

**Bureau of Environmental Services
Budget Advisory Committee FY 2014-15
Supplemental Detail on Budget Decision Packages**

Portland Harbor

River Mile 11

The City of Portland is a member of the River Mile 11 E Group. An Order between EPA and the Group, was finalized on April 15, 2013. The order requires the signatories to pay for and conduct investigation activities at RM 11E. The additional work at RM 11E will allow design and construction of the final remedy for the RM11E project site to begin quickly after EPA issues a final Record of Decision (ROD) for the Portland Harbor Superfund Site cleanup. The RM11 E Group will also be paying costs incurred by EPA, Oregon DEQ and several Native American tribes to oversee this work. We anticipate an additional \$40,000 from BES to complete this work

Program Specialist

The Portland Harbor work is transitioning from the investigation and analysis phase to an allocation and litigation support phase. We expect to see a significant increase in legally sensitive public records requests (increasing the workload of the bureau's public records coordinator) and technical support requests from our City Attorney's office. Resources to develop and maintain an organized paper and computer database will be critical to meet this need, as well as supporting historical research activities. The program has never had a dedicated resource for data and information management, and has relied on contractor and bureau support staff, as available. Our contractor budget is decreasing, requiring more in-house resources.

Reduction in Technical Contract Support

One of the area's of assistance the technical contracts provide is to support the city's participation in the ongoing liability allocation process. This process will ultimately determine the amount of financial liability the City will be assigned in the cleanup of Portland Harbor. This cut will limit our ability to review information developed by other parties and respond to statements about City properties or operations, thus affecting our ability to defend City positions in the allocation process. If BES cannot provide the technical support for preparation of the necessary information, this may affect the City's ability to meet its obligations under the agreed settlement procedure. This represents approximately 13 % of our technical contract budget.

Reduction in Legal Support

Legal support for the City's participation in the Portland Harbor Superfund site is critical. Reducing our legal support will impact the City's ability to participate in the liability allocation process- from both a strategic positioning and on the ground review of questions and statements from other parties regarding City liability. Again, the

reduction may affect the City's ability to meet its obligations under the agreed to settlement process. The ongoing allocation process will determine the ultimate financial liability for the cleanup. This represents about 10% of our legal services budget

Reduction in Natural Resource Trustee Support

The Natural Resource Trustees (Native American Tribes, NOAA/NMFS, USFWS, ODFW) are tasked with determining the damage to natural resource caused by the contamination at the Portland Harbor Superfund Site. The City, as are other parties, is involved, and helps fund, the trustees as they determine the extent of the damage and identify options to correct or mitigate for the damage. We expect that eventually our involvement with the Trustees will require more of their expertise as we determine the extent of the City's liability for natural resource damages, and how we agree to correct those damages. The City will be expected to fund the efforts of the trustees as they work with the City on these issues. Reducing the funds we have available for supporting the Trustees could impact our ability to efficiently come to an agreed upon resolution to City liability, thus potentially creating significant financial uncertainty. This represents approximately 35% of our budget item for funding natural resource trustees

Wastewater Collection, Transportation, Treatment

Pumping and Treatment O&M

Biosolids - Land Application & Transportation

Current FY13/14 adopted budget is \$2,879,955. Estimate 3% annual CPI increase and 5% annual fuel increase for Madison Farms and Sherman County land application. Land application contract with K&S Madison expires in December 2013. Hauling contract with Gresham Transfer expires in September 2014. These calculations assume continuation of Madison Farms and Gresham Transfer programs. A needed reduction of solids in the lagoon and/or additional solids from ESCSO could add to overall program cost not reflected here. These numbers were adjusted down from original program estimates: 4% to 3% (inflation) and 15% to 5% (fuel).

Outfall Inspection & Cleaning/Repair - Treatment Plants

A complete interior/exterior outfall inspection was completed in Aug/Sept 2012 (FY12/13). This inspection indicated necessary cleaning/repair work which needs to be completed in late summer/fall in FY14/15 at an estimated cost of \$200k. Optimally the cleaning/repairs from the 2012 inspection would be completed in FY13/14 instead of waiting until FY14/15. Interior/Exterior inspection and clean/repair = 6 year cycle; sonar inspection and clean/repair = 3 year cycle. The next interior/exterior inspection will be needed in FY19/20 @ ~\$125,000 (the first cycle it shows up as being 7 years from the last inspection because there is a 1 year break this time between the inspection in 2012 and the cleaning work). A multi-beam sonar inspection (bathymetric survey crew) of the outfall pipe (50' upstream/downstream) needs to be conducted late summer/fall in FY16/17 estimated at \$25,000. This type of inspection is required every 3 years. Minor

dredging is anticipated to follow this inspection in late summer the following year (FY17/18) at an estimated \$30k.

Millwright position

The Bureau has been expanding its facilities over the last several years with the completion of projects including the dry-weather clarifier expansion, the wet-weather screening house, CEPT, the digester expansion, Portsmouth odor control facility, and the secondary process improvements. These projects have added over 300 new mechanical assets to the system, yet staffing levels have remained the same. As these assets age, they require additional predictive and preventative maintenance (PM) to ensure a failure does not occur. The plant millwright staff has become increasingly stressed in keeping up with the workload as evidenced by a trending decrease over the last year in mechanical work orders completed of about -6% at TCWTP (89% PM Completion) and -2% at CBWTP (84% PM completion) and the current large backlog of over 300 open work orders. With the decrease in completed PMs, the benchmark of 90% PM work order completion has not been achieved, resulting in deferred maintenance. There will be further challenge to complete PMs to the established level of service in the upcoming years as we face some upcoming major repairs to several assets such as the TCWTP clarifier drives, the CBWTP effluent structure and the CBWTP blower plenums. Insufficient staffing increases the risk of asset failures leading to permit violations, loss of methane revenue, and increased repair costs over the life of the asset resulting in an increased cost to the ratepayer. In addition, due to budget cuts this fiscal year, the maintenance contract for the two Cogen Engines was cut, requiring that this maintenance service be performed by already stressed millwright staff. Maintenance of these additional assets alone is estimated to require one full-time employee to meet 85% uptime. Not having staff to effectively and efficiently maintain this critical asset will decrease our ability to produce electricity for the treatment plant which currently amounts to a cost savings of approximately \$750,000 in electricity per year.

NPDES Permit Study - CBWTP

The Mutual Agreement And Order (MAO) associated with the NPDES permit requires an one-time study for a monitoring and analysis program due by December 30, 2015. This is a robust monitoring program of the quality of effluent from CBWTP and the effectiveness of the secondary treatment improvements and the CEPT projects in treating captured CSO at CBWTP. Effluent testing includes things such as giardia, cryptosporidium, fecal coliform, and adenovirus. The outcome of this study will drive the timing for construction of new secondary clarifiers. The study needs to start in winter of 2014 and will take approximately one year to complete.

Pump Repairs - CBWTP Influent Pump Station

The maintenance strategy is to repair one low flow pump (there are a total of four needing repaired) each fiscal year at \$50,000 each. These pumps are critical assets to the treatment process. Repairs do not meet CIP criteria because expected useful life is only 5-7 years.

Arc Flash Study - Treatment Plants

An arc flash study is a short circuit and breaker coordination study to verify adequate equipment ratings and evaluate equipment protection. This study along with arc flash equipment labeling on things such as switchboards, panelboards, MCCs and control panels is necessary to identify arc flash hazard levels and the working and approach boundaries as required by NFPA 70E-2012 and NEC 110.16 to ensure electrical safety standards in the workplace. The study/analysis must be done whenever a major modification or renovation takes place. It must also be reviewed periodically, not to exceed five years, to account for changes in the electrical distribution system. The last study for CBWTP was done in 2007 and TCWTP was 2003. Since then CBWTP has added Cogen along with completing several other large projects such as the Support Facility, CEPT, Wet-Weather Screenhouse, Digester Expansion. TCWTP has seen several modifications including new motor control center and clarifier motor drives. CBWTP = \$50,000 and TCWTP = \$15,000, totaling \$65,000.

Blower Repair - TCWTP

This funding is necessary to perform proactive maintenance (Class II overhaul/inspection) for the blowers at TCWTP. The maintenance plan is to do one blower repair each year: Blower #2, Blower #1 and then Blower #3. There is a 6-7 year maintenance cycle, which is determined based on approximate run time hours so this does not qualify for capital funding.

Portable Motor Test Equipment

Existing motor test equipment is at the end of its useful life and needs to be replaced with a new tester. Additionally, we have 16 new medium voltage motors and 30-40 new submersibles that cannot be tested with the current testing equipment. A vendor is necessary to do this testing at about \$2200/day. This equipment allows us to test the motors in-house. Having our own tester will allow us to be more efficient with our predictive and preventative maintenance plan that ensures motors are working efficiently and effectively. With this test equipment we can catch failures sooner which ultimately increases the reliability of the treatment process and decreases repair costs. Expected useful life for this equipment is 15-20 yrs. Estimated cost savings to the bureau is approximately \$120,000 in critical motor testing over the life of the tester. \$46,280 total with \$39,280 equipment + \$7000 training.

Eliminate BES contribution for street sweeping

Street Cleaning - Street Cleaning is a common and expensive practice undertaken by most urban municipalities. Street sweeping, essentially the operation of large trucks for cleaning street surfaces, is primarily performed for aesthetic purposes. It is often perceived to lead to improvements in the environmental conditions of urban waterways by preventing pollutants deposited on street surfaces from reaching the stormwater system, and subsequent to that, urban streets. There is, however, little available

evidence to quantify the extent to which street sweeping can improve stormwater quality. Portland also has a few key features that make the questionable benefit of street sweeping even more marginalized. Portland's street runoff in most of the City is captured in another treatment facility; either the combined sanitary and stormwater pipes that flow to the wastewater treatment plant, or to stormwater facilities that capture sediments and allow for their mechanical removal in a more efficient manner.

Eliminating BES' contribution to PBOT's provision of street sweeping services, therefore, would have a negligible and/or immeasurable effect on the water quality of urban streams and pose a lower risk reduction to the budget than other programs of its size. An ongoing cut of \$425,000 equals approximately 100% of BES' contribution and an estimated 20% reduction of total City street cleaning budget.

Multnomah County Vector Control Service Agreement

The Intergovernmental Agreement for services (#52771 June 2006) provides that Vector Control does Rat Abatement and Control and Mosquito Abatement and Control and related services. This proposal reduces the \$237,000 intergovernmental agreement by 20% or \$47,400. The primary focus of the reduction should be in mosquito control, monitoring and mitigation and related activities with specific areas of reduction to be negotiated between the parties.

Renegotiate Vector Control Lease Agreement (Revenue Offset)

The City and the County reached an agreement dated May 9, 1968 that, among other stipulations, allows the county to occupy and beneficially use City of Portland property and structures on the Columbia Boulevard Wastewater Treatment Plant campus without compensation. The agreement does allow for modification or amendment, but not termination of the agreement. BES proposes to modify the agreement such that BES becomes the landlord and the County becomes the tenant of property and structures mentioned herein, and BES provides security, sewer, garbage, janitorial and other typical services in return for the County as tenant to pay a \$5,000/monthly lease to the Bureau for beneficial use.

Collection System O&M

Stormwater O&M - Revegetation

Current FY13/14 adopted budget is \$757,752. A continued increase in number of green streets being built requires this increase in funding to maintain these assets as defined by Level of Service B.

Electricity - Collection System/Pump Stations

Projections based on usage and rates indicate this overall utility reduction can be taken from the FY13/14 pump station adopted budget of \$2,129,538 for FY14/15. This includes a reallocation to natural gas and water/sewer which are underfunded right now. If this reduction is taken the following years will include an increase in funding. FY15/16 includes half year electricity increase for Fanno/SW 86th PS per Engineer

estimate (\$65,000). Years 3-5 include full year funding for Fanno/SW 86th PS per Engineer estimate (\$130,000). Also includes funding for Airport Way PS (\$10,000) beginning in FY14/15 and SW Odor Control Facility electricity (\$15,000) starting in FY15/16. These are also per Engineer estimates.

Equipment

Includes CCTV replacements (\$12,000), acoustical inspection equipment for a one-year pilot testing program with relevance for Fats Oils and Grease inspection and root intrusion inspection (\$25,000) and two Shorty Launchers which allow lining of 4 - 6 inch lateral connections from within the sewer main (\$14,000).

Pollution Prevention

Environmental Compliance

CSA PTE services funding for work unrelated to specific capital projects

Most Coordinated Site Analysis work on evaluation of contaminated properties is directly chargeable to project numbers. However several times each year, on average, emergency response to address potential releases to the environment, threats to worker health and safety, or cleanup of spills requires immediately available contingency funds. Although highly variable, historical usage is \$40,000 more per year than the currently budgeted \$75,000. Occasionally these funds are reimbursed when longer term clean up project numbers are assigned. Examples of projects include Killingsworth Fast Disposal Landfill, Guilds Lake, and more recently emergency sewer repair projects.

Seasonal Hire

Workloads for Coordinated Site Analysis have increased greatly over the last several years, especially with the shift to sewer rehabilitation in the capital program. Contracts are used to the extent that individual projects can be contracted, but there is a commensurate increase in routine technical and administrative work generated within the section. A seasonal or intern FTE will provide workload leveling at the lower technical levels freeing other personnel to more complicated or unique work.

Extend Limited Program Coordinator at BDS Desk

Beginning in April 2014, the Development Services Center (DSC) will be open for an additional 12 hours/week. This is in addition to the increase of 8 hours/week in the summer of 2013. The addition of 12 hours of DSC staffing by Pollution Prevention Plan Review will result in over 40 total hours of new staff time. According to the Bureau of Development Services, recent and projected development projects and proposed permits coming to the DSC has increased and will continue to see a significant increase for the foreseeable future. The number of larger project reviews are expected to decrease, while the number of smaller projects will increase at a much greater rate to increase overall development by about 5%. Smaller projects often result in much higher

levels of technical assistance as the sites are generally complicated retrofits and the applicants are often less versed in plan review requirements and procedures. In addition, the anticipated workload is related to high level complex reviews related to infill development and conformance with new codes and rules.

Environmental Technician II Position: Spill Control/Citizens Response

Spill Prevention/Customer Response has significant responsibilities to ensure compliance with all National Pollution Discharge Elimination System (NPDES) and Water Pollution Control Facility (WPCF) permits governing both the sanitary and stormwater systems. Recent revisions to these permits include increased tracking and compliance reporting, expanded illicit discharge and connection investigations and enforcement of violations which may harm City systems. Due to new federal permit requirements established within the Columbia Boulevard (CBWTP) NPDES Permit in 2011 and the creation of the Cut Through the FOG program in 2012, SPCR reallocated resources and dedicated a position to the Fats, Oils, and Grease program. In order to meet these regulatory challenges, an Environmental Technician II (Investigator) is needed to maintain an effective level of service and protect and extend the life of City assets. This position will be responsible for: Responding to customer complaints (SPCR receives approximately 450 calls/year); Investigate illicit discharges and illicit connections; Conduct enforcement actions on new and enhance City codes and administrative rules. Enforcement actions are expected to increase by ~200% (from ~20/year to ~60/year) over the next 2 years.

Environmental Investigations

Replace continuous flow monitors

Field Operations has approximately 45 flow monitors used to collect sewer design and operations information. Those monitors are reaching the end of their useful life and will soon lose manufacturer support. New monitors have significant technological improvements such as built in wireless capabilities and improved data recording techniques providing greater efficiency and accuracy. Prior year's purchases revealed higher than originally anticipated costs for these monitors (increase of \$10,000 to budget \$50,000 per year). Purchases will be completed in FY14-15 and FY15-16.

Lab Equipment

Equipment purchase completed, removed from budget.

HVAC Replace duct connectors for exhaust fans and Direct Expansion (DX) Cooler

The Water Pollution Control Lab requires extensive ventilation and temperature control for its operations. Changes in efficiency of those systems can have a big impact on operating costs for the facility. Connectors in the exhaust fan and cooler ducts are leaking threatening to cause the whole system to go out of balance.

HYDRA Communication Upgrades

Data Acquisition & Management has been upgrading radio communications and data collection components of the HYDRA system for the last several years. The HYDRA system remotely collects and records information about rainfall, sewer level and flows, pump station alarms, and CSO overflows. The legacy technology is 23 years old and replacement and repair of the legacy technology is no longer an option. The upgrades will provide increased security, data acquisition effectiveness, reliability, and capability to the overall system. Emergency overtime reductions of 37% (for repairs to the old systems) have already been realized from the system upgrades implemented over the last several years. The amounts listed provide individual year funding for specific equipment purchases to continue the upgrades. FY15 funding will complete the upgrade of the Skyline communications network and FY17 funding will complete the upgrade of the Scott communications network.

Reduction in Maintenance and Janitorial Services at Water Pollution Control Laboratory (WPCL)

The Water Pollution Control Laboratory (WPCL), in North Portland includes both office and industrial space with a full service laboratory. Additionally, the facility has two meeting rooms for Bureau staff that have also been made available for after-hours use by neighborhood associations, community groups and other non-profit organizations. The building is seventeen years old with increased maintenance needs for floors, furniture and restroom facilities. This proposal reduces the interagency agreement for maintenance and janitorial services from \$260,000 to \$200,000. These reductions will include specialized and preventative maintenance and repair services provided by a facilities technician as well as reductions in daily janitorial services necessary to meet the needs of the workforce and the expectations of the public using the facilities evenings and weekends. This proposal reduces the level of service provided for a depreciating building. Cuts to the maintenance and cleaning schedules will require either a reduction in public usage of the building or the institution of charges for the use of the facility.

Watershed and Stormwater Management

Watershed Management

Columbia Slough Watershed - Mandatory 10-yr Fish-tissue Sampling

The DEQ issued Record of Decision (ROD) establishes mandatory 10 yr fish tissue sampling events. The City must implement the ROD to meet state and federal requirements for cleanup of contaminated sediment in the Columbia Slough. Budget requests reflect work plan followed by sampling and reporting.

SWNI

End support that BES provides to SWNI for staffing the Watershed Resource Center (WRC) . There are a number of challenging water quality and watershed health issues that impact southwest Portland, but there is no watershed council for the area to address them. This cut could result in the loss of the WRC manager position if SWNI is unable to backfill the loss of funding. The impact to BES would be reduced community engagement in activities to protect and enhance watershed health (i.e., invasive plant removal, native plant landscaping, habitat restoration projects, water quality protection), reduced ability to get work accomplished on private property, and lost opportunities to leverage resources (i.e. get grants) to develop cost-effective watershed restoration projects. BES's MS4 permit includes these types of outreach as best management practices which are included in the Bureau's compliance report. This support also provides for a trusted non-city representative to work with SW communities to facilitate BES projects and priorities, and thus avoiding potential additional costs/ controversy.

Ecoroof Incentive Contract obligations

Pay contractually obligated subsidies (\$5 per square foot) for ecoroof projects approved but not yet completed.

Community Watershed Stewardship Program (CWSP)

This would eliminate the CWSP program - both the community grants and support for two PSU graduate research assistants. This program is listed as a BMP in BES's MS4 permit, so cutting the program will put the Bureau at risk of non-compliance. The CWSP program enhances the Bureau's ability to address water quality and stormwater management issues by providing community organizations with opportunities for small grants for watershed health projects, and it has been a key program for BES to address equity.

Ecoroof Engineering Support

Reduce budget for City support to develop an ecoroof and/or Green Factor requirement to conform with historical spending rates.

Construction Management and Support

Downspout/Stormwater Retrofit Services

Eliminate operating budget for RDII in Hillsdale-area sewer system

The \$600,000 operating budget appropriation is for repair of a couple hundred private sewer laterals. The City is under order by the State DEQ to control Rainfall Derived Inflow and Infiltration (RDII) into the Hillsdale - area sewer system sufficiently to stop

sanitary sewer overflows that occur during rain storms at SW 25th and Dewitt. Repair of the laterals is a necessary task in order to adequately control the RDII. Failure to make these repairs will jeopardize our ability meet the requirements of the DEQ order.

Internal Support Services

Mapping & Data Management

Asset & Work Management - System Enhancements

A \$50,000 cut was taken in FY09/10 eliminating all funding for re-investment in Synergen, the Wastewater Group's work and asset management system for pump stations and treatment plants. Half of the cut (\$25,000) was added back in FY12/13 with a commitment to have the funding every other year there after. The funding in FY12/13 was utilized for the highest priority improvement at the time which was to increase reporting capabilities to allow better access to the data for decision-making for asset management and work management. In FY13/14 the \$25,000 was temporarily eliminated as go through another prioritization process to determine the next enhancements needed which this funding would support in FY14/15. We are scheduling/staging the implementation of the tasks to allow for every-other year funding for necessary outside resources. Re-investment into Synergen to implement new and/or improve functionality allows for improved asset management and optimized work management. It also supports optimization of inventory and purchasing management, which are key functions also used in Synergen.

Finance

Wholesale Contract Increases

Increasing development in areas of the City flowing to Clean Water Services' sewage treatment facilities together with rate increases at Clean Water Services and the City of Milwaukie will require higher payments to these agencies under existing contracts.

Replacement of MS Office Pro

BTS has upgrade of MS Office from Office 2003 to Windows 7 plus training, budgeted at \$251,748 for the current year. Given the one-time nature of the expense, next year's budget would ordinarily show a reduction by that amount. Although upgrades will commence in Spring 2014, approximately \$150,000 of (one-time) upgrade and training expenses are expected to occur next fiscal year, resulting in a smaller reduction.

Replacement of MS Office Pro - training

Updated schedule for implementation makes it more likely that software installation will be complete this fiscal year. Eliminating this partial carryover of a one-time expense will leave no budget for staff training. This would be in addition to the \$101,748 reduction already proposed in this area. The current year expenses are one-time.

Phase-in of Water Meter Maintenance to the Utility Base Charge

Meter maintenance costs of approximately \$2,250,000 are charged by the Water Bureau to BES through an interagency agreement. These costs are recovered through sanitary volume charges. Best practice in Water/Sewer ratemaking is to include these charges in the utility base charge. This adjustment represents year one of a five-year transfer of those charges from sanitary volume rates to the base charge.

Bureau Support

Landscape Maintenance - Parks Bureau

This funding will sustain new landscape being installed by capital projects (Support Facility and CSO sites). Standards indicate a higher level of maintenance initially with it tapering off after two years of establishment. Estimated maintenance costs are determined by percent of installation costs as follows: 10% - 1st year, 5% - 2nd year and 2.5% there after. Typically landscape warranty from CIP projects is of little value since rarely does a company return to fix anything. In addition, even during the warranty period there is maintenance that needs to be completed. Continuing to not provide increased maintenance funding for new landscaping is not sustainable. Without this funding either new landscaping will not be maintained or level of service for existing landscaping will be significantly reduced.

Temporary Stores Staffing

This request is to hire temporary labor for 3-6 months to attempt to sustain Stores current level of service during anticipated staff transition. This funding was requested in last year's financial plan in Year 5 (FY17/18) and is being moved up because the Lead Storekeeper (SASIII) has communicated that she has intentions of resigning in January 2014. Without this additional resource customers will see diminished core services.

Facilities - Condition Assessment

This funding is necessary to complete condition assessment on treatment plants and critical pump stations to determine rehab/repair/maintenance needs and priorities for roofs/HVAC and security elements. Focus will be on structures that house the most critical assets and/or are occupied by staff. Paving condition assessment also needs to be completed and will be achieved through working with Bureau of Transportation Maintenance Operations. This request supplements condition assessments that need to be done through the CIP program where it is known that capital re-investment is necessary. This will require outside professional expertise to complete. Not knowing the condition of existing assets negatively impacts our ability to achieve good asset management. Without this information it is difficult to compete with other priorities in the bureau and get the necessary funding commitment to address failing facility-related assets.

Smith-Bybee Room A/V Upgrades at Water Pollution Control Lab

This was purchased in FY 13-14, so funding is not needed. Audio Visual equipment in Smith-Bybee conference rooms was old and outdated, difficult to configure and gain network access using various laptops. Upgraded A/V equipment and designated computer.

Transfer budget for contract to clean and repair Portland Loos to General Fund

Although they serve a public purpose, maintenance and repair of the Loos is not core to the bureau's mission. Transfer of responsibility to General Fund would be at least partially offset by royalty revenues from Loo sales to other agencies.

Bureau Management, Policy, Public Information

Public Information/Education/Community Involvement

Restore Clean Rivers Ed position

Clean Rivers Education offers 13 classroom lessons covering stormwater, wastewater, combined sewer overflows (CSOs), watersheds, water chemistry, biomagnification/Portland Harbor Superfund, invasive/native riparian plants, macroinvertebrates as biological indicators, and riparian habitats. Between 13,000 and 15,000 student contacts are achieved each year. Funded from internal resource reallocation.