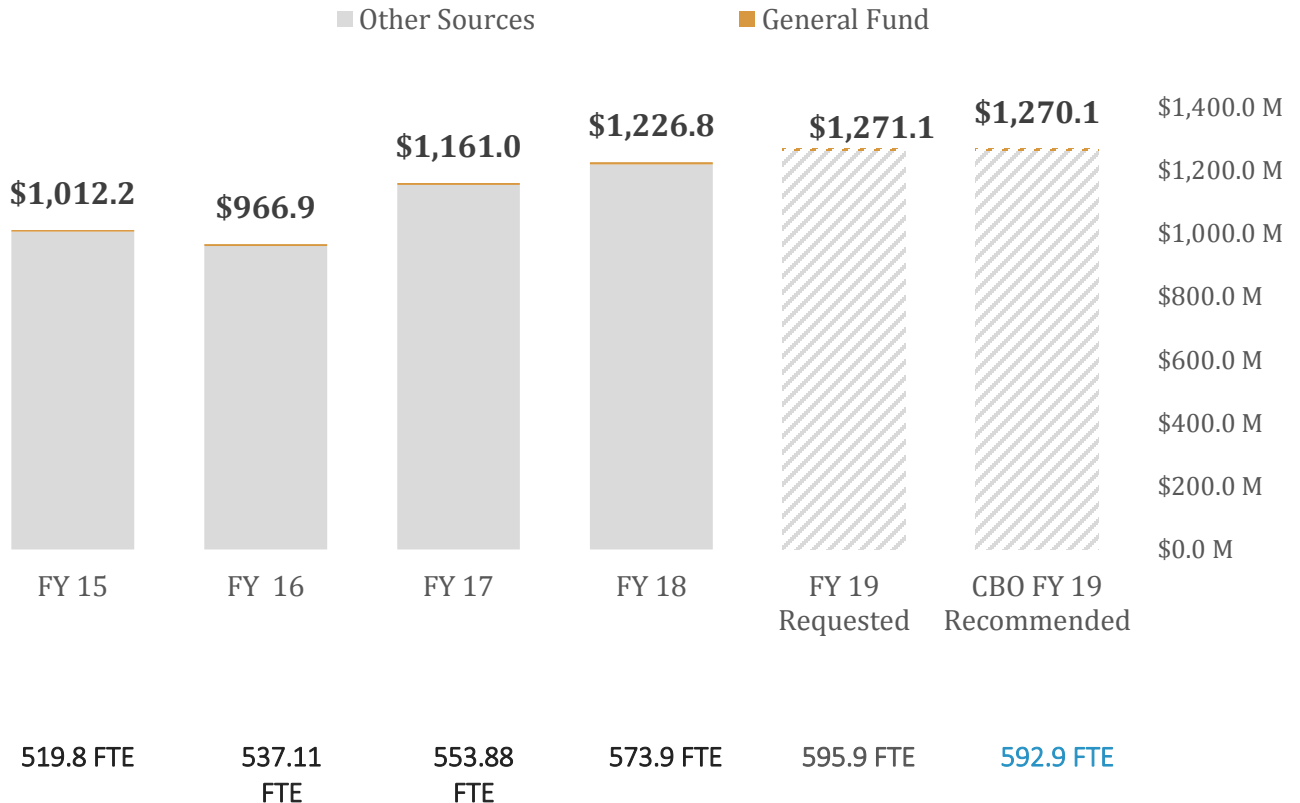




Bureau of Environmental Services

Analysis by Shannon Fairchild

Adopted Budget Resources- 5-Year Lookback



INTRODUCTION

The Bureau of Environmental Services (BES) request includes \$156.9 million in operating expenses and \$133.4 million for capital expenses for FY 2018-19 for a total budget request of \$290.3 million. This is a 6.9% increase from the FY 2017-18 Revised Budget of \$271.7 million.

There are seven decision packages to add several activities costing \$3.2 million. The decision packages include requests for 22 new FTE. If all 22 are approved, there would be 595.9 FTE authorized for FY 2018-19. CBO recommends 19 FTEs and funding \$2.4 million of the requests.

KEY ISSUES

Rate Forecast

The Bureau of Environmental Services (BES) has requested, as part of its FY 2018-19 budget, a rate of increase of 3.00% for the typical single-family household. This amounts to a bill increase of approximately \$2.16 per month or \$6.47 per quarter (utility fees are billed on a quarterly basis and only 20% of customers opt for monthly statements). Combined with the Portland Water Bureau’s requested rate of increase of 8.90%, the typical single-family household would experience a 4.97% increase for a typical total combined monthly bill of \$113.34 or \$340.02 quarterly.

The rate of increase is slightly higher than the 2.85% rate of increase projected in the financial plan BES submitted during last year’s budget process. BES projects the annual rate of increase will remain stable at 3% for each of the next five years, as illustrated in the table below.

	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
<i>FY 2019-23 Plan</i>	3.00%	3.00%	3.00%	3.00%	3.00%
<i>FY 2018-22 Plan</i>	2.85%	2.85%	2.85%	2.85%	

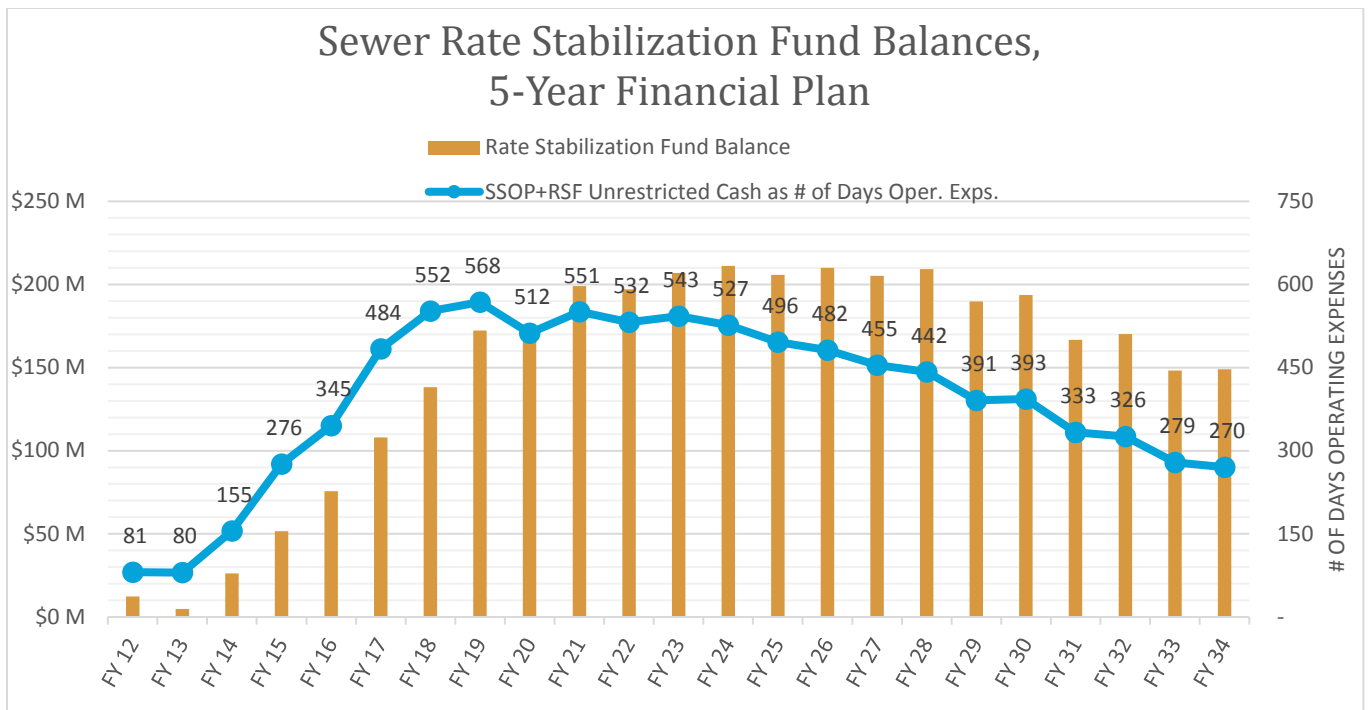
Despite the stable trend in the rate of increase over the next five years, the increase slightly exceeds the consumer price index (CPI-U) forecasted by the Bureau of Labor Statistics. One of the bureau’s Key Performance Measures (KPM) is a measure of affordability of service. The measure –typical household bill as a percentage of median household income—shows that BES’s share of the typical bill is about 1.4% of the projected median household income, assuming the inclusion of all requested decision packages. Combined with the Water Bureau portion of the bill, the total utility bill constitutes approximately 2.1% of median household income in Portland. Utility bills impact households in Portland differently. Compared to white households, communities of color—particularly black households in Portland—devote a higher portion of their household income to the combined utility bill. For example, black households currently spend approximately 4.1% of their household income on their water and sewer bill compared to white households who spend about 1.85%. The FY 2018-19 requested rate would increase the portion of income spent on utilities to about 4.2% for black households and 1.88% for white households.

A major driver of the rate of increase continues to be the increasing debt service of BES' capital program. The bureau's financial plan contains a total estimated increase of approximately \$42.2 million in rate revenue requirements over the forecast period, 70% (\$29.9 million) of which is from increased debt service for planned issuances of bonds in FY 2019-20 and FY 2021-22 to support the bureau's requested Capital Improvement Program (CIP). Additional drivers include personnel services expenditures which are forecast to increase at an average annual rate of 7.8% over the next five years. Further, external material costs are projected to increase at an average rate of 1.5% a year and internal material service costs at 4% a year.

Rate Stabilization Fund

BES maintains a Sewer System Rate Stabilization Fund (RSF) that is used to smooth short-term budget fluctuations and to phase in increases associated with large capital projects. The bureau projects the balance in the fund to reach approximately \$170.6 million in FY 2018-19 from the low balance of \$4.9 million in FY 2012-13. The growth of the fund is due to many factors; however, the primary drivers are robust retail revenue, growth in System Development Charges, and conservative revenue and expense budgeting. The FY 2018-19 budget request includes \$25 million in net transfers from the Sewer Operating Fund to the Rate Stabilization Fund. The bureau points to the strong construction climate which will result in significant revenue from SDCs in FY 2018-19. However, later in the bureau's forecast, SDC growth slows as the construction boom is assumed to subside over the 5-year forecast.

This plan continues BES' practice of maintaining a larger balance in the rate stabilization fund on an ongoing basis. This policy decision is driven by the goal of maintaining smooth rates beyond the five-year forecast as well as maintaining or improving the bureau's "days cash on hand" financial ratio. This ratio is considered by rating agencies when assessing credit quality. As demonstrated in the chart, BES forecasts the RSF balance will reach \$200 million by FY 2020-21 and remain at that level for eight years before BES begins to draw it down. BES has set its long-term balance goal for the fund at \$150 million. This balance goal is significantly higher than prior years. The unrestricted cash on hand ratio has grown significantly since FY 2011-12, exceeding the 270-day best practice goal since FY 2014-15. BES currently has more than double that and forecasts this measure to peak next year at more than 560 days of cash on hand. BES forecasts significantly more than its 270-day goal over the next decade.



Actual balance in the RSF is likely to be higher than forecast for several reasons. In addition to the primary drivers of robust retail revenue, growth in System Development Charges, and conservative revenue and expense budgeting, underspending the capital budget can have an indirect impact on the rate stabilization fund. For example, lower than anticipated capital spending reduces the bureau’s need for bond proceeds to pay for capital projects, resulting in delayed and/or smaller debt issuances. When this occurs, the debt service that is budgeted for the planned bond issuance is no longer needed. The unspent debt service funds can either be transferred to the construction fund to cash finance capital projects or be transferred from the operating fund to the rate stabilization fund to smooth future rate increase.

In previous budget reviews, the FY 2017-18 Prior Year Performance Report and FY 2017-18 Fall Supplemental Budget review, CBO noted that the bureau is in a unique position to potentially lower the rate increase from its current forecast and/or increase the share of capital financed with cash, lowering future debt service costs. Because the bureau’s RSF balance is sufficient to correct for near-term forecast errors, CBO recommends that the bureau consider lowering planned rate increases, at least in the short term, and look for ways to use the RSF to reduce future rate increases.

Changes to the Operating Budget

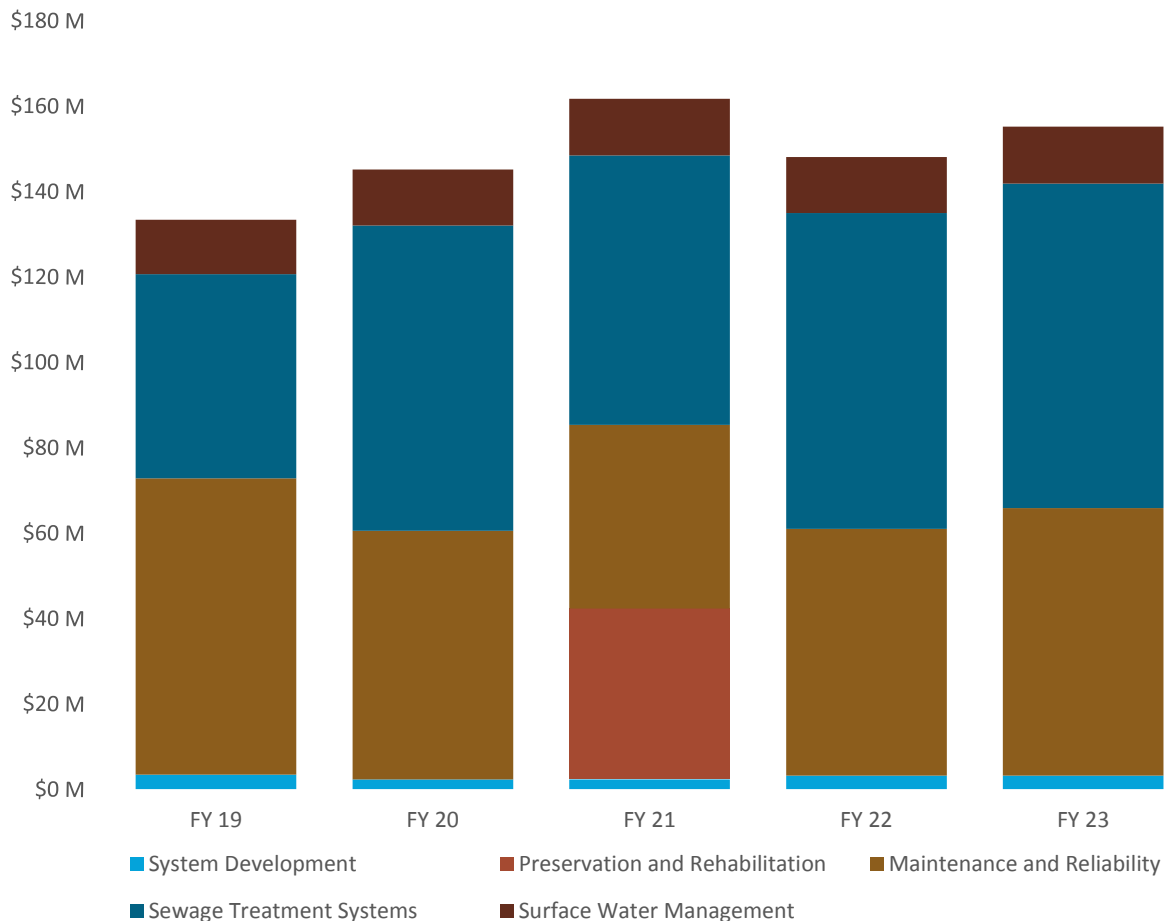
BES’s requested operating budget is estimated to increase by 4.3% or \$6.4 million compared to the FY 2017-18 Adopted Budget. Personal Services accounts for approximately \$3.8 million of the growth while external materials account for about

\$4.3 million. Decreases in internal materials and services and capital outlay of \$1.7 million are also requested. The estimated increase in the operating budget includes \$3.2 million in new costs if all the decision packages are approved. Those packages include non-personnel requests as well as requests for 21 full-time equivalent regular positions and one full-time equivalent Limited Term position. Currently, BES has 573.9 full-time equivalents, which represents a net increase of 50.35 FTEs between FY 2008-09 and FY 2017-18. If all the FTE requests are approved in the FY 2017-18 budget, the bureau would have 595.90 FTEs, resulting in a net increase of 14% employees in a 11-year period.

Current Five-Year Capital Improvement Plan

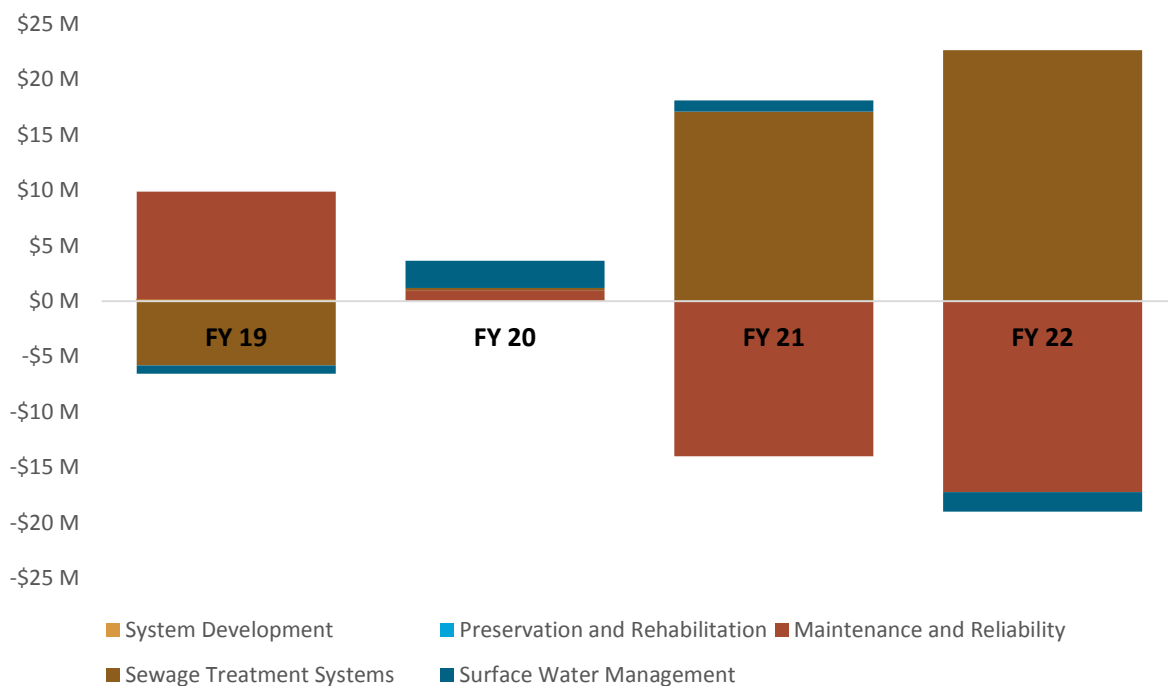
BES' requested budget includes \$743.3 million in capital expenditures over the next five years, reflecting the bureau's vision for a greatly expanded capital program to address aging assets and improve system reliability.

The 5 Year CIP includes a significant amount of spending for the bureau's two sewage treatment plants



Compared to last year's requested CIP, there are several changes resulting in a net increase of \$14.7 million or a 3% increase when comparing the capital plan between FY 2018-19 through FY 2021-22 (i.e. the four years shared by both plans). A comparison of the four common years of the CIP shows an almost \$34.1 million increase in spending for the Sewage Treatment Program and a \$20.5 decrease in the maintenance and reliability program. The CIP includes over \$114 million for secondary treatment expansion at the Columbia Boulevard Wastewater Treatment Plant, in addition to \$61 million in other projects at the plant. Also included is \$74.2 million for improvements at the Tryon Creek Wastewater Treatment Plant (TCWTP) and the interceptor leading to it. In addition, \$40 million is included in the plan for Preservation and Rehabilitation which is BES' projected share of the Portland Building reconstruction project.

Higher capital spending for the two treatment plants and reduced spending for maintenance and reliability projects account for most of the changes from last year's CIP



New Projects in the FY 2018-19 Plan

The requested budget includes 24 projects that are new to the capital plan with estimated costs of \$70 million over the next five years and more than \$152 million in total new project costs. Approximately \$49 million are in the Sewage Treatment Systems program. A significant amount of work is underway at both treatment plants which will replace obsolete facilities, increase efficiency of the overall plant processes and prepare the plant for meeting regulatory requirements. New

surface water management projects include SW Capital Highway (\$3.7 million in the five-year plan) and Tryon Creek Interceptor (\$21 million in the five-year plan). Rehabilitation and inflow reduction work at Hillsdale Crest is a notable \$6.8 million project added to the FY 2018-19 five-year plan.

Key Issues in Capital

Process Improvement

Since the completion of the CSO program in 2012, the bureau has begun to shift its capital program toward smaller, more rehabilitation focused projects. To catch up maintenance and replacement projects to improve system reliability, the bureau stated in last year's requested budget that it needs to double its capital throughput in the next five years. The FY 2018-19 Requested Budget revises that plan to extend that timeline to ten years.

Given the observed decrease in capital spending since 2012, BES began a multiphase, multiyear effort to better understand and improve how the bureau delivers CIP work. BES completed phase 1 of the Capital Improvement Program Process Review and Enhancement Project (CIP PREP), between March and August 2017. BES also recently adopted a new strategic plan and CIP process implementation is one of the strategic initiatives.

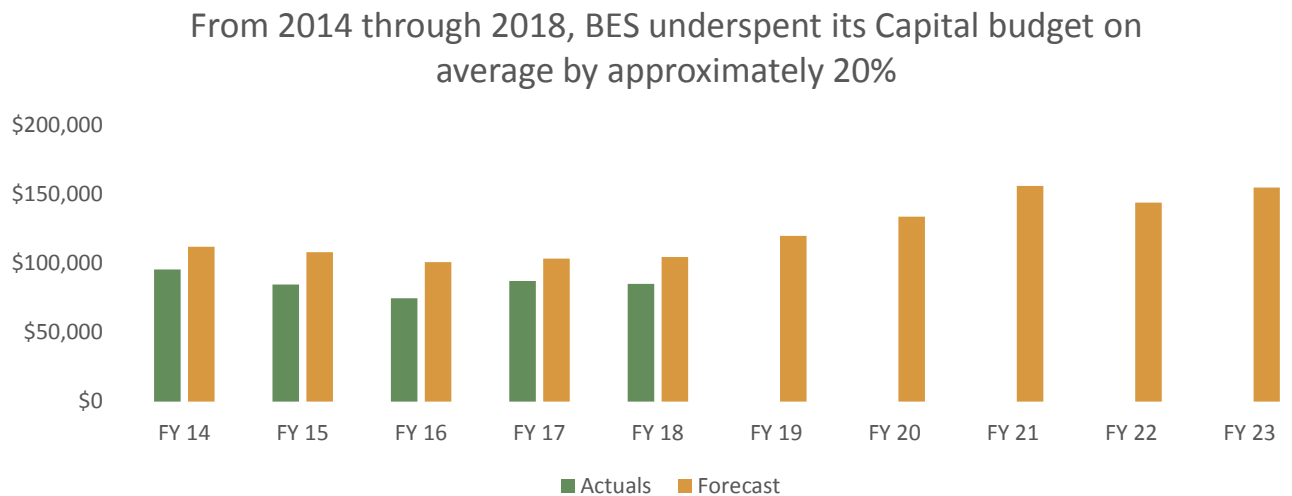
The bureau did a good job engaging its staff and other stakeholders in the initial project phase. Staff input overwhelmingly recommended changes that require organizational and process restructuring. Phase I CIP PREP findings are to:

- 1) Implement task-focused suggestions that wouldn't be affected by restructuring
- 2) Reorganize to create concept-to-closeout project management and technical teams
- 3) Restructure to create an integrated project origination (planning) and prioritization process

BES has begun instituting the task-focused recommendations that are easiest to implement and will result in small but visible process efficiencies. The move to integrated planning and project management approach to capital project delivery will require significant reorganization. BES expects to have a transition plan in place this summer (2018) but significant improvements in delivery aren't expected to be realized for several years.

Program Growth

While the organizational and process improvements recommended in CIP PREP have not yet been implemented, BES's five-year capital improvement plan continues to assume significant program growth despite low capital expenditure rates. As illustrated in the chart below, the bureau has underspent its CIP budget by approximately 20% every year since FY 2013-14. Despite this, the bureau forecasts spending \$120 million in capital expenditures in FY 2018-19, a 15% increase from the previous year's forecast. When comparing FY 2017-18 projected actuals to the FY 2018-19 capital expenditure forecast, the bureau would need to increase its capital throughput by over 40% to reach its goal.



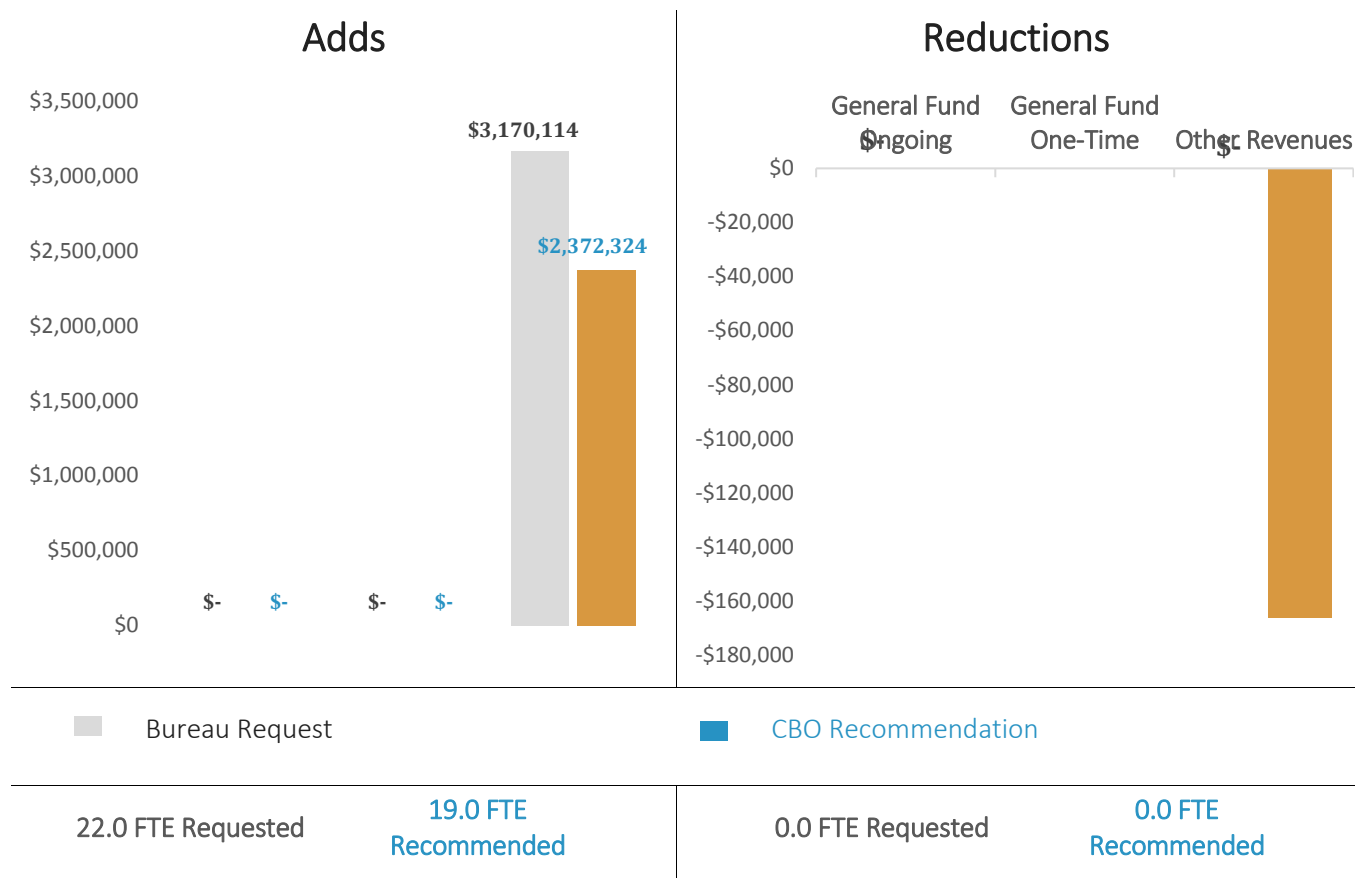
In discussions with BES about the number of staff needed to deliver its capital improvement plan, the bureau indicated that it has a cumulative backlog of unassigned projects in its current five-year capital improvement plan. When asked to quantify that backlog, BES provided an estimate of \$94 million which includes the total budget for all projects under the primary/shell programs, some of which are unassigned. To help illustrate the backlog problem, the bureau pointed to the five design engineers submitted in BES's FY 2017-18 Requested Budget, which were not funded even though the full CIP was approved.

The bureau believes that it needs 11 design/project management engineering positions in FY 2018-19 to deliver on its CIP, but only requested four positions due to rate constraints. Despite this, the short and long-term CIPs for the bureau are built on the bureau adding 11 FTE to its engineering staff. The bureau acknowledges this gap, stating it will "require further adjustments to priorities in the future and difficult decisions about what work to delay, and what to assign to consultants or contractor staff."

CBO notes that BES' 3% rate of increase for retail customers assumes 90% of its capital improvement budget will be spent or approximately \$120 million in FY 2018-19. This issue has budget implications if there is a misalignment between what is budgeted in the bureau's capital improvement plan and the staff resources that are needed to deliver on that plan.

The bureau has taken steps to identify the process and organizational changes that it needs to reach its capital delivery goals. CBO recommends the bureau continue to shift the conversation to performance and establish metrics to track the bureau's progress toward meeting its goals, and communicate to Council and the public the long-term rate impact of those goals.

DECISION PACKAGE ANALYSIS AND RECOMMENDATIONS



CBO's focus in our review is to ensure that new requests are thoughtful, intentional, well-developed, and meet stated bureau priority needs. Moreover, we have assessed the degree to which the bureau has made efforts to realign program resources to accommodate these new requests before requesting new resources. As a general

matter, however, the trade-offs between cost, risk, and service level are a matter for City Council consideration. The bureau has submitted these requests within the cost constraints established by the budget guidance and with the goal of optimizing risk reduction and service level maintenance and enhancement.

BES has submitted seven decision packages that represent \$3.2 million in additional funding which includes requests for 22 FTE. Below is a summary of those packages that warrant further discussion and tables with those requests that CBO recommends without discussion.

Service Delivery

ES_01, \$1,262,896, 8.00 FTE

This decision package represents a suite of requests that address the bureau's efforts to improve how BES delivers sanitary and stormwater services. These positions are tied to addressing the bureau's current volume of work.

Wastewater Requests

- Engineering Technician II (Facilities Management) \$99,204

This request adds a position to support the Wastewater Group Facility Program which currently consists of one FTE, a Wastewater Group Facilities Property Manager. The facility program's volume of work has increased over the past several years as the result of deferred maintenance on bureau owned properties. In addition to managing a growing backlog of maintenance needs, the Facility Manager handles unauthorized camping and damage to bureau property. Given these compounding factors, the bureau asserts that its facilities management program is in "unplanned maintenance mode."

In addition to the maintenance aspect of the Manager's role, the Facility Manager is responsible for organizing the logistical side of construction projects at the pump stations and treatment plants, e.g. maintaining security, safety, space programming, establishing construction staging areas. Demand for the logistic part of the Facility Manager's responsibilities is growing as planning for expansion to meet regulatory requirements related to secondary treatment processes has already begun. The requested position would support the Facility Manager; responsibilities include coordinating facility related maintenance work with internal staff, other bureaus and contractors, overseeing small repair projects, maintaining and repairing roofs, windows, gutters, fencing and fire alarms and daily facility complaints and needs.

Given the workload of the current manager, the demonstrated backlog and the cost effectiveness of maintenance and early prevention, CBO recommends this position.

- Facility Maintenance—Painting \$60,000

Another facility maintenance related request is for painting bureau assets at the treatment plants and pump stations. Currently, the bureau tracks 15,500 assets and has one Industrial Coatings Specialist dedicated to painting these assets. Of those assets, 85 buildings require painting, work that has been deferred over the years. With this \$60,000 ongoing request, the bureau estimates that it would be able to paint a combination of different sized buildings based on the following estimates: \$10,000 for a small building, \$20,000 for a medium and \$40,000 for a large building. According to the bureau, a \$60,000 annual reinvestment puts the buildings on a 27-year painting life cycle compared to a 10-year cycle which would require an \$161,000 ongoing reinvestment. The bureau's Painting/Coatings Reinvestment Plan will help to determine how assets are prioritized and that most of the work will be done by a contractor.

CBO recommends this request. Painting is an important early intervention and prevention strategy that helps to extend an asset's life. When possible, CBO encourages the bureau to utilize underspending in other budget areas to increase the number of buildings painted on an annual basis when possible.

- Wastewater Operator II \$98,238

This request adds an operator position to resume dredging activities at the Columbia Boulevard Wastewater Treatment Plant lagoon. A reduced biosolids hauling schedule was implemented as part of the Phase Lagoon Reconstruction Project that began in FY 2016-17. Prior to the reconstruction project, two operators were assigned to dredge the lagoon seven days a week. When the reduced schedule was implemented, one of the Wastewater Operator II positions was reclassified to an Electrical Engineer to support the Maintenance Division. The other Operator position was temporarily reassigned to the Special Operations Group (SOG). When dredging resumes in July 2018 and biosolids are hauled to Eastern Oregon, the bureau intends to redirect the Operator from SOG back to dredging. This request would replace the second Operator position that was reclassified to an Electrical Engineer. To support the hauling schedule, two operators are needed to dredge solids from the new cells in the lagoon.

CBO recommends this position.

- Consultant Services—Industrial workspace optimization \$50,000

BES is requesting \$50,000 in one-time funding for a consultant to provide industrial workspace optimization services at the CBWTP maintenance shop. Over the past 10 years, new equipment, changing work requirements, and additional staff has contributed to the space constraint at the maintenance shop. Given this, the bureau has some safety concerns because of limited equipment clearances as well as noise and work flow inefficiencies that result from the current layout. CBO

appreciates the tour of the facility to better understand the issues at the maintenance shop and notes that space issues are both a bureau and Citywide issue. CBO recommends this request as an important measure of risk mitigation and worker safety.

Pollution Prevention Group Requests

- Tech-I: Maintenance Inspection Program \$78,276

This request adds a position to the Maintenance Inspection Program which inspects Stormwater Management Facilities (SMFs) installed on both residential and commercial property. SMFs are facilities that reduce impervious areas such as eco-roofs, pervious pavement and trees, planters and basins, and manufactured stormwater treatment technologies such as Stormceptors. The City of Portland and its co-permittee, the Port of Portland, implement stormwater management programs under an Oregon Department of Environmental Quality (DEQ) permit issued under the federal Clean Water Act (CWA). Inspection of SMFs is a requirement under the City's Phase I National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Discharge Permit.

As Portland grows, so too do the overall number of SMFs that require inspection. Between FY 2012-13 and FY 2016-17, properties with SMFs experienced an 8% average annual growth rate or a 48% percent increase. Currently, there are approximately 13,000 SMFs in the City's inventory. The two inspectors assigned to this team have not been able to keep up with rising demand. Inspection frequency varies by asset type and is generally one to seven years, however, the bureau is on a 15-year schedule with current staff resources. Given the existing and future need for this work, CBO recommends this position.

- Tech II: Plan Review (2 positions) \$198,408

This request is for two Environment Technician IIs to support the Pollution Prevention Plan Review group. This group performs plan reviews, early assistance, land use, and inspections. They serve as subject matter experts for industrial and commercial facilities at the Bureau of Development Services service desk. The FY 2017-18 Adopted Budget included one Environmental Technician I (hired 9/5/17) to support the increased work load which brought the current staffing to six FTE: one Environmental Program Coordinator, two Environmental Technician IIs, one Engineering Associate, and one student intern (14 hours per week). Altogether, the plan review team has grown from 2.5 FTE in FY 2012-13 to 6 FTE in FY 2017-18 (interns and contract employees are not included in the FTE count).

Bureau data demonstrates that the total number of building permit reviews grew 6% every year between FY 2012-13 and FY 2015-16. Expanding the timeframe to FY2016-17, the annual growth rate drops to 3%; this decrease accounts for 128 fewer permits received by the plan review team compared to the previous year,

suggesting some flattening in the growth trend. In addition to handling more building permit reviews, work involving administrative reviews, variances, and special circumstances has grown significantly. The total number of administrative reviews, variances, and special circumstances increased 50% every year between FY 2012-13 and FY 2016-17. CBO notes that the plan review team's level of service has declined over the growth period, e.g. 65% of building permit reviews did not meet the 20-day turnaround goal of 90% in FY 2016-17 compared to the high of 91% in FY 2013-14. In December 2017, the bureau began implementing efficiencies and process improvements to address the team's declining performance outcomes.

CBO appreciates the steps the bureau has taken to improve the team's performance. Given the addition of a new position in September and the process improvements that were implemented in December 2017, CBO is hesitant to recommend both positions until the new staff person and process improvements have sufficient time to impact performance outcomes. Therefore, CBO is recommending one position. Finally, CBO recommends the team explore changing its performance targets to something that better reflects the level of service it can provide relative to the cost to the review fees.

- o Laboratory Analytical Specialist \$107,874

This request adds a laboratory analytical specialist position to the Water Pollution Control Laboratory. The position would be assigned to the Nutrients section to address an operational hole that exists at the lab. Currently, this work is done by shifting one or more of the three analysts trained in this work to the nutrients section, decreasing capacity in the other sections of the lab.

It's worth noting that laboratory staffing levels have remained unchanged since FY 2001-02 while output has increased 60% over the same period. The laboratory has accomplished this through more efficient instrumentation, alternative analytical methods, and cross training staff. The bureau asserts that shorter sample hold-times, lower detection levels, and increasing requests for analysis can no longer be met from efficiency gains. The bureau states that this work is not suitable for contract staff because of specific training requirements, loss of continuity and most importantly the long-term need for this position to meet service levels throughout the bureau and City. Further, the bureau indicated that the operational hole in the nutrient section has resulted in delayed turnaround times which have led to retesting and other inefficiencies. Fewer resources available for routine maintenance has also resulted in instrument failure.

CBO appreciates the steps the laboratory has taken to maximize efficiency gains at the laboratory before requesting an additional staff person. CBO recommends this request.

- o Environmental Program Coordinator SPCR \$115,092

This is the second year the bureau is requesting this position. The Environmental Program Coordinator was one of two positions requested to augment the bureau's Spill Prevention and Citizen Response group in the FY 2017-18 budget request. One (the Engineering Technician I) position was included in the FY 2017-18 Adopted Budget. Currently, the SPCR team has one Environmental Tech I, three Environmental Tech IIs, one Program Manager, and thirteen Duty Officers that provide 24/7 coverage Citywide.

According to the bureau, the addition of the Tech I position has helped SPCR improve response times to incidents, increase data tracking and quality, and support better records retention practices. However, the team continues to experience capacity issues with the enforcement action and appeal phase of the process. Data provided by the bureau demonstrates that enforcement actions have increased 28% every year since FY 2014-15, i.e. the team processed 24 enforcement actions in FY 2014-15 compared to 55 in FY 2017-18 (projected). The turnaround time from discovery to issuance grew 5% every year during the same period, a much more modest annual growth rate. According to the bureau, the type of enforcements being referred to SPCR are getting more complex, with higher civil penalties, and higher cost recovery amounts. They often cross multiple workgroups, which increases the amount of time to write the enforcement action and monitor compliance. The bureau's target is a 2 to 4-week turnaround time which is based on the premise that the faster a violation is enforced the quicker a facility will return to compliance.

Given that SPCR has yet to meet its target enforcement turnaround times, CBO has concerns that the target may not be realistic given the growing volume and complexity of enforcement actions. That said, the enforcement actions turnaround times are lengthy and preventing pollutants from entering the water supply is an important strategy to help the bureau meet its regulatory requirements. With a dedicated staff person focusing on enforcement actions, the position would also free up time for other SPCR staff to respond to phone calls and complaints and to conduct investigations. CBO is hopeful that SPCR's planned technological improvements to assist staff in the field will also improve productivity, but encourages SPCR to set achievable targets based on reasonable service levels. CBO recommends this position.

- o Industrial Stormwater \$99,204

This request adds a Tech II to the Industrial Stormwater Program. The program administers the State NPDES General Industrial Stormwater Permit (1200z) through an IGA with DEQ. The purpose of this permit is to monitor industrial facilities to control pollutants from entering the stormwater system. Like the other positions requested by Pollution Prevention, the volume of work for Industrial

Stormwater permitting is growing. The program currently administers approximately 200 permits as well as 200 certifications. The current Tech II permit load is approximately 42 permits and 40 No Exposure Certifications (NEC). BES anticipates adding another 24 permits and an unknown number of NECs for Portland Harbor Superfund and the Columbia Slough. Further, there are approximately 100 unpermitted sites that require inspection. Given the regulatory requirements associated with this work, and both the current and future need for this position, CBO recommends this position.

In addition to the packages discussed above, CBO recommends the following increases and reductions as submitted:

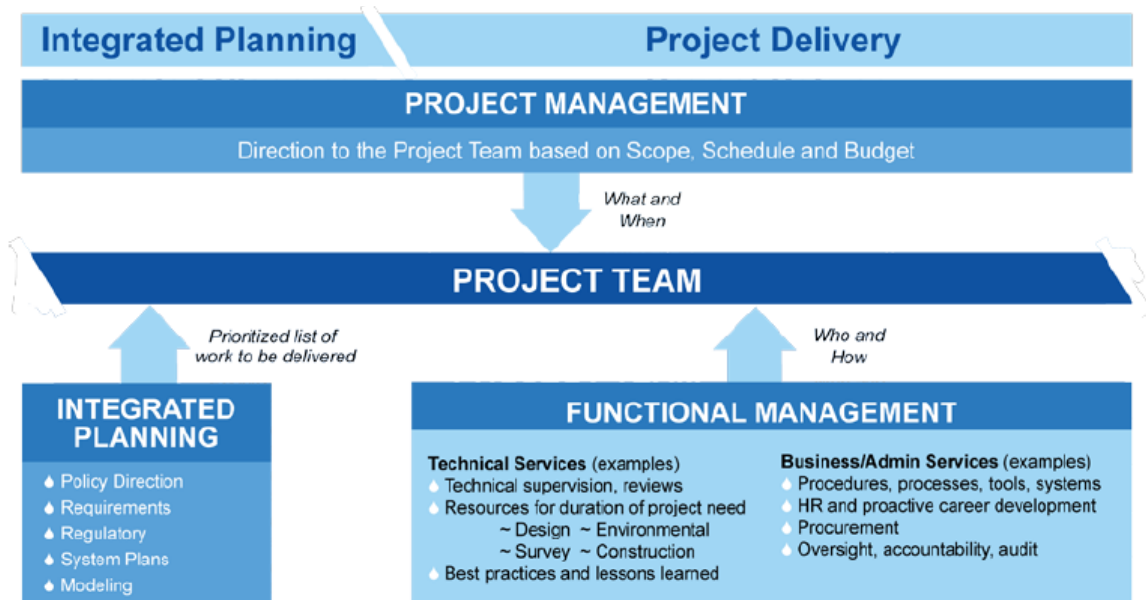
- Stephens Creek Program Tree Planting \$30,600
- Neighbor to the River Trees/Vegetation \$106,000
- Private Property Retrofit Program: combined basins (\$200,000)
- Continuous Collection System Plan Update \$200,000
- New Vehicle Materials Testing Lab \$35,000
- Field Operations—Minor Equipment and Tools Increase \$20,000
- Off Cycle Vehicle replacement—SPCR Ram Van \$42,500
- New Vehicle ISW/MIP \$35,000
- Business Services: renewable energy credits \$30,00
 - Asset Work and Management System (Synergen Upgrade) \$7,500
 - Fleet—field vehicle (E& I Automation) \$50,000

CBO Recommendation: 1,163,692 | 7.00 FTE

Capital Improvement Planning and Delivery Improvements

ES_02, \$948,934, 10 FTE

Between February and September 2017, BES completed the first phase of its three phase Capital Improvement Program Process Review and Enhancement Project (CIP PREP). This phase of the process produced a CIP lifecycle process map and identified priority areas for improvement. Using inputs from Phase I, BES identified two primary focus areas for Phase II: 1) Integrated planning outputs and 2) Centralized program and project delivery. The bureau is working on a plan to implement these changes which will include “adjusting the three dials” —business processes, workforce talent, and organization. BES will begin implementing changes to business processes and organization changes in July 2018. CBO reviewed the workforce component of the bureau’s implementation plan through this lens.



re 15 The new process changes the focus from disparate segments to a project team seeing projects through delivery

Integrated Planning

Integrated Planning was identified in BES' strategic plan and CIP PREP I process as a critical step to improve the bureau's capital throughput. BES is still in the process of defining what implementation will look like, but there is consensus that it will bring together the four main areas of the CIP as well as external inputs, e.g. the Comprehensive Plan, system plans, other City infrastructure bureau system plans, regulatory requirements, and modeling. The vision is to create a consistent process for filling the CIP pipeline in a consistent way.

A key component to integrated planning is assessment and prioritization. To accomplish this, BES needs condition assessment data. Though condition assessment of the combined and separated sanitary pipes and limited stormwater assets has been a focus of the bureau's work for the past few years, a condition assessment program for stormwater assets (both built and natural) is new. In absence of condition information, the Storm Water System Planning group has focused on GIS-based risk assessments to evaluate the greatest stormwater risks in the City and the consequences of asset failure. Risk data is important, but information on the condition of the assets is needed to understand the likelihood of asset failure. Together, the bureau will use risk and condition data to prioritize stormwater investments to prescribed or desired service levels.

Given this context, CBO reviewed the following four requests together.

- Program Manager—Condition Assessment \$150,222
- Business Systems Analyst—Condition Assessment \$111,096
- SWSP Condition Assessment PTE, Wetland Inventory (PTE) \$76,000
- Integrated Planning for Stormwater Priority Areas \$200,000

BES states the Stormwater System Plan (SWSP) team will use a combination of

existing and in-house resources and professional-technical-engineering contracts to inventory and assess the condition of stormwater assets over the next three to five years. The existing Stormwater System Plan division includes six staff. The two requested SWSP condition assessment staff (i.e. Program Manager and Business Systems Analyst) would develop the condition assessment program. In addition, the \$200,000 for integrated planning of stormwater priority areas would provide project feasibility analysis, hydraulic analysis, concept design and cost estimating. BES is also requesting \$76,000 for a PTE contract for a wetland inventory condition assessment. The PTE would augment existing in-house and external resources and contracts to further the work. BES estimates the wetland program will cost approximately \$3.65 million over the next five years.

Given the importance of condition assessment and the long-term nature of the work, CBO recommends both the Program Manager and Business Analyst positions to support the SWSP division. CBO also recommends the contracted services for the Wetlands Inventory. CBO notes that BES received \$100,000 (ongoing) in the FY 2017-18 Adopted Budget for system planning and it is unclear why more ongoing funding is needed. CBO recommends BES wait until the recommended FTE are hired before requesting more ongoing funding for system planning.

- Condition Assessment Field Technician \$98,586

This position request adds a Field Technician to the Condition Assessment Program in the Wastewater group. In the FY 2016-17 budget, BES received approval to hire 2.0 FTE (one Senior Engineer and one Maintenance Planner Scheduler) to develop, implement, and sustain an ongoing formal condition assessment program for the treatment plants and pump stations. These positions were hired in the spring and summer of 2017. An Engineering Technician II was requested and approved in the FY 2017-18 Fall Supplemental Budget, but as of early February the position has not yet been hired. Altogether, the program is designed for three additional technicians; this request is for one. In the FY 2017-18 Adopted Budget, BES received \$57,200 in ongoing overtime costs for existing staff to get the program started. Finally, BES received \$250,000 in ongoing funding in the FY 2017-18 Adopted Budget for consultant services to begin to perform condition assessments on pipes, structural assets, and coatings that are outside the scope of the bureau's expertise and available equipment.

Overall, CBO remains supportive of a dedicated condition assessment function that is based on well-established asset management principles. Given the bureau is also requesting two other positions to develop a new condition assessment program for the stormwater system, CBO is hesitant to recommend a position for a program that already has two staff and authority to hire a third. Thus, CBO recommends delaying the request for the Field Technician until the staff approved in Fall Supplement Budget is hired. As the program develops, CBO recommends BES

establish performance targets to measure and communicate the program's progress.

- Support for System Planning and Project Modeling \$130,782 (1 FTE)

This request adds a Senior Engineering Associate to the Asset Management Division to support modeling for capital projects and the Continuous Collection System Plan (CCSP). The bureau states that both current workloads and projected increases in the CIP have put pressure on the modeling and analysis team that supports the bureau. For example, work has begun on the Continuous Collection System Plan which required both internal and consultant staff for data collection, analysis, and modeling expertise. BES anticipates that after three years of consultant support, work will shift entirely to internal staff to support a dynamic CCSP. Given some of the hot spots identified in the CIP PREP Phase I exercise and the bureau's shift to integrated planning, CBO believes that a sufficiently staffed asset management team will help the bureau identify, prioritize, and plan its work more effectively. CBO recommends this position.

Centralized Program and Project Delivery

Four Engineering FTE:

- Pump Station RR&M Project Management/Design \$148,758
- Surface Water Project Management/Design \$148,758
- Treatment Plant Project Management/Design \$130,782
- Supervising Engineer for Wastewater Design \$160,254

The second component of CIP PREP recommendations was a centralized program and project delivery approach. Unlike the current model that has multiple handoffs, project management will be continuous during the project's life cycle, a "concept to close out model." While the project team will add and subtract expertise during the project cycle, the core team will remain intact. Other jurisdictions like Seattle Public Utilities have had success with this model.

Given the timing of the requested budget and the bureau's work on CIP PREP, a disconnect exists between the bureau's vision and the future role of several positions requested in the budget. Because the future organizational structure is yet to be determined, it is unclear whether the four engineering positions (discussed below) would use the proposed "concept to closeout" model or would function as design engineers under the current model. CBO raised this concern with the bureau. In response, the bureau asserted that the engineering positions could end up as either design engineers or project managers, depending on the timing of hire, ultimate proposed reorganization structure, skill sets, and experience of people needed at that time.

BES's FY 2018-19 CIP includes a 16% increase in capital expenditures compared to this year's CIP budget. A significant amount of this increase is attributed to secondary treatment expansion at CBWTP and improvements at TCWTP and the

interceptor leading to it. There is also \$12.5 million increase in Surface Water Management program projects as well as the need for staff to support the Pump Station Improvement Program and the Surface Water Projects. Project backlog information for the current year CIP also demonstrates that there are many unassigned projects from these program areas that these positions could support if the work is delayed to FY 2018-19.

CBO recommends all four positions, but notes some concerns. While there is no perfect time to add staff when the bureau needs to implement significant process improvements while also addressing its capital needs, it is difficult to determine the appropriate number of engineering staff when there is a disconnect between the CIP and available staff resources. This has created a misalignment between the number of projects proposed and approved in the CIP and the human resources budgeted to do the work.

- Construction Manager \$148,758 (1 FTE)

This request adds a Construction Manager (CM) position to the Construction Services Division. Construction Managers typically manage several projects at a time and are responsible for construction contract management, stakeholder coordination, quality and risk management, safety and communication with the public during capital project construction. Currently, there are 10 construction managers who have workloads that are higher than standard for their position and five who have manageable levels. The bureau also has one contract construction manager who is working full-time all year. The bureau has two supervisory level vacancies in this division. BES points to the current workload of its CMs and the 17% increase in the FY 2018-19 capital improvement plan to demonstrate the need for this position.

BES is still determining how the new integrated planning and program management model will affect the scope and role of this position. Some existing CM positions may shift to become overall PMs in the new organizational structure, other CMs may remain CMs, a role that would still be part of many project teams if BES organizes into a centralized PMO structure. Like the other engineering positions, it could be moved anywhere within a new organizational structure as needed for the new process.

Given the vacancies in two positions that supervise this group, the potential shift from CM to PM under the new project management model, and the efficiencies that may result from that change, CBO does not recommend this position.

Support

In addition to the engineering positions, BES is requesting additional support for cost estimating and program controls support for the Program Management and Controls Division. Both requests are supported by findings from CIP PREP I. The two requests are discussed below.

- Project Cost Estimator \$140,154 (1 FTE)

This request is for a Project Cost Estimator to support the Program Management and Controls Division. The first phase of the CIP PREP identified a need for BES to increase its focus on project management, including rigorous practices and supports for the fundamentals of project cost, schedule, and scope development. Typically, large agencies and private engineering firms have a pool of cost estimators and schedulers in the project management office to provide project managers with budget and schedule expertise and support on complex projects. This support is not currently provided by the bureau. Success for this position would be measured through increased accuracy of project budgets and better portfolio monitoring. CBO recommends this position.

- Project Controls Contractor Support \$200,000 (EMS)

This request is for two years of contractor support to provide program controls expertise to supplement existing staff and to help mature the organization's approach to cost estimating, project scheduling, workplan updates, training, and staff support. Findings from CIP PREP I support the need for more robust project controls and project management approaches to successfully plan and deliver a larger capital program. CBO recommends this request.

Miscellaneous

In addition to the packages discussed above, CBO recommends the following increases and reductions as submitted:

- New Vehicle Treatment Plants Shared Pool \$35,000
- Condition Assessment—Large Diameter Force Mains (\$200,000)
- Condition Assessment—Sewer and Stormwater System \$26,160
- Condition Assessment—Overtime (\$19,066)

CBO Recommendation: \$650,348, 8.00 FTE

Workforce Development

ES_03, \$311,096, 1.0 FTE

Workforce development is one of six goal areas identified in BES strategic plan and is supported by findings from CIP PREP I. These requests represent some of the initial investments identified to help the bureau reach its workforce development goals and support improved capital delivery.

- Training Coordinator (Limited Term) \$111,096

This request is for a limited term position dedicated to organizing and providing training opportunities for bureau staff, particularly the Engineering Services Group which has less than 0.25 FTE dedicated to this work currently. This temporary

position will create and implement a workforce development program for engineering, construction, and technical staff that support organizational goals, employee retention, and the development of key skill sets like project management that support delivery of the capital plan. The bureau anticipates that this position will eventually be absorbed in the ongoing responsibilities of other existing positions once the heavy lifting of developing and rolling out a training program is done. This position will also work closely with BES's Equity Manager to implement actions from the bureau's equity plan.

CBO appreciates that BES is considering the equity component of this request, including a training program tied to career "ladders." Given the size the Engineering Services Group, the scope of this position's responsibilities, and the bandwidth of existing employees to absorb this work, there is a high likelihood that this position is requested to be added as permanent during a future budget process. CBO recommends this position.

- Interns-WWG Maintenance \$50,000

This request is for two full-time engineering interns in the Wastewater Maintenance Division to support critical work processes and conduct reliability-centered maintenance. Tasks include preparing Pump Station System Operations Plans and updating the Treatment Plants Operations and Maintenance Plan.

CBO supports these positions. Exposing students to public works can attract future full-time engineers to this work and help build a more diverse workforce. CBO expects that the bureau, as part of its strategic plan, CIP business review, and equity work will use these positions as career ladders for high-performing interns.

- Lease for additional temporary office space \$150,000

This request for ongoing funding is for approximately 4,000 to 5,000 square feet of additional space to address the bureau's staff needs. Space issues have surfaced in the temporary locations during the Portland Building renovation. While BES is currently managing in the temporary locations, it does not believe it can accommodate the additional 40 staff that it estimates will come onboard in the next two years. The bureau believes this request is most likely a temporary cost since staffing assumptions were built into the plan for the restored Portland Building.

CBO recommends this request.

CBO Recommendation: \$311,096, 1.00 FTE

Bureau Culture

ES_04, \$10,000

BES is requesting \$10,000 to support internally focused, professional development activities that will be designed to build greater capacity among staff to undertake

successful engagement with various community groups. A focus would be on train-the-trainer type professional development experiences that build internal capacities thus allowing staff to learn from peers within the bureau.

CBO recommends this request.

CBO Recommendation: \$10,000

Responsive Business Systems

ES_05, \$383,288, 3 FTE

BES' strategic plan includes a goal of integrated administrative, technical, and financial systems that support responsive and adaptable decision-making and service delivery.

- Business Systems Analyst—Investigations Divisions \$111,096

This request is for a Business Systems Analyst in the Environmental Investigations Division. Providing timely and accurate analytical and environmental data to the bureau and other City agencies is the core purpose of the Environmental Investigations Division. The position is part of a broader long-term plan to incrementally improve data and application efficiency bureau-wide over several years. In recent years, the bureau has been assessing and prioritizing investments in data collection, management, and governance including the recruitment of the Data Strategist in December 2017.

The Environmental Investigations Division generates data daily in multiple ways, such as via electronic measurement of flow in the conveyance systems and via laboratory analysis of environmental samples from treatment plants and industries. Despite the amount of data generated by the division, it lacks a centralized set of data rules and quality review processes. This has made it difficult for end users to assess the suitability of each data source for their project objectives and to efficiently respond to inquiries from other bureau divisions, City agencies, and other data consumers (e.g. universities, etc.). This position would develop Environmental Data Management Plans that would reduce redundancy, improve data integrity, and facilitate better reporting. Once the position addresses the division's immediate needs, the bureau plans to use the data management approach implemented at the division level to inform management strategies in other parts of the bureau.

Given the volume of data collected by the Environmental Investigations Division, the efficiencies it would create, and the long term need for data management within the division, CBO supports this position.

- Financial Analyst \$111,096

This request adds a Financial Analyst position to the bureau's Financial Planning Division to assist with budget development, budget monitoring, responding to

finance related inquiries, and other fiscal analysis. Given the size, complexity, and diverse portfolio of the bureau, the Financial Planning Division's team is quite small. Currently, BES has a decentralized budget monitoring process that relies on staff outside of the division to monitor their own program budgets. Diligent monitoring and analysis of revenue and expenditures would be the primary focus of this position so that the bureau is better able to track and identify financial resources and make budget adjustments throughout the year.

This position is responsive to some of the concerns raised by CBO regarding the need for more budget monitoring and analysis at the bureau. CBO looks forward to learning how the position helps the division to better track and identify internal resources to address emergent needs throughout the year. CBO recommends this position.

- Procurement Assistant \$111,096

This request is for a Procurement Assistant to augment and help to expedite support from OMF-Procurement Services. This position would coordinate and administer all aspects of bureau procurement and contracting processes as well as grant and intergovernmental agreements. CBO recognizes that a well-functioning procurement process is an essential part of the bureau's work and that it is reasonable for the bureau to need additional support given the size and scope of the bureau.

CBO recommends this position.

- BTS Flexible Services Contract \$50,000

The Bureau of Technology Services (BTS) offers an accessible contract vehicle for BES to bring in IT-subject matter experts during periods of IT-related support surges. Using this capability would improve service responses and is in line with BES' desire to develop IT and data management practices to improve decision-making. CBO recommends this request.

CBO Recommendation: \$383,288, 3 FTE

Community Relationships

ES_06, \$233,900

- Affordability 2.0—Multifamily eviction prevention \$400,000

The affordability of utilities for low-income residents is an increasing concern in many communities across the US, including Portland. Currently, Portland's low-income assistance program is available to single family household customers with an account. However, this assistance only reaches a portion of PWB and BES's low-income customers as many individuals and families living in multifamily housing do not have individual water meters and pay for utilities as part of their

rent. Together, PWB and BES are proposing a \$600,000 annual transfer to Home Forward's Short-Term Rent Assistance Program to address this inequity (PWB's portion is \$200,000; BES's portion is \$400,000). Home Forward will distribute the funds to 19 community organizations to provide up to \$500 of crisis assistance per household, annually. If approved, the bureau would develop eligibility requirements and measures to track program outcomes.

PWB estimates that the program will serve approximately 1,200 households per year, many of whom are facing eviction. It is unclear whether the \$600,000 will provide additional assistance to these households or whether they will supplant existing funds, allowing Home Forward to redirect their resources towards other programs. It is anticipated that the bureaus' agreement with Home Forward would address this issue.

Expanding the low-income discount program to residents living in multi-family housing has been a long-standing legal, administrative, and logistical challenge. The utility bureaus have stated that this program complies with legal requirements around the use of ratepayer funds, but they did note that the General Fund may be the most appropriate resource to cover the administrative costs of the program. However, a request for General Fund resources was not included in either bureau's budget request.

Utility costs are a growing problem for some households in Portland and, as noted elsewhere in this review, affordability is one of the key performance measures for the utility bureaus. Designing and developing a low-income discount program that reaches the most vulnerable residents is very challenging. CBO has concerns, however, that the crisis assistance program being proposed is targeted to address broader affordability concerns in Portland rather than affordability of utility costs. According to the Water Research Foundation, some utilities in the U.S. have developed low-income assistance programs that directly provide direct discounts to their multi-family customers and/or their landlords. In addition, the utilities may be better positioned to explore a more targeted approach now that the Portland Housing Bureau (PHB) is developing and implementing a new rental registration system. In FY 2018-19, PHB will move forward in developing a system to track the estimated 120,000 rental units within Portland. This presents an opportunity to collect data that can be used to inform strategic investments across systems and target utility assistance directly.

Given the lack of clarity around administrative expenses for the program and the potential opportunity for a more targeted approach, CBO recommends that the bureaus further develop this proposal while exploring more targeted alternatives.

- Wholesale Contract Increases (MCDD) (\$166,100)

The reduction is an adjustment to the prior year's budget request. CBO recommends this request.

CBO Recommendation: \$(166,100)

Leadership in City Government

ES_07, \$20,000

- *Disaster Response Team Trailers \$20,000*

This request is for cargo trailers, equipment, and tools for BES Damage Assessment Teams and disaster response. This request anticipates purchase and equipping of two cargo trailers annually through FY 2020-21, for a total of 6 trailers that would be kept at various BES sites (scattered geographically) for Damage Assessment Teams and disaster response. These resources would increase the bureau's ability assess and determine the status of assets and facilities. Damage assessments will be used to quickly determine and report the location, severity, and nature of damage and inform response and recovery efforts. Geographic location of these emergency response trailers would be carefully considered in regard to both critical functions and facilities for the wastewater system and goals for equitable service during emergencies.

This request continues a theme of requests over the past several years related to emergency preparedness. For example, in FY 2017-18, BES requested and City Council authorized \$45,000 in one-time funding for emergency preparedness kits for general use at work sites as well as bureau vehicles.

Disaster and emergency response is an important component of bureau preparation and continuity for operations and service recovery post event. CBO recommends this request. If similar requests are considered in the future, CBO suggests BES submit comprehensive description of the state of its preparedness activities and future needs for context.

CBO Recommendation: \$20,000

SUMMARY OF REQUESTS AND RECOMMENDATIONS

	Adopted FY 2017-18	Request Base (A)	Bureau Decision Packages (B)	CBO Recommended Adjustments (C)	Total Recommended Revised (A+B+C)
Resources					
Budgeted Beginning Fund Balance	\$ 272,770,600	\$ 481,971,000	\$ -	\$ -	\$ 481,971,000
Licenses & Permits	2,420,000	2,157,000	-	-	2,157,000
Charges for Services	369,361,071	391,397,266	3,170,114	(797,790)	393,769,590
Intergovernmental Revenues	391,886	380,775	-	-	380,775
Interagency Revenue	2,591,744	2,614,676	-	-	2,614,676
Fund Transfers - Revenue	338,772,265	375,523,000	-	-	375,523,000
Bond and Note	229,000,000	-	-	-	-
Miscellaneous	4,681,100	7,613,000	-	-	7,613,000
Total Resources	\$1,219,988,666	\$1,261,656,717	\$3,170,114	(\$797,790)	\$1,264,029,041
Requirements					
Personnel Services	\$ 70,320,885	\$ 72,682,203	\$ 2,639,764	\$ (346,548)	\$ 74,975,419
External Materials and Services	70,575,307	73,932,381	1,062,660	(600,000)	74,395,041
Internal Materials and Services	46,421,096	44,641,378	7,500	-	44,648,878
Capital Outlay	77,569,281	95,864,312	(539,810)	148,758	95,473,260
Bond Expenses	184,602,857	187,007,171	-	-	187,007,171
Fund Transfers - Expense	344,766,124	381,605,121	-	-	381,605,121
Contingency	354,624,116	335,518,862	-	-	335,518,862
Unappropriated Fund Balance	71,110,000	70,405,289	-	-	70,405,289
Total Requirements	\$1,219,989,666	\$1,261,656,717	\$3,170,114	(\$797,790)	\$1,264,029,041

City of Portland
 Decision Package Recommendations
 (Includes Contingency and Ending Balance)

	Bureau Requested					CBO Analyst Recommendations					
	Bureau Priority	FTE	Gen Fund Ongoing	Gen Fund 1-Time	Other Revenues	Total Expenses	FTE	Gen Fund Ongoing	Gen Fund 1-Time	Other Revenues	Total Expenses
Bureau of Environmental Services											
<i>Adds</i>											
ES_01 - Service Delivery	01	8.00	0	0	1,262,896	1,262,896	7.00	0	0	1,163,692	1,163,692
ES_02 - CIP Planning and Delivery Improvements	02	10.00	0	0	948,934	948,934	8.00	0	0	650,348	650,348
ES_03 - Workforce Development	03	1.00	0	0	311,096	311,096	1.00	0	0	311,096	311,096
ES_04 - Bureau Culture	04	0.00	0	0	10,000	10,000	0.00	0	0	10,000	10,000
ES_05 - Responsive Business Systems	05	3.00	0	0	383,288	383,288	3.00	0	0	383,288	383,288
ES_06 - Community Relationships	06	0.00	0	0	233,900	233,900	0.00	0	0	(166,100)	(166,100)
ES_07 - Leadership in City Government	07	0.00	0	0	20,000	20,000	0.00	0	0	20,000	20,000
<i>Total Adds</i>		<i>22.00</i>	<i>0</i>	<i>0</i>	<i>3,170,114</i>	<i>3,170,114</i>	<i>19.00</i>	<i>0</i>	<i>0</i>	<i>2,372,324</i>	<i>2,372,324</i>
Total Bureau of Environmental Services		22.00	0	0	3,170,114	3,170,114	19.00	0	0	2,372,324	2,372,324