Associate will fill the long-term need via specialized management of the Automation and Control Narrative update and implementation process for capital projects, which includes coordinating with Wastewater Group operations staff and other engineering staff to develop revised control strategies and prepare documentation for approval and implementation. This need is currently being filled by contract staff, at approximately the same annual cost, but with the added risks and inefficiencies of high turnover, training needs and contract.
- **Collection System Design Engineer within the High-Risk Rehab program.** This position will support delivery of projects in the Bureau's pipe rehabilitation program, including the Large Diameter Program and Downtown/Old Town Rehab Projects, which have been identified as near-term priorities due to the high risk of failure within 5 years. This program encompasses over \$250

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million in capital projects over the next 10 years, with over \$25M in high priority projects currently unassigned over the next 3 years due to limited staff resources.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

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Engineering Program

Program Description & Goals

The Engineering Program is led by the Chief Engineer, the official agent of the bureau responsible for public improvements. The Chief Engineer is responsible for establishing, maintaining and enforcing the technical standards for design and construction of Public Works projects necessary to maintain public health and the health of the environment. The Engineering Program also integrates the organizational management, human resources, budget, and administrative support functions of the Engineering Services Group to ensure the smooth operation of the workgroup, which has just over 200 Full Time Employees distributed across 4 work locations.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Construction management costs as a percentage of total construction costs			

Explanation of Services

The Engineering Program is comprised of the leadership, administration and operations functions for the Engineering Services Group. The Program includes the office of the Chief Engineer and related group-wide support functions. The Chief Engineer is the signatory for all bureau-related public works construction documents, provides management and leadership for the Engineering Services Group and its 5 Programs that serve ratepayers and the community by managing the planning, design and construction of sewer and stormwater projects to protect public health and watersheds. Collectively, this Program and the five programs under the Chief Engineer (Asset Management, Program Management and Controls, Design Services, Construction Services, and Materials Testing Lab), provides the analysis, engineering design, construction management, technical standards and best management practices, and Capital Improvement Program (CIP) implementation and budget management to produce projects that improve, protect and enhance the bureau's infrastructure.

Equity Impacts

The Engineering Program leads and directs the Engineering Group's implementation of the BES Equity Plan and BES Strategic Plan initiatives to ensure positive racial equity outcomes on all Engineering programs and projects.

Changes to Programs

Increased challenges in employee movement, training/onboarding and turnover due to retirements and a highly competitive job market have increased the administrative, management and leadership workload of Engineering Program. The operating environment has also changed significantly in the last year due to prioritization of bureau efforts including CIP delivery increases, CIP process improvements,

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reorganization discussions, and building moves/facility needs (which have affected the entire Engineering Group).

In FY2018-19, the Systems Development Program (formerly within the Engineering Group) was restructured to report directly to the BES Director's Office. Additional changes to organizational structure are being considered to improve efficiency, oversight of work, and customer service. Engineering operations and administration are undergoing systematic process improvements to gain efficiencies in their work. Staff are using technology in a much more significant way to improve productivity, communication, and records management. The Chief Engineer has led the Engineering Services Organizational Development Project to improve collaboration, increase productivity, and reduce turnover. The Program is implementing policy and practice updates related to teleworking, flexible schedules, and other workplace culture improvements to attract and retain a highly talented workforce.

Other than adjustments to accommodate standard life-cycle vehicle replacement schedules, there has been no reallocation of resources to or from this program in recent years, and no major operational budget changes are requested for FY2019-20.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

Materials Testing Lab Program

Program Description & Goals

The Materials Testing Lab (MTL) Program provides quality assurance (QA) and quality control (QC) of materials used in the construction of Bureau assets. QA/QC involves materials testing, code-mandated special inspection, confined space entry, and geotechnical services, as well as evaluation of emerging technologies and products. In addition to providing these services for BES projects, the lab also provides services to other City bureaus (primarily Water Bureau, Transportation and Parks), typically on a fee-for-service basis.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Number of lab analyses performed each year			

Explanation of Services

The MTL Program provides industry-standard testing and evaluation services for construction materials, to ensure that materials used by BES capital projects and other City bureau projects, meet national and international standards. The program monitors the quality of pipe materials, asphalt mixes, concrete mixes, and precast concrete products to ensure that City projects are using appropriate products in the construction of long-term public assets. This ensures that the type of pipe for a sewer rehabilitation program are appropriate and durable for local conditions. This testing and monitoring is also performed “real-time” in the field, for samples of actual products at the time of installation. The MTL Program also provides the geotechnical analysis for BES and City projects, and special inspections as required by local and state building codes.

Equity Impacts

This program is part of the overall engineering design and construction approach for capital projects at BES that ensures the same quality standards of design, construction, and materials for any capital project in the city, regardless of neighborhood/community demographics. This ensures that no community bears disproportionate burden due to inferior construction materials.

Changes to Programs

Workload expectations within the MTL Program have increased due to increases in other work requests from partner bureaus – primarily the Portland Water Bureau’s capital program (Washington Park reservoir projects, etc.).

Ongoing process improvement efforts such as use of technology tools for scheduling and tracking work requests and activities are underway. Allocation of resources to the Materials Testing Lab program has stayed relatively consistent in recent years, and no major budget changes are requested. The MTL Program is requesting \$40,000 in ongoing budgetary resource beginning in FY2019-20 to cover overtime for staff who are frequently called out for night work and other time-sensitive capital projects. Overtime

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expenses have averaged \$38,000 annually over the prior three years and have previously been unbudgeted.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

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Systems Development Program

Program Description & Goals

The Systems Development Program (within the Director's Office) provides all private development related services on behalf of BES, from early assistance and land use to building permit review and stormwater facility inspection to public works projects and source control review—all to support City development goals and ensure consistency with regulatory requirements and BES's infrastructure system needs. This program area includes the Transportation Interagency Program, the Sewer Extension Program, and the Nonconforming Sewer Program (with support from the Revenue Programs division within the Business Services Group).

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target

Explanation of Services

BES development review functions, provided by the Systems Development Program, are critical to ensuring the continued issuance of land use reviews, building permits, and public works permits. BES ensures adequate sanitary and stormwater services are available to serve the proposed development.

Customer service to support applicants through the development review process is a critical component of the work of the Systems Development Program, as is ensuring that approved projects are adequately protective of the BES system, human health, and the environment. Most Systems Development Program functions are co-located with the Bureau of Development Services and the other City development-related functions, allowing real time coordination between bureaus and with customers, to best meet targets and goals related to supporting development.

The Nonconforming Sewer Program (NSP) assists Portlanders by resolving shared and private sewer situations. Many properties across the City share sewer laterals with neighboring properties or have a private sewer line in the right-of-way. Nonconforming sewer laterals become problematic when they fail and need to be repaired/replaced or when properties sell or redevelop. The NSP is working to resolve as many of these situations as possible, in the most cost-efficient method, through the capital improvement CIP process. However, many nonconforming situations must be resolved more quickly than the CIP can accommodate, due to home sales or redevelopment schedules. These urgent situations require a high level of customer/public support to assist in reaching timely resolution.

Systems Development Program is responsible for the following activities:

- review and evaluation of early assistance and land use reviews;
- implementation of our drainageway protection rules;
- building permit review for sanitary connections, stormwater management, and pollution prevention/source controls;
- permitting and design oversight of public works projects related to new or re-development;
- providing broad liaison services to the regional transportation agencies while assuring conformance with BES stormwater management requirements and design standards.;
- design and project management of sewer service extensions;

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- the conversion of existing substandard sewer connections through customer service, outreach, permitting, design and construction of new sanitary sewers;
- private stormwater facility inspection;
- sewer connection permits;
- customer service to support the City's unified and co-located permitting system; and
- advocating for BES and our ratepayers through participation in broader citywide planning projects and negotiation of development agreements

Equity Impacts

The Systems Development program is a customer service-focused division, providing both permit review functions as well as face-to-face and phone customer support. Division staff routinely attend customer service and equity training and seek ways to improve assistance to home and property owners with little permitting experience.

An additional staffing request in FY2019-20 aims to support the Nonconforming Sewer Program more efficiently by identifying and supporting potential eligible candidates in accessing the available financial assistance and deferred payment options. Many NSP properties are on older, smaller, and subdivided lots and there is overlap of some NSP areas with high percentage minority and/or low-income census tracts. Also, helping existing property owners resolve nonconforming sewers can help them stay in homes and/or reap full value of home at sale, rather than being forced into selling at a lower price when their sewer is not in compliance.

Changes to Programs

Due to a growing economy and desirable development factors, pressures on development review and the Systems Development Program have increased significantly over the past few years. BES has added staff and continued to refine and improve processes to reduce permitting timelines and ensure that customer service goals are met.

In February 2018, BES implemented an internal reorganization in response to Mayor Wheeler's request that permitting bureaus improve review turnaround times. This reorganization moved the Source Control Plan Review Section from the Environmental Compliance Division (within the Pollution Prevention Group) into the Systems Development Division. The Systems Development division was also moved into the Director's Office. At the time, Source Control Plan Review timelines were approximately 4-6 weeks behind in commercial plan review. Through continued process improvements and work load prioritization, timeline goals have improved and been met for much of the remainder of 2018.

BES is finalizing the reorganization through a small handful of reclassifications, to ensure adequate supervisor/employee ratios and providing key lead worker positions to guide day-to-day work. In addition, a new Customer Service Supervisor position will oversee a team focused on customer service in the Development Services Center (DSC), where up to five BES staff currently provide face-to-face customer support five days and one evening a week, including issuance of Sewer Connection Permits. The nature of this work is demanding, with customers needing immediate attention and conflicts requiring timely resolution.

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A total of \$299,500 in ongoing budgetary adjustments are requested in FY2018-19 to accommodate hardware/software costs to support implementation of the City's new Portland Online Permitting System (POPS), to accommodate increased bank card fees that facilitate customer ease of payment, and for interagencies with PBOT related to increased costs of service for Sewer Connection Inspections and the Public Works Permitting Program.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

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Environmental Monitoring and Investigation Program

Program Description & Goals

The Environmental Monitoring and Investigation Program (within the Pollution Prevention Group) provides the City with cost-effective and customized environmental laboratory services, along with the high-quality data and technical consultation that supports the Bureau’s regulatory objectives and requirements, conveyance system data needs, watershed assessments and property investments.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Number of lab analyses performed each year			

Explanation of Services

The Environmental Monitoring and Investigation Program supports the bureau’s compliance with major environmental permits, regulations, and programs managed by the bureau to protect and improve surface water, groundwater, stormwater, sediment, soil, and habitat quality. The program staff is specialized in the following areas:

- Investigations Monitoring Services (IMS) provides project management, data analysis, and data reporting services for BES monitoring projects, plus project management for non-City agencies using the Water Pollution Control Laboratory (see below).
- Field Operations provides cost-effective, high-quality environmental monitoring services to internal BES stakeholders, in support of the Bureau’s regulatory, engineering, and scientific programs.
- The Water Pollution Control Laboratory (WPCL) analyzes domestic and industrial wastewater, groundwater, surface water, biosolids, sediment, and soil in support of the City’s regulatory requirements, wastewater operations, Capital Improvement Program (CIP), and environmental programs, such as watershed management and restoration.
- Data Acquisition & Management (DA&M) collects critical operational, environmental, and emergency information on the City’s wastewater and stormwater collection systems and communicates those data to BES’s Combined Sewer Overflow program.

Equity Impacts

This program aims to deliver services equitably Citywide, in alignment with the BES Strategic Plan.

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Changes to Programs

Monitoring and Investigation Program responsibilities and priorities are highly dependent on changes to regulations at the federal, state, and local level, including changes to environmental permits and regulatory standards or requirements. Additionally, workloads are influenced by the nature and magnitude of work conducted by our utility partners and within the bureau's own CIP, by emerging pollutants, and by new or evolving industries and/or industry sectors.

DEQ has placed the Columbia Boulevard Wastewater Treatment Plant (CBWTP) on the 2019 NPDES permit issuance list, which has required MIP to conduct additional monitoring to support compliance deliverables, in addition to biosolids management challenges at the CBWTP has requiring additional monitoring. Additionally, new state and federal regulations to control specific pollutants, such as mercury, and increased demand for low-level pesticides analyses (compounded by the unreliability of timely services from contract laboratories) have compelled MIP to develop potential capability to provide these services from within. Lastly, demand for program services continues to be high particularly in flow monitoring in the sanitary, combined, and stormwater sewer systems to support system planning needs and bureau improvements to the BES CIP process.

MIP has identified a resource gap in support for development of improved data evaluation and management systems, which are necessary to improve data accessibility in aid of development standards for the Stormwater Management Manual, to maximize the value of PAWMAP information, and to support regulatory reporting for NPDES and UIC permit requirements. Some of this work is currently progressing via expansion of HYDRA stations, radio networks and data centers to support new service areas and data gaps affiliated with stormwater system planning.

In FY2018-19, MIP added an Electronic Systems Technician within Data Acquisition & Management to address HYDRA system installation, operation, and maintenance requirements and a Laboratory Analytical Specialist to the WPCL to provide dedicated oversight in the Nutrients Section. A number of reclassifications were implemented in FY2018-19 to improve data management, and to better support Field Operations projects, oversight and consistency.

Adjustments in the Requested FY2019-20 Requested Budget include addition of a 2-person Filed Operations team (and a vehicle) to manage increased expectations for short-term flow monitoring data for modeling and pre-design within the CIP. Additionally, the request adds a Business Systems Analyst (working closely with MDAS in the bureau's Information Management program) to facilitate data challenges. This position was requested and initially supported for funding in FY2018-19 but was removed very late in the process in an effort to limit total FTE requests.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

Environmental Compliance Program

Program Description & Goals

The Environmental Compliance Program manages, interprets and implements City-wide environmental permits and associated state and federal regulations. Through investigations, technical analysis, data collection and management, program evaluations, and policy development, this program helps protect the City's storm and sanitary assets, watershed health and local water quality.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Percentage of industrial enforcement tests in full compliance			
Average resources spent in site investigations and cleanup, per site investigated or remediated			

Explanation of Services

Environmental Compliance Program manages Citywide environmental programs and permits and performs the associated activities of developing codes and rules, permitting private dischargers, investigating complaints and illicit discharges, inspecting commercial and industrial facilities, establishing and implementing user charges, and enforcing codes and rules.

Permits and environmental programs managed by the Environmental Compliance Program:

- Columbia Boulevard and Tryon Creek Wastewater Treatment Plant National Pollutant Discharge Elimination System (NPDES) Permits. These permits regulate the discharge of total suspended solids (TSS), biochemical oxygen demand (BOD), and *E. coli* to the Columbia and Willamette rivers.
- Phase I NPDES Municipal Separated Storm Sewer System (MS4) Permit. This permit is intended to reduce or eliminate stormwater pollution by directing the operation and management of drainage and roadway infrastructure, parks and natural areas, maintenance facilities, and other features of the built and natural environments; it also influences construction development standards.
- Underground Injection Control Water Pollution Control Facility (UIC-WPCF) Permit. The UIC-WPCF permit protects beneficial uses of groundwater by reducing or preventing pollutants from public rights-of-way from entering approximately 9,000 City-owned injection wells, which manage stormwater throughout the City.
- Total Maximum Daily Load (TMDL) Program, which ensures that City discharges of certain pollutants (e.g., temperature, bacteria, mercury) to local rivers and streams do not exceed amounts allocated by the Oregon Department of Environmental Quality (DEQ) (which has determined the maximum combined load from point and nonpoint sources that still meets water quality standards).

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- Air Contaminant Discharge Permit (ACDP), requires the bureau to track and report sources of air contaminants at the Columbia Boulevard Wastewater Treatment Plant (CBWTP). This was recently updated to include air toxics as part of Cleaner Air Oregon requirements.
- Solid waste permit for the management of biosolids at CBWTP. This is a permit to manage and close the Triangle Lake Monofill, which houses legacy biosolids at CBWTP.
- Industrial Stormwater 1200Z permit at CBWTP. This is a permit to manage stormwater discharges from the CBWTP campus to the Columbia Slough.

Equity Impacts

The Environmental Compliance Program has a direct, mandated responsibility to ensure that the environmental programs and permits it manages result in positive equitable outcomes for all communities. These programs provide significant benefits to underrepresented communities, particularly those living in proximity to industrial facilities and those relying on direct contact with surface water (e.g. subsistence fishing).

The Portland Brownfield Program was created directly in response to an environmental justice initiative at EPA. From the Program's inception, a central goal has been to address the environmental burden that brownfields create in neighborhoods. According to a recent Metro report, brownfields are three times as likely to be located in underserved communities. The Brownfield Program focuses on neighborhood brownfields: smaller commercial sites, like former gas stations and dry cleaners, that are often found close to homes, schools, and businesses. We provide financial assistance to clean up sites that will provide benefit to existing community. Project partners that have received assistance from the Portland Brownfield Program include Verde, Black United Fund, Oregon Food Bank, Hacienda CDC, the Dharma Rain Zen Center, Albina Youth Opportunity School, Community Energy Project, Proud Ground, and REACH CDC.

The Coordinated Site Analysis team supports equitable provision of utilities and watershed improvements, as well as remediation of contaminated areas that have the potential to pose unacceptable risk to human health and the environment.

Changes to Programs

Environmental Compliance Program responsibilities and priorities are highly dependent on changes to regulations at the federal, state, and local level, by new and reissued permits, and by new permit conditions. Program expectations can change based upon newly emerging pollutants and industries, changes to the City's sewer system, and changes to practices and regulations affecting industrial and commercial facilities. More stringent state and federal requirements have led to greater need for staffing and professional resources because City held permits are more complex, prescriptive, and have more stringent discharge standards. A more standardized and robust data management system covering all activities in compliance is critical to maintaining compliance.

The Portland Brownfield Program (within the ECP budget) makes use of Environmental Protection Agency (EPA) funding for many projects, however EPA funding has become more competitive and less stable in the past year. At the state level, new brownfield legislation and proposed legislation has created opportunities for new types of brownfield incentives in Oregon.

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With the CBWTP on the 2019 NPDES permit issuance list, ECP has needed to carry out additional monitoring, report development, and submittals of data and reports. 2018 DEQ Air Toxics regulations will require greater scrutiny of our system, more reporting to DEQ, and potentially additional air control upgrades at CBWTP. The 1200Z Industrial Stormwater permit was issued in 2018 with additional monitoring requirements impacting compliance at the CBWTP and ECP's oversight of 500 regulated industrial facilities.

ECP has adapted to meet these new demands, with staff actively engaged in legislative efforts to sustain and grow brownfield resources at both the state and federal levels, and via process improvements to facilitate anticipated increases in BES capital improvement projects (CIP), utility coordination with PBOT and Water, and support of broader City initiatives. The program is moving to a new data management system, which has been under development for approximately 5 years. This will greatly improve program efficiencies (e.g. inspections, enforcements, data management, cross program activities). Additionally, ECP is cross-training staff in multiple program areas to improve multi-media industrial inspections (e.g. Industrial Stormwater staff inspecting MIP facilities when possible) and developing program audits to evaluate the City's compliance with permit requirements.

In FY2018-19, ECIP added three new positions including an Environmental Technician in Industrial Stormwater to keep up with the new DEQ 1200Z industrial stormwater permit, an Environmental Technician to keep up with the pace of development and growth in the City (monitoring about 400 new properties per year), and an Environmental Program Coordinator in SPCR to better manage large investigation and enforcement workload.

ECP no longer has internal support for modeling as that function is no longer available from the Asset System Management program. The primary budgetary addition in FY2019-20 is adding a GIS Technician to conduct data maintenance, data scrubbing, QA/QC, database tool maintenance, UIC registrations, and monthly/annual database reporting in support of the UIC permit. It will also perform outfall mapping and management and maintenance of the MS4 outfall database, and will be the liaison between multiple bureau program areas to ensure communication, coordination, and correlation between databases and general system management related to UIC and MS4 asset data.

Program Budget

Resources:

Expenses:

Staffing:

Assets and

Liabilities:

Pollution Prevention Program

Program Description & Goals

The Pollution Prevention Program provides leadership and administrative support to the Pollution Prevention Group, along with advising the Bureau Leadership Team on matters concerning environmental monitoring, investigation and compliance, and their impact on organizational operations and capital programs.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Average resources spent in site investigations and cleanup, per site investigated or remediated			

Explanation of Services

The Pollution Prevention Program provides leadership and administrative support to the Pollution Prevention Group (including the Environmental Compliance Program, Environmental Investigations Program and the Brownfields program).

Equity Impacts

The Pollution Prevention Program leads and directs the Pollution Prevention Group's implementation of the BES Equity Plan and BES Strategic Plan initiatives to ensure positive racial equity outcomes on all its programs and projects.

Changes to Programs

In FY2018-19, a Management Analyst position was reallocated from the Director's Office to Pollution Prevention to assist with unmet administrative responsibilities. No major budget changes are requested for FY2019-20.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

Portland Harbor Program

Program Description & Goals

The Portland Harbor Program works for the responsible cleanup of the chemical contamination in the Lower Willamette River, designated as the Portland Harbor Superfund Site, which is regulated by the Federal Environmental Protection Agency (EPA) under the umbrella of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA – also known as Superfund). Associated, but separate from the Superfund, is the National Resources Damage Assessment (NRDA) process which evaluates the damage to natural resources, harmed by the contamination, and provides a restoration plan to compensate for those losses.

The Portland Harbor Program goals include:

- Be a leader in accomplishing a successful cleanup as soon as possible
- Protect public interest, resources and city infrastructure
- Protect human and environmental health with a focus on most vulnerable populations
- Prevent future degradation of waterways and improve watershed health
- Maintain a working harbor
- Build public trust in the cleanup process and outcomes
- Maximize local economic opportunities during the cleanup

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target

Explanation of Services

The City is a steward and regulator of the Willamette River and is also one of over 100 parties that are potentially responsible for cleanup costs. As such, the City has long been involved in the Portland Harbor Superfund, working to ensure that the interests of Portlanders are represented. The Portland Harbor program is made up of four main support areas that all work closely together to achieve programmatic goals. These areas include policy and administration support, legal support, technical support, and public involvement support.

- **Policy and administration support** provides leadership for the Portland Harbor Program along with services for stakeholder engagement, government relations, program development, operational oversight, and coalition building to advance cleanup implementation.
- **Legal support** provides services in defending the City in its involvement and potential liability associated with the CERCLA process, the allocation settlement process, the Natural Resource Damage Assessment settlement process, which addresses liability for historic damage to the environment, and associated lawsuits. Legal support also provides services in developing partnership agreements to facilitate collective action towards cleanup implementation, and cleanup agreements with EPA.

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- **Technical support** provides services by protecting city assets, preventing recontamination of the river, investigating and controlling sources of contamination, planning and implementing cleanup work, performing environmental risk assessments, coordinating with other technical programs throughout the bureau and city, and managing projects.
- **Public involvement support** provides services in developing, implementing and managing a community involvement program designed to build and strengthen relationships with diverse community stakeholders and encourage community involvement in the cleanup process. The public involvement support area also works closely with other government agencies on public health and risk communication along with environmental justice issues related to the Superfund.

Equity Impacts

The Portland Harbor Program recognizes past inequities and is actively promoting equity and environmental justice through meaningful involvement of Portland's diverse communities in the cleanup. The new Portland Harbor Community Involvement Program is being developed in close partnership with community groups to ensure that those who are disproportionately impacted by the contamination and/or cleanup itself have an opportunity to be involved in the cleanup process.

Changes to Programs

Cleanup progress is heavily influenced by external factors, such as the availability of EPA and DEQ resources for oversight, and the willingness of other potentially responsible parties to move forward with various phases of the cleanup process. These external factors change frequently which require the program to maintain a high-level of flexibility.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

CERCLA Program

Program Description & Goals

The CERCLA Program area is dedicated to holding certain segregated funds related to the Portland Harbor Program for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Please see Portland Harbor Program narrative above.

Explanation of Services

Please see Portland Harbor Program narrative above.

Equity Impacts

Please see Portland Harbor Program narrative above.

Changes to Programs

Please see Portland Harbor Program narrative above.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

NRDA Program

Program Description & Goals

The NRDA Program area is dedicated to holding certain segregated funds related to the Portland Harbor Program for the National Resources Damage Assessment (NRDA) process. Please see Portland Harbor Program narrative above.

Explanation of Services

Please see Portland Harbor Program narrative above.

Equity Impacts

Please see Portland Harbor Program narrative above.

Changes to Programs

Please see Portland Harbor Program narrative above.

Program Budget

Resources:

Expenses:

Staffing:

Assets and

Liabilities:

Collection System Program

Program Description & Goals

The Collection System Program (within the Wastewater Group) oversees the complex operation, maintenance and repair of the City's wastewater and stormwater collection system to minimize service interruptions and potential hazards to public health, safety, property, and the environment.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Number of stormwater flooding events due to system capacity			

Explanation of Services

The Collection System program prioritizes the day-to-day management and performance of the City's wastewater and stormwater collection and pumping facilities. This system includes 98 active pumping stations, 10 step systems, 3,040 miles of pipeline, 683 miles of lateral, 40,789 manholes, 8,625 stormwater sumps, 506,880 linear feet of ditches, 54,700 stormwater inlets and catch basins, 328 trash racks, 148 manufactured stormwater facilities, and 2,096 greenstreets. Key activities within this program include engineering, condition assessment inspection, operations and maintenance, and repair.

The Operations and Maintenance team oversees operation and maintenance of the wastewater and stormwater collection and pumping systems. The Collection System Manager is responsible for coordinating resources throughout BES as well as from other bureaus and agencies, for effective management and maintenance of the collection system. Resources in place to support the collection system include an extensive computerized maintenance management system; mapping and GIS resources; an asset management decision-making structure; safety and training programs; sewer release response plan implementation; planned maintenance programs and resources for effectively responding to emergencies and unplanned maintenance needs; chemical root treatment to abate root issues within sewers, source control programs to minimize operational upsets due to fats, oils, and grease and similar discharges; a rigorous condition assessment program based on closed-circuit television (CCTV) and field inspections; chemical treatment to mitigate odors; a highly-refined hydraulic capacity assessment and modeling program; public involvement and community outreach; and a CIP budget planning process that leverages funding to minimize business risk exposure.

Operation and maintenance activities include

- collection system facility design
- field inspections
- preventative and predictive maintenance
- repairs
- management of maintenance contractors
- support for Capital Improvement Program (CIP) projects, public works permitting, and stormwater system planning and implementation efforts.

Programs for sewer inspection, cleaning, and repair are implemented under the City's Capacity, Management, Operation, and Maintenance (CMOM) program. CMOM provides a structured approach for focusing resources on those assets with the highest potential likelihood of failure and whose failure is

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likely to have the most significant consequences; the emphasis is on preventive maintenance that reduces sewer releases.

The CMOM/Maintenance Engineering team provides expertise on the application of asset management principles to sewer and stormwater operation, maintenance, and repairs to ensure that individual infrastructure assets reach an optimal useful service life at an overall least cost. Maintenance Engineers give guidance and coordinate within BES and with other bureaus and agencies. They are called upon to make decisions rapidly so that service interruptions and hazards to public health, safety, property and the environment are minimized. Programs for sewer inspection, cleaning, and repair are implemented under the City's CMOM program, providing for a structured approach to focus resources on assets that have the highest potential likelihood of failure and most significant consequence of failure, with an emphasis on preventive maintenance to achieve the goal of reducing sewer releases.

Equity Impacts

The Collection System Program has facilities equitably distributed across the City and provides equitable service levels to all communities.

Changes to Programs

Collection System Program responsibilities are impacted by aging infrastructure and deferred maintenance and capital reinvestment, which can transfer an increased burden onto collection system operations.

In recent years, the program has increased condition assessment work to better understand the current state of assets (specifically, force mains and pump stations). This work continues via increases in FY2019-20 to support condition assessment on Tier 1& 2 Force Mains. This inspection and assessment will provide the information to determine a long-term maintenance and/or replacement plan for these critical system assets.

Budgetary adjustments requested in FY2019-20 include adding two Industrial Maintenance Millwrights to support sustainable operations at the bureau's 98 pump stations Citywide (including odor control facilities and other related infrastructure). Additionally, the FY2019-20 Requested Budget includes increases in funding for odor control and reliability assessment work at various pump stations Citywide.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

Maintenance Program

Program Description & Goals

The Maintenance Program (within the Wastewater Group) leads the preventive, predictive and corrective maintenance of over 18,000 registered assets at the two large wastewater treatment plants, 98 pump stations and the vast collection system. The 2017 implementation of the Condition Assessment Program (CAP), a comprehensive utility asset management program, facilitates decision-making on the quality and quantity of infrastructure reinvestment required to meet and sustain optimal levels of service at an acceptable level of system risk.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Number of sanitary sewer overflows			

Explanation of Services

The Maintenance Program functions are performed by several groups:

- Maintenance Planning plans, schedules, and coordinates the material, equipment, and personnel required to implement maintenance projects. Staff are responsible for project scoping and management, management of vendor/contractor service contracts, and ensuring that projects meet standards. They also serve as project managers on small- to medium-sized capital improvement projects.
- Mechanical Maintenance installs, maintains, troubleshoots, and repairs the facilities and mechanical equipment at the City's wastewater treatment plants. The team works with engineers, technicians, and others to ensure that BES's collection and treatment facilities meet short- and long-term reliability and sustainability requirements.
- Pump Station Operation and Maintenance is responsible for ensuring the efficient, reliable operation and mechanical maintenance of 98 pump stations and related infrastructure, to prevent and/or minimize the number and impact of combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs).
- The Electrical and Instrumentation programs install, maintain, troubleshoot, and repair a variety of electrical equipment and instruments at the City's wastewater treatment plants and pump stations.
- The Automation Support Team develops strategies for automating hardware and software to improve the efficiency of collection and treatment facility operations. The team uses Programmable Logic Controllers (PLC), IFIX SCADA (supervisory control and data acquisition), and a complex communications network involving fiber-optic, airwave (i.e., radio), and copper media to integrate operations of the wastewater treatment plants, pump station, and other elements of the CSO system.

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Equity Impacts

The Maintenance Program delivers maintenance to the treatment plant and pump station facilities located in all areas of the City, and all facilities are all assessed and maintained according to the same criteria and standards that benefit all communities.

Changes to Programs

Maintenance Program responsibilities are impacted by aging infrastructure and deferred maintenance and capital reinvestment, which can transfer an increased burden onto collection system operations and maintenance obligations. Recent trends increased condition assessment, a need to improve asset inventory management, and updates to maintenance procedures. Development of the Maintenance Program condition assessment program began in summer 2017 with implementation of Level 1 assessment services for treatment plants and pump stations beginning in October 2018.

The primary budgetary change for the Maintenance Program in FY2019-20 is increasing consultant services to support condition assessment by \$150,000 ongoing. This work addresses technical analysis that is typically beyond the expertise of internal staff.

Program Budget

Resources:

Expenses:

Staffing:

Assets and

Liabilities:

Treatment Program

Program Description & Goals

The Treatment Program (within the Wastewater Group) manages the operation and maintenance of two wastewater treatment plants that treat collected wastewater/stormwater from the City of Portland service area. The Columbia Boulevard Wastewater Treatment Plant (CBWTP), treats both combined and separated sewers with an annual daily average of 76 million gallons per day of municipal wastewater. The Tryon Creek Wastewater Treatment Plant (TCWTP), treats combined sewer flow with an annual daily average of 6.5 million gallons per day. The treatment process at each of the two treatment plants surpasses the performance measure required in the City's National Pollutant Discharge Elimination System permits.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Amount of wastewater processed annually (in million gallons)			
Percent of biochemical oxygen demand removed			

Explanation of Services

The Treatment program area plans, develops procedures for, manages and performs the operations and maintenance of Portland's two large sewage treatment facilities (CBWTP and TCWTP), the combined sewer overflow (CSO) reduction system, the resource recovery systems and beneficial reuse or disposal of biosolids and stormwater residuals.

The CSO system includes (1) interceptors, pumps stations, flow control structures, and upstream collection structures that direct the flow to the proper conveyance systems, (2) facilities such as deep tunnels, shafts, consolidation conduits, and CSO pump stations that store and convey CSO to protect the Columbia Slough and the Willamette River from overflows, and (3) treatment of captured CSO at the CBWTP using two separate systems: standard dry weather primary clarification with secondary biological treatment, and a wet weather treatment train with chemical enhancement when needed.

Operating the treatment facilities and the CSO system requires 24-hour-per-day staffing and monitoring, with the ability to quickly adjust staffing levels and treatment processes in response to sometimes dramatic changes in weather conditions and flows. In addition to regular staffing during daytime hours, treatment operations includes work shifts at CBWTP between 3:00 P.M. and 7:00 am., 7 days per week. The primary activities are to monitor and make process adjustments to both CBWTP and TCWTP, while being mindful of pre-determined process targets and permit requirements. Operators are responsible for monitoring pump station alarms, monitoring and control of the CSO system. The CSO system and TCWTP are remotely monitored and controlled via software and technology solutions (i.e., HYDRA, SCADA and iFIX). The essential wastewater collection, conveyance, treatment biosolids production systems are operated off-shift by a small team, which is supplemented during storms or other extreme wet weather events to meet additional operational demands.

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Equity Impacts

Treatment services are provided equitably to all ratepayers throughout the City. Furthermore, the Columbia Boulevard Wastewater Treatment Plant Citizens Advisory Committee represents a variety of neighborhood, business, industry, environmental, recreational, educational and other interests. It is a community sounding board to review and advice CBWTP to ensure the plant is implemented in accordance with the vision of the community

Changes to Programs

As the treatment plants continue to age, there have more frequent failures of equipment. In recent years, the Treatment Program has supported increased condition assessment work. Better understanding the condition of all assets at the treatment plants will help prioritize and properly sequence the specific work and inform reinvestment needs.

The City of Lake Oswego has asked that capital projects at TCWTP be delayed in order to explore the potential to build a new treatment plant at a different location nearby. However, there is a driving need to assess immediate, critical needs at TCWTP and implement projects to keep the plant functioning properly to meet regulatory requirements.

In July 2018, CBWTP began a massive two-year effort to reduce the solids inventory at the solids lagoon (a portion of the lagoon is unusable due to construction while the remaining operating cells are overloaded). While this effort is ongoing, evaluation for keeping up with incoming solids will occur to develop a plan to keep up until the secondary process improvements project provides new solids handling process equipment. The bureau received \$3.5 million in ongoing budgetary resource in the FY2018-19 Fall BMP to support the Biosolids Inventory Reduction Project. Additional budgetary adjustments of approximately \$150,000 are requested in FY2019-20 to accommodate increases in the costs of the pre-existing biosolids hauling contracts due to inflationary and fuel increases.

The Renewable Compressed Natural Gas (RCNG) facility is scheduled to be completed in summer 2019 and will allow conversion of waste to produce biogas for sale directly to NW Natural Gas. While the biogas reuse project will add assets to CBWTP that will require operation and maintenance, an operational facility will also generate revenue for the bureau. In addition to approximately \$320,000 in annual ongoing O&M expense related to RCNG operations, the FY2019-20 Requested Budget adds a new FTE to manage, coordinate, measure, track and optimize the delivery and sale of biogas and maximize potential for revenue generation. This project is anticipated to generate a minimum of \$3 million dollars in annual revenue, with potential for a much higher amount if market conditions align.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

Wastewater Services Program

Program Description & Goals

The Wastewater Services program provides leadership and specialized operational and administrative support to approximately 200 employees within the Wastewater group of programs.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Cost to operate and maintain the treatment plants per million gallons treated			
Percentage of urgent public health and safety related service requests responded to within two-hour timeframe (KPM)			

Explanation of Services

The Wastewater Services Program provides high-level oversight and coordination of the wastewater operations staff within the Collection System, Treatment and Maintenance Programs (i.e. the Wastewater Group). Staff within the Wastewater Services Program provide high-level analytical and financial support to management such as reporting and analysis of services, including performance measuring, financial and organizational analyses, information requests, benchmarking and survey responses, developing organizational policies and procedures, financial planning and budget management. The Wastewater Services Program includes three primary functions: Administrative Services, Stores and Facilities Management.

Administrative Services include timekeeping, human resources support, records management, document production and editing, reception services/onsite access, payment processing, mail distribution, administrative and facility support (including keys & access cards and development of Group-level policies, procedures and business processes.

Stores provides procurement & acquisition support, inventory management, receiving, shipping, logistical support, disbursement, payment processing, hazardous materials management, and surplus handling and disposal for a wide range of industrial and administrative goods and services. Stores physically stocks thousands of pieces of inventory tracked via a work and asset management system (Synergen). Stores has an active program for removing obsolete, overstocked or underutilized inventory items and identified spare parts and equipment. Equipment rentals are managed by Stores in coordination with City Fleet. Equipment and vehicle procurements, as well as repairs and fuel associated with such are overseen by Stores in conjunction with the end user and City Fleet. Stores also manages on-going service and maintenance contracts for the Wastewater Group.

Facilities Management provides ongoing facilities maintenance activities, property management, project management and interagency agreement coordination related to collection and treatment system buildings, grounds, real property, and communications. This includes over 200 different structures -- approximately 1/3 located at the two treatment plants, with the remainder at pump stations and other facilities throughout the system. Structures range significantly in size (from 50 square feet to 60,000 square feet) and complexity (regularly occupied vs unoccupied, below ground vs. multi-story). All structures require management of conditions such as paving, sidewalks and the surrounding grounds; walls and windows; doors and locks; power; water; lights; equipment; furniture; ventilation; roofs, gutters and downspouts; fences; and community impacts.

Equity Impacts

The Wastewater Services Program leads and directs the Wastewater Group's implementation of the BES Equity Plan and BES Strategic Plan initiatives to ensure positive racial equity outcomes on all its programs and projects.

Changes to Programs

In recent years, this program has experienced increased reliance on the business need for reliable records management, facilities management, and reporting & analysis, including a need for improved coordination across the bureau and city.

Despite an increase in administrative burdens and deferred projects to accommodate more and new bureau and city initiatives, no new budgetary resources are requested for FY2019-20.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

Science, Fish and Wildlife Program

Program Description & Goals

The Science, Fish and Wildlife Program (within the Watershed Services Group) provides expert scientific and technical assistance to all BES programs and the City on environmental policy, planning, projects, regulations and monitoring. This program also leads the City’s Invasive Species program and manages the City’s compliance with the Endangered Species Act.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Watershed Health Index for water quality (KPM)			

Explanation of Services

The Science, Fish & Wildlife Program (also known as the Science Integration Division) provides scientific and technical assistance through the work of two teams – the Biological Sciences Team and the Ecosystem Sciences Team. This program collects, analyzes, applies, and communicates the best available science to ensure that City policies, programs, and projects protect and restore watershed health and achieve regulatory compliance.

- The Biological Sciences Team is responsible for the City’s Invasive Species program, watershed planning, improvements in the mainstem Willamette River, and integration of the Terrestrial Ecology and Enhancement Strategy (TEES) into BES operations. The team provides expert services to BES in botany, wetlands, wildlife, mitigation banking, fish passage, and pesticides/herbicides.
- The Ecosystem Sciences Team is responsible for the City’s Endangered Species Act compliance, federal and state fisheries partnerships, the City’s Streamlining Team to secure permits for any city project in water, watershed and project monitoring, and public engagement. The team provides BES with expert services related to hydrology, water quality, ecosystems, fisheries, and natural resources regulations.

Equity Impacts

The program aids in understanding and responding to environmental justice issues in Portland, including evaluating climate impacts across Portland and the disparate impact on low income communities. The proposed budgetary addition in FY2019-20 for gauges to establish flood warning systems are of particular value in the Johnson Creek floodplain area.

Changes to Programs

There have been no major budgetary changes to the Science, Fish & Wildlife Program in the past year. However, in response to a changing regulatory climate, the program has taken the lead on exploring natural resource mitigation banking for the City primarily to support BES’ and other bureau’s natural

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assets. Based on needs throughout the Bureau, and the focus on the BES Strategic Plan, the program expects to allocate more resources in the future for system planning and monitoring.

The only discretionary budget adjustment for this program in FY2019-20 is an ongoing increase of \$82,000 for expansion and extension of a contract with USGS for gauges to establish flood warning systems.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

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Sustainable Stormwater Program

Program Description & Goals

The City’s stormwater system is a complex network of natural and constructed assets on public and private property and in the public right-of-way. The Sustainable Stormwater Program integrates stormwater system planning, stormwater polices, and design guidelines with implementation, technical assistance, and stewardship of the City’s stormwater assets.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Number of stormwater flooding events due to system capacity			

Explanation of Services

While the City does not own all stormwater assets in the system, the City relies on the stormwater asset network to provide critical community functions including conveyance, storage, treatment and habitat. The stormwater system includes tens of thousands of pollution-reduction and flow-control facilities like green streets, UICs and ponds; thousands of acres of wetlands; hundreds of miles of ditches and pipes; and hundreds of miles of streams and rivers. Major subprograms of the Sustainable Stormwater Program include Stormwater System Planning, Stormwater Management Manual, and several implementation efforts.

- The BES Stormwater System Plan (SWSP) identifies and quantifies stormwater system risk within an asset management framework. This allows BES to compare stormwater system risk across all parts of the City, assign priorities based on risk, and integrate stormwater projects with other infrastructure needs. Stormwater System Planning is an ongoing effort that guides BES investments in stormwater, prioritizing project areas, informing policies and practices to reduce risk, protect existing infrastructure, comply with regulations, and improve watershed conditions to protect public health and the environment.
- BES’s Stormwater Management Manual (SWMM) provides policy and design requirements for stormwater management on all development, redevelopment, and improvement projects in Portland on private land, public property, and public rights-of-way. Publishing the SWMM involves revising it regularly to reflect current system needs, regulatory requirements and technical standards. Design updates are informed by Sustainable Stormwater’s research and monitoring of stormwater facility performance.
- The Stormwater Implementation and Technical Assistance section provides technical assistance on stormwater facility design and operation to City staff, consultants, and private property owners. The Private Property Retrofit program works with other bureau programs and with private landowners to assess existing stormwater conditions and implement and support projects and programs on non-BES assets that advance the City’s stormwater goals. The Stormwater Stewards program manages stormwater sustainably by expanding and protecting Portland’s urban forest and maintaining green streets, through the Environmental Services Tree Program (ESTP) and the Green Street Stewards (GSS) program.

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Equity Impacts

This program is using the Bureau of Planning and Sustainability's data on vulnerable communities from the City's Comprehensive Plan to inform where we prioritize stormwater investment.

Changes to Programs

The Sustainable Stormwater Program has experienced several changes in the past year, which will be continuing in FY2019-20 and beyond. The ongoing SWSP effort has been ramping up in recent years and is expected to continue to be a major driver for resource requests in the coming years. A new subprogram, Stormwater Asset Inventory and Condition Assessment (AICA), is launching in order to better accommodate gathering data and technical information about the condition of assets in the collective stormwater system Citywide.

A combined increase in program funding of \$690,000 is requested in FY2019-20 to accommodate a crew of two Engineering Technicians to collect field data and records research to support the AICA efforts, and to fund PTE contract support to inventory and assess both natural and constructed stormwater system components and to assist with development of use-friendly mapping tools and other technology solutions.

Additionally, the Sustainable Stormwater Solutions Program budget makes a one-time increase of approximately \$350,000 to fund (via interagency) staff in the Bureau of Planning and Sustainability (BPS) that support BES strategic initiatives related to watershed health. BES will work with BPS during FY2019-20 to determine and recommend a long-term solution.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

Watershed Services Program

Program Description & Goals

The Watershed Services Program provides leadership and administrative support to the employees in the Watershed Services Group and coordinates citywide efforts to improve watershed health, support sewer system needs and comply with state and federal environmental regulations. The Watershed Services Program also coordinates the acquisition of natural areas to meet stormwater system objectives.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Watershed Health Index for water quality (KPM)			

Explanation of Services

The Watershed Services Program is the management and administrative services for the Watershed Services Group. Staff in this program, reporting directly to the Watershed Group Manager, coordinate a variety of group and citywide wide efforts including land acquisition, the Watershed Investment Program, training, and other special projects. Two administrative staff provide clerical, budget, administrative and purchasing support for the Group.

Primary functions include:

- Watershed program management: manage and direct watershed programs and activities
- Personnel management: plan, organize, direct and evaluate the performance of managers and staff, including their professional development
- Watershed portfolio management: provide leadership for policy and program development and implementation
- Inter-bureau, inter-agency, and stakeholder coordination
- Natural areas acquisition and restoration planning
- Budget management: develop and monitor budget, contract and transaction support
- Administrative, clerical, and purchasing support and training

Equity Impacts

Watershed Services programs and projects provide multiple benefits to communities throughout Portland, and the work is increasingly planned and implemented using an equity lens. Land acquisition programs protect and restore natural areas in low income, racially diverse, and underserved communities throughout Portland, proving both watershed and public health benefits.

Changes to Programs

Turnover in the Senior Administrative Specialist position during FY2018-19 has left the position vacant for several months, impacting program productivity. This position will be filled temporarily as a limited-term

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hire to maintain flexibility for tailoring administrative needs to be responsive to ongoing discussions about potential bureau reorganization.

There have been no significant program changes to Watershed Services in the past year, and no budgetary changes are requested in FY2019-20.

Program Budget

Resources:

Expenses:

Staffing:

Assets and

Liabilities:

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Watershed Management Program

Program Description & Goals

The Watershed Management Program develops and implements projects in defined watersheds throughout the City to address stormwater deficiencies, improve water quality and hydrology, mitigate impacts from flooding, protect and restore riparian and shallow water habitat, and address sediment contamination. The program leverages support from public and private entities, including grant funding, for watershed projects.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Watershed Health Index for water quality (KPM)			

Explanation of Services

The Watershed Management Program coordinates across work groups to implement watershed enhancements and restoration projects, predominantly through BES’s capital program. This program area also includes community outreach, cultivating partnerships with public and private entities, obtaining grant funding for watershed projects, conducting land use reviews, and providing support for environmental permitting. Staff specialize on individual watersheds and become experts in their areas. Watershed Management Program staff is divided into three teams:

- The Columbia Watersheds Team focuses on the Columbia Slough and areas of the Columbia River watershed that are within the City of Portland. This team coordinates with partners to improve water quality, address sediment contamination, and enhance and restore riparian, wetland, and shallow-water habitat.
- The Eastside Watersheds Team works to improve the ecological conditions of the Johnson Creek watershed and other watersheds east of the Willamette River, in collaboration with public and private partners. The team leads projects and programs that reduce impacts from flooding, improve surface water quality and hydrologic function, and enhance habitat for fish and wildlife.
- The Westside Watersheds Section focuses on subwatersheds west of the Willamette mainstem, including Fanno and Tryon creeks and tributaries that drain directly to the Willamette and Tualatin rivers. This section works closely with City and other partners to address stormwater system deficiencies, support sanitary system improvements that will improve water quality, and protect and restore instream habitat.

Equity Impacts

Watershed Management programs and projects provide multiple benefits to communities throughout Portland, and the work is increasingly planned and implemented using an equity lens. Examples include:

- The Community Watershed Stewardship Program coordinates with the City’s New Portlander Program to provide partnership outreach activities to immigrant and refugee communities.

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- The Columbia Slough Sediment Program coordinates with Community Engagement Liaisons to do outreach about sediment contamination and fish consumption to immigrant and houseless communities who fish in the Slough.
- Watershed Management partners with the Johnson Creek and Columbia Slough Watershed Councils which serve racially diverse and low-income neighborhoods in N, NE, and SE Portland.
- Johnson Creek floodplain restoration projects reduce the incidence of nuisance flooding in low income neighborhoods in SE Portland.
- Neighborhood to the River projects integrate trees, green streets, and rain gardens into capital project areas providing opportunities to provide the benefits associated with green infrastructure into historically underserved communities.
- Land acquisition programs protect and restore natural areas in low income, racially diverse, and underserved communities throughout Portland, proving both watershed and public health benefits.

Changes to Programs

The Watershed Management Program did not undergo significant changes in FY2018-19. The primary budgetary adjustment in the FY2019-20 Requested Budget is an increase of \$150,000 to support contracts that will continue to identify project planning for priority areas to for risk reduction via future capital or operational solutions. Additionally, the program budget increases by \$78,000 ongoing for source investigation sampling of pollutants in the Columbia Slough and \$40,000 one-time resources for participating in the Community Rating System (CRS) that encourages floodplain management activities and potentially reduces flood insurance rates.

Program Budget

Resources:

Expenses:

Staffing:

Assets and

Liabilities:

Watershed Revegetation Program

Program Description & Goals

The Watershed Revegetation Program provides vegetation management for stormwater management projects and for natural area improvements. As part of the maintenance of City-owned stormwater facilities, the program provides landscape design services, supports stormwater system planning and oversees the maintenance of green streets. This program advances watershed health goals through vegetation and land management to protect and improve water quality, reduce pollutants, improve fish and wildlife habitat, and enhance ecosystem services within riparian areas, wetlands and upland areas.

Performance Measure	FY 2016-17 Actual	FY 2017-18 Actual	FY 2018-19 Target
Number of trees planted			
Feet of streambank restored			

Explanation of Services

The work of the Watershed Revegetation Program is accomplished via two primary areas of work:

- Watershed Revegetation Program Stormwater Operations and Maintenance is responsible for vegetation management of City-owned stormwater management facilities and all maintenance of green streets. The program provides landscape design services and general project support for Capital Improvement and Public Works Permit Projects. Maintenance services include facility inspections, work order management, and general oversight and management of contractors responsible for performing field services related to maintenance, irrigation, pruning and planting. The program also provides support for stormwater system planning efforts, implementation of the Stormwater Management Manual, and incorporation of green infrastructure into the Bureau's asset management system.
- The Watershed Revegetation Natural Area Program is responsible for managing bureau property acquired for the purposes of advancing BES's watershed health goals through vegetation and land management projects that protect and improve water quality, reduce pollutants, improve fish and wildlife habitat, and generally enhance other ecosystem services within riparian areas, wetlands, and upland areas. The program may also enter into agreements to provide similar services on other public and private property. The program provides management and monitoring services on Capital Improvement Projects related to vegetation services required to keep BES in compliance with state, local, and federal permits. Program staff provide subject matter expertise related to natural area vegetation, natural resource management and habitat enhancement to partners and stakeholders within BES and throughout the City, and with outside entities.

Equity Impacts

Stormwater facilities are located in all areas of the City and stormwater services are provided equitably to all communities.

Changes to Programs

Workload expectations of the Watershed Revegetation Program have increases massively with the bureau's continued investment in greet street assets and growing needs in vegetated natural areas. In FY2019-20, the Requested Budget for this program proposes shifting to a model that reduces currently contracted services in favor of four in-house FTE to perform this same work. While the ongoing budgetary increase (net of contract reductions) is approximately \$135,000 ongoing, the bureau has done substantial analysis to identify that productivity utilizing an improved mix of contract resources and FTE will significantly improve service outcomes and the bureau's ability to fill the revegetation service gaps.

Program Budget

Resources:
Expenses:
Staffing:
Assets and
Liabilities:

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