

Seattle Public Utilities

Drainage and Wastewater

SPU – Drainage and Wastewater

Overview

Seattle Public Utilities (SPU) is responsible for maintaining the network of sewer and drainage systems throughout the City of Seattle. These systems include approximately:

- 448 miles of sanitary sewers
- 968 miles of combined sewers
- 68 Pump Stations
- 5.5 miles of wastewater force mains
- 87 City-owned and permitted Combined Sewer Overflow points
- 38 Combined Sewer Overflow control detention tanks/pipes
- 477 miles of storm drains / 295 storm drain outfalls
- 36,500 catch basins
- 65 miles of ditches, 121 miles of culverts
- 19,500 feet of green stormwater infrastructure
- 12 detention/treatment ponds
- 145 flow control facilities
- 189 water quality structures

The Drainage and Wastewater (DWF) CIP is the vehicle for rehabilitating, replacing, improving and expanding this infrastructure, as well as constructing projects that protect, conserve, and enhance the region's environmental resources. Planned spending in the DWF CIP is approximately \$663 million over the next six years.

Historically, the DWF CIP has been funded primarily by revenue bonds serviced by ratepayers. However, DWF financial policies adopted in 2003 gradually increase cash contributions from the Utility to fund the CIP. By 2007, 25% of total CIP costs were funded by a cash contribution, with the remaining capital needs being debt financed.

Summary of Upcoming Budget Issues and Challenges

The biggest challenge for the Drainage and Wastewater Fund will be continuing to manage large priority projects while still accomplishing Mayoral priorities and complying with Environmental Protection Agency (EPA), Department of Ecology (DOE), and the National Pollutant Discharge Elimination System (NPDES) permits within the financial limitations of the fund.

The City of Seattle negotiated a consent decree last year between the City, the EPA, and the United States Department of Justice (DOJ) for compliance with the Clean Water Act and state regulations. The Consent Decree was entered in court on July 3, 2013, and includes deadlines for development and implementation of the Long Term Control Plan and will drive spending in the Combined Sewer Overflows (CSO) Reduction Program over the next several years. The Consent Decree also includes requirements to implement a Capacity Management, Operations & Maintenance (CMOM) Program, which drives both operations and maintenance (O&M) spending and CIP spending in the Rehabilitation Program. Additionally, an NPDES permit for stormwater was renewed by the State government in 2013. This permit includes prescriptive requirements to help protect local waterways and Puget Sound from damaging pollutants and excessive runoff. This increasing regulatory emphasis on protecting and improving water quality has resulted in the need for the City to make substantial investments in detention, water quality treatment (e.g., green stormwater infrastructure or GSI), CSO retrofits, pipe and pump station rehabilitation, and inflow/infiltration (I/I) reduction:

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- Detention is the storage of stormwater and/or sewage during a rainfall event and can be accomplished through detention ponds (stormwater) or underground tanks (wastewater and stormwater). Detention can be added to the drainage system to offset the impacts of larger storms that overwhelm the conveyance capacity of the combined sewer system and can result in backups of sewage, localized flooding and releases of untreated sewage.
- Water quality treatment is the removal of pollutants and can be accomplished through GSI or the use of technology such as specialized media filters. GSI is the use of green solutions to help reduce overflows by allowing stormwater to infiltrate slowly into the ground and cutting the volume of stormwater entering the system. GSI includes specific treatments that rely on specialized soils and plants that provide flow control and/or water quality benefits. The use of GSI is required through Seattle's NPDES permit and Stormwater Code.
- CSO retrofits are focused on optimizing the existing collection systems, using low-cost repairs and modifications to reduce overflows to waterways.
- Pipe and pump station rehabilitation consists of repairing, rehabilitating, or replacing existing gravity sewer pipes, wastewater pump stations, and/or force mains that have deficiencies or have reached the end of their useful life.
- Inflow/Infiltration (I/I) reduction focuses on filling in cracks in sewer lines through which groundwater can enter the system. It also addresses parts of the system where there are direct stormwater connections to the sanitary sewer system which can/should be directed to a separated stormwater system. By reducing I/I, it is possible to reduce the frequency and volume of sanitary sewer overflows (SSOs) and sewer backups.

CIP funding is also needed to improve the existing drainage system so residents experience less flooding and fewer sewage backups. Sewer backups are prohibited and considered by our regulators to be a violation of our state permits and federal consent decree. Through prudent investment in capital projects and maintenance, SPU will be closer to meeting this standard. In addition, this performance level benefits ratepayers by avoiding costly fines and damages.

The Combined Sewer Overflow (CSO) Reduction Program constitutes one of the major investments and challenges for the Drainage and Wastewater Fund in upcoming years. During heavy rains, the combination of stormwater (about 90 percent of the volume) and sewage may exceed the capacity of the combined sewer system and overflow into our waterways – causing a combined sewer overflow. CSOs spill a mixture of raw sewage and stormwater into local waterways at 90 outfalls throughout the City of Seattle. These spills violate water quality standards, create unacceptable risk to public health, and contaminate sediment and habitat for endangered species and pollute Puget Sound. CSO spills are illegal and unacceptable under any standard of environmental care.

Annual overflows have been reduced from 20-30 billion gallons per year by both the City and the County in 1970 to about 1 billion gallons per year, today. The City's overflows account for 100-200 million gallons per year. SPU currently does not meet regulatory mandates which limit overflows to one untreated overflow per outfall location per year. SPU is required by state and federal law to achieve control of CSOs by 2025 through a Long Term Control Plan, which will be

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submitted for Regulatory approval by May 2015. SPU must also achieve significant NPDES Wastewater Permit milestones for the control of CSOs to Lake Washington by December 30, 2015.

Most recently, the DOJ on behalf of the EPA and Washington State DOE finalized a Consent Decree describing measures the DOJ will require of SPU to remedy violations of the Clean Water Act. The Consent Decree includes, among other significant requirements, completion of a Long Term Control Plan (LTCP) by 2015 and completion of construction of all CSOs by December 2025. CSOs must be proven to be controlled, one year after completion of construction. Continuing investments in CSO control will enable SPU to meet current permit requirements including preparation of a Long Term Control Plan, accomplish required milestones to control CSOs into Lake Washington and achieve compliance with the 2025 goal.

While cost estimating is dependent on many factors, SPU's current expectation is to spend approximately \$204 million over the next six years (2015-2020) on CSO reduction projects. The projects will include a combination of underground storage tanks, GSI, system retrofits, gravity sewer pipe rehabilitation projects, and the development of a long-range plan for CSO projects to be constructed from 2016-2025. One of the biggest challenges of the program is siting wastewater facilities in a dense urban environment. SPU is addressing that challenge through an early and active community/stakeholder involvement process on each of its projects. Another challenge revolves around SPU's relationship with King County and maintaining an active partnership to operate the wastewater system and plan for potential joint CSO reduction projects.

Another challenge for the DWF is ensuring basic service level programs, such as flooding and system capacity, are not stripped of funding as our regulatory requirements continue to grow. The separated drainage and wastewater system is at capacity during storm events at various locations across the City. The impacts can range from very serious (basement sewer back-ups) to nuisance (limited street or yard flooding) issues. SPU is moving forward to address the highest priority locations with capital improvements using available funding and staff resources. These highest priority projects include the South Park Pump Station project, the Thornton Confluence Improvement project, and Broadview Sewer and Stormwater Improvements project.

- The South Park Pump Station project will construct a pump station and water quality facility in South Park. The pump station will allow the existing storm drain trunk to meet the level of service adopted in the 2004 Comprehensive Drainage Plan. In turn, this allows for future projects to expand the collection system to address flooding complaints. The water quality facility will treat most stormwater flows from the basin, reducing pollutant loading to the Duwamish River. The project's engineering design is complicated by the tidal flows present in the Duwamish. The South Park Pump Station will be integral to the Integrated Plans South Park Water Quality Facility and will be a regulatory requirement if the Integrated Plan (IP) is approved.
- The Thornton Confluence Improvement project will replace the road culvert at 35th Ave NE and restore the floodplain area at the confluence of the north and south forks of Thornton Creek. This will reduce local flooding impacts to roads and private property as well as enhance instream and riparian habitat in a critical segment of the creek.
- The Broadview neighborhood has experienced a long history of capacity-related backups and overflows. The Broadview Sewer and Stormwater Improvements project will test non-

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traditional solutions to these longstanding issues, with a goal of reducing sewer backups and stormwater flooding in the Broadview basin.

When making investments in capital facilities that will last decades, it makes financial sense to understand and consider incorporating the potential impacts of climate change on local precipitation and sea levels in Puget Sound. There have been major storms in 2006, 2007, 2010, 2012, and 2014 that have resulted in serious drainage and wastewater impacts related to capacity. Scientists indicate that there is a potential that storms will become more intense and more frequent in the near future. This variability requires the utility to have a much more in-depth understanding of how the system functions under different weather conditions. The utility will need to forecast impacts to the stormwater and combined systems on a much more localized level. This type of work will require more fully developed system models than in the past.

Finally, the DWF CIP must address projects that have a shared cost with the other two lines of business. A large issue in this area is the Seawall Replacement project. This project has the potential to have a significant impact to the DWF. Due to shifts in scope and design, the cost for the DWF has grown significantly and may lead to projects across the DWF CIP being reprioritized in order for SPU to meet the growing cost requirements.

Thematic Priorities

The overriding goal of the DWF CIP is to construct facilities that reduce the frequency of flooding and sewer backups for customers and improve water quality and habitat in the environment by reducing sewage overflows and the impacts of stormwater pollution. Projects in the CIP are also guided by various federal regulations, City policies, long-term plan documents, and the SPU Asset Management Committee (AMC) benefit criteria. Many Drainage and Wastewater CIP projects are outlined in the Wastewater System Plan, Combined Sewer Overflow Reduction Plan, and the Comprehensive Drainage Plan. The Drainage and Wastewater Fund primarily considers three main criteria when prioritizing work: public health and safety, environmental protection/regulatory requirements, and Mayor/Council priorities. Project timing can be influenced by opportunities or requirements to combine construction activity with other projects.

Public Health and Safety: The overriding priority for the Drainage and Wastewater Fund is maintaining public health and safety. This will be accomplished through capital programs and projects including the 14th and Concord Combined Sewer System (CSS) Improvement project, the Localized Flood Control Program, the Broadview Sanitary Sewer Overflow (SSO) reduction program and the South Park Pump Station project. The primary Capital program is the sewer and drainage rehabilitation program. This program is focused on identifying and correcting defective or deteriorating infrastructure, including drainage and wastewater pipes, before failure which could result in sewer backups, roadway collapses or landslides.

Environmental Protection/Regulatory Requirements: The City of Seattle/SPU must meet state and federal regulatory requirements in order to comply with the Clean Water Act (CWA) and the Consent Decree that was entered in court on July 3, 2013, between the City, the EPA and DOJ. The two most significant regulatory drivers associated with the CWA are the NPDES Waste Discharge Permit (aka NPDES CSO Permit) and the NPDES Phase I Municipal Stormwater Permit (aka NPDES MS4 Permit).

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- As required by the NPDES CSO Permit, Seattle developed a 2010 CSO Reduction Plan Amendment to describe the effort to reduce CSOs to the state standard of one overflow per outfall per year. As part of meeting these requirements, SPU will be constructing CSO reduction facilities at Windermere, South Genesee, and Henderson. DWF is committed to completing this program by 2018.
- As part of the NPDES MS4 Permit, Seattle is required to have a Structural Stormwater Control Program to address stormwater impacts that are not adequately controlled through other required permit actions. As part of meeting this requirement, SPU is constructing stormwater quality and flow control facilities including South Park Pump Station, the Capitol Hill Water Quality Facility, and Broadview sewer system improvements.

City Priorities: Projects in the 6-year CIP that address City priorities include the Venema Natural Drainage System (NDS) and Capitol Hill Water Quality Facility where green stormwater infrastructure will be used to reduce stormwater impacts while contributing to meeting sustainability goals.

- The Venema NDS project will construct natural drainage elements including large bioretention swales and permeable pavement in alleys. A swale is a specially designed area where stormwater can infiltrate into or through the ground or vegetation, depending on whether it is designed primarily for water quality treatment or flow control. The result will be improved stormwater flow control and water quality treatment in the Venema basin which will improve hydrology and water quality in Venema Creek, a tributary of Piper's Creek.
- The Capitol Hill Water Quality project will result in an innovative regional scale stormwater facility. The facility will include vegetated bioswales which will provide stormwater treatment for a portion of the largest sub-basin draining to South Lake Union while providing a vibrant pedestrian-friendly streetscape. This project will be constructed in partnership with the private development of adjacent properties, and includes new sidewalks and road surfaces.

Project Selection

SPU identifies candidate capital projects from several sources – planning (e.g. comprehensive plans, program plans), external projects and opportunities, and emergencies or other unexpected events. Under SPU's Asset Management system, projects must be justified through a business case process that establishes that a problem or opportunity is timely and important, and that the proposed solution is superior to alternatives based on a triple bottom line analysis (economic, environmental and social) of life cycle costs and benefits. The process also recognizes that a project may be a "must do" project (e.g. required by regulation).

SPU prioritizes its capital projects into categories from least to most important. Some projects are identified as part of an externally driven project. Typically, SPU lacks control over the timing of such projects. Priority rankings are based on the following set of criteria:

- **Regulatory Mandates, Legal Agreements:** The degree to which the project is driven by Federal, State, and Local laws, permit and regulatory requirements, and consent decrees; as well as by legal agreements with public and private parties. Examples of

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highly ranked projects in this category include the Windermere, South Genesee Henderson and the Long Term Control Plan.

- **External Drivers:** SPU's responsiveness to, or engagement with, the projects of other Departments or jurisdictions, and the specific mandates of the City Council and Mayor. Examples of highly ranked projects in this category include the Alaskan Way Viaduct and Mercer Corridor projects.
- **Infrastructure:** How a project addresses infrastructure conditions or vulnerabilities. Examples of highly ranked projects in this category include the Point Sewer Pipe Rehabilitation and Emergency Rehabilitation programs.
- **Level of Service:** The importance of this project in providing or improving services to customers. Examples of highly ranked projects in this category include the South Park Pump Station, Localized Flood Control program, Sanitary Sewer Overflow Capacity program, Point Sewer Pipe Rehabilitation, and Emergency Rehabilitation programs.
- **Other Factors:** Other important factors include high net present value or cost-effectiveness, social or environmental benefits not otherwise captured, a project already in progress or near completion, limited time opportunity, demonstration projects, community visibility, and outside funding. An example of a highly ranked project in this category is the Capital Hill Water Quality Project.

Every project is rated against each criterion; criteria ratings are then considered in determining an overall project priority ranking, using expert judgment (rather than a formula). Priority rankings for the CIP are determined by the leads for each Line of Business (LOB), with review by key internal stakeholders. The ranking scheme and criteria are the same for all LOBs and are approved by the SPU Director and Asset Management Committee. Project priority rankings are used to clarify and document which projects are most important (and why), to help determine which projects at the margin will be included or excluded (or deferred) from the CIP, and which projects should receive priority attention if a staff or financial resource constraint should arise.

Aligning Infrastructure with Planned Growth

SPU is working to take better advantage of opportunities to incorporate improvements and repairs to our drainage and wastewater systems with major redevelopment and projects undertaken by others (e.g., private developers, other city departments, regional and state agencies). Currently, SPU is partnering with South Lake Union developers to build a regional GSI-based stormwater treatment facility to treat Capitol Hill stormwater runoff while also increasing green space in the public right of way. For the future, SPU will be ramping up long-range planning efforts to improve understanding of the existing conditions of our drainage and wastewater system, predicted growth areas, and possible impacts to the drainage and wastewater system. This better understanding will lead to more forward thinking decisions on where we need to better plan to for growth and allow us to better leverage both our investments and those made by others.

Future Projects/What is on the Horizon

The DWF CIP will increase programs to meet requirements and commitments outlined in the 2010 CSO Reduction Plan. The 2015-2020 Proposed CIP includes significant investments for the Henderson CSO reduction project.

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The six-year CIP also includes funding for the Long Term Control Plan, which will identify all remaining CSO projects throughout the City to achieve the Washington State requirement to reduce CSOs down to an average one untreated CSO per year per outfall. Funding to address those remaining CSO projects will need to be included in future CIP budget submittals. In addition, SPU has been authorized by the EPA to prepare an Integrated Plan, which will propose projects to reduce stormwater pollution into the environment. Integrated Plan projects will need to be funded and constructed between 2016-2025. The Integrated Plan itself is funded under SPU's pre-capital planning operations and maintenance budget. Finally, water quality requirements for stormwater will likely result in increases in capital investment requirements on both new projects and potential retrofits of the existing system.

The programmatic analysis and prioritization currently being done in the Flooding, Sewer Back-up, and Landslides business area will result in a comprehensive list of small to large CIP projects to be constructed over the next 15 to 20 years. Projects will be similar to current projects such as 14th and Concord CSS improvements, Broadview sewer system improvements and the South Park Pump Station.

Additional stormwater and CSO facilities, both structural and green, will require growing levels of operations and maintenance support for inspection and maintenance.

CIP Revenue Sources

SPU's Drainage and Wastewater CIP is funded largely by Drainage and Sewer ratepayers. SPU issues bonds, serviced by ratepayers that cover approximately 75% of the CIP, with the remainder funded by cash. DWF rates were approved by the Executive and City Council in 2012 for the three-year period of 2013-2015.

SPU also actively seeks grants and low interest loans. Loans like this offer a lower interest rate than what SPU can borrow/issue debt and offset the need to draw down extra dollars from the construction fund. SPU also receives Remedial Action Grants from Ecology for up to 50% of sediments cleanup project costs.

CIP Spending by Major Category

(000s of Dollars)

Drainage and Wastewater Fund	2015	2016	2017	2018	2019	2020	Total
PROTECTION OF BENEFICIAL USES	5,182	5,821	7,067	9,841	6,243	6,345	40,499
SEDIMENTS	4,797	2,420	3,778	21,315	19,264	17,140	68,714
COMBINED SEWER OVERFLOWS	60,067	48,337	24,890	23,197	16,400	31,334	204,225

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REHABILITATION	10,629	16,338	21,020	22,520	22,520	24,520	117,547
FLOODING, SEWER BACKUP & LANDSLIDES	16,970	23,960	26,372	18,899	15,961	15,472	117,634
SHARED COST PROJECTS	13,783	12,242	22,645	9,925	8,821	6,382	73,798
TECHNOLOGY	10,498	7,956	6,149	6,443	4,778	5,081	40,905
Total	121,926	117,074	111,921	112,140	93,987	106,274	663,322

Protection of Beneficial Uses: This program makes improvements to the City’s drainage system to reduce the harmful effects of stormwater runoff on creeks and receiving water bodies by improving water quality and protecting or enhancing creek habitat. The program includes projects to meet regulatory requirements. Funding in 2015 and 2016 will be focused on cost effective stormwater and water quality projects such as the Venema Creek Natural Drainage System (NDS) and the Capitol Hill Water Quality project.

Increases in the **Protection of Beneficial Uses BCL** in 2015 is the result of water quality stormwater projects identified as a part of the Integrated Plan and also the expansion of the Street Sweeping project to increase the sweeping frequency, extend the sweeping season, and add a new route. Commitments in the Integrated Plan are requirements of the Consent Decree. The decrease in 2016 is primarily the result of the Taylor Creek Culvert Replacement project construction being pushed out from 2016 to 2017 to accommodate a more involved and lengthier community engagement process.

Sediments: The City of Seattle is a Potentially Responsible Party (PRP) for cleanup liabilities for contaminated sediments at the Lower Duwamish Waterway Superfund Site, the Harbor Island Superfund Site, and Gas Works Park because of alleged contributions from CSO and storm drain discharges. The City continues to work with EPA, the Washington State Department of Ecology, King County, and other PRPs on an assessment of contaminants and sources. The Sediments program provides funding for preliminary studies and analysis for cleanup of contaminated sediment sites in which the City is a participant, for actual cleanup of contaminated sites, for preliminary engineering for future cleanup efforts, and for liability allocation negotiations. Funding is used to develop studies and analyses required by regulatory agencies for determining the boundaries and cleanup requirements for specific action sites. The study phase of sediment remediation projects often requires multiple years before specific cleanup actions are defined. As regulatory agency cleanup requirements become clear, additional individual cleanup projects will be included in subsequent CIP proposals.

Increases in the **Sediments BCL** reflect the latest schedule and estimates based on negotiations and agreements between parties for proposed actions needed. The Sediments program funds preliminary studies and analysis for cleanup of contaminated sediment sites, for actual cleanup of contaminated sites, for preliminary engineering for future cleanup efforts, and for liability allocation negotiations. The City will pay for only the costs associated with its portion

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of responsibility. Costs increase slightly in 2015 and 2016 due to negotiations and agreements with regulatory agencies and other PRPs.

Combined Sewer Overflows: This program consists of projects that are mandated by state and federal regulations to control CSOs into the City's receiving waters. Projects include large infrastructure projects (e.g., storage structures, pipes, tunnels, wet weather treatment plants, stormwater separation, pump stations, etc.), smaller retrofits, construction of green infrastructure (GSI) for CSO control, and development of regulatory required plans such as the Long-Term Control Plan (LTCP). Key projects in the 2015 Budget include the Henderson CSO projects, CSO facility retrofits at Delridge and Leschi, and GSI projects in Delridge and Ballard. In 2014, SPU began work on two of the projects in the LTCP, the largest of which is to construct storage (either tunnel storage or local tank storage facilities) in the Ballard and Fremont/Wallingford neighborhoods. Planning work is underway and will continue through the coming years to review potential siting areas and perform initial geo technical investigations. This work is starting early in order to meet CSO Consent Decree compliance date requirements.

Increases in the **Combined Sewer Overflows BCL** reflect revisions to the cash flow and schedules for the Henderson North CSO Reduction project which has been accelerated to begin construction in Q1 2015. In addition, the CSO Facility Retrofit project has increased costs to reduce the frequency and volume of CSOs in the Leschi Basin and Henderson Basin. The decrease of \$902,000 in 2016 is driven primarily by cost reductions in Future CSO Projects that resulted from delaying CSO investments in accordance with the Integrated Plan and implementing stormwater projects in the Protection of Beneficial Uses BCL. The reductions in 2016 were documented in the Strategic Business Plan process.

Rehabilitation: This program consists of projects that rehabilitate or replace existing drainage and wastewater assets in-kind to maintain or improve the current functionality level of the system. Projects include pump station structures, major mechanical and electrical components, and force mains; drainage and wastewater control structures and appurtenances; and pipes and culverts. Individual projects are defined by the type and method of rehabilitation and/or replacement and include emergency rehabilitation, maintenance and no-dig pipe rehabilitation, point sewer pipe and structure rehabilitation by crews, and point sewer pipe and structure rehabilitation by contract.

Changes in the **Rehabilitation BCL** are driven by the Strategic Business Plan process which decreased baseline funding in Point Sewer Pipe Rehab in 2015 while increasing No Dig Pipe Maintenance Rehab in 2016. This will allow SPU to evaluate and fund additional rehabilitation work on gravity sewer pipes and significantly reduce the risk of exceeding the Consent Decree target of four sanitary sewer overflows per 100 miles of sewer pipe. Efforts in these areas will focus on sites with the highest risk as well as those prioritized to fulfill regulatory NPDES permit commitments that will restore original pipe capacity and address issues with discharge points of selected outfalls where these characteristics have been diminished, as well as increasing capacity to pump stations to meet Consent Decree requirements.

Flooding, Sewer Back-up, and Landslides: This program is responsible for preventing and alleviating flooding and sewer backups in the City of Seattle, with a primary focus on the protection of public health, safety, and property. The program area is focused on planning, design, and construction of channels, pipes, roadside ditches, culverts, detention ponds, and natural drainage systems that control and/or convey storm runoff to receiving bodies. This program also involves protecting SPU drainage and wastewater infrastructure from landslides and providing drainage improvements where surface water generated from the city right-of way

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is contributing to landslides. Finally, this program includes the Broadview Long Term Plan, which aims to reduce sewer backups and stormwater flooding in the Broadview basin.

Increases in the **Flooding, Sewer Back-up, and Landslides BCL** are driven primarily by the Localized Flood Control Program which had projects delayed in 2013 and 2014 due to lack of resources. In addition, funding has been added to the Broadview Long Term Plan to reduce stormwater flooding and sewer backups, and new stormwater conveyance projects in South Park project have been funded according to the Strategic Business Plan.

Shared Cost Projects: This program includes individual capital improvement projects which typically benefit multiple lines of business (e.g., the Water line of business and the Drainage and Wastewater line of business) where costs are "shared," or paid for, by more than one of SPU's utility funds. In 2015, the Shared Cost program includes funding for a number of interdepartmental projects including the Alaskan Way Viaduct and Seawall Replacement, Mercer Corridor, and Sound Transit Link Light Rail. Funding is also included for SPU's Heavy Equipment Purchases, the Integrated Control Monitoring Program and a number of smaller projects.

Changes in the **Shared Cost Projects BCL** are driven primarily by Heavy Equipment Purchases-DWW in order to purchase vector trucks for sewer cleaning and two new CCTV trucks for sewer inspection work. This need was approved in the Strategic Business Plan to support the future sewer rehabilitation work in the out years. Although there is a slight decrease in 2016, there is significant reduction in the Alaskan Way Viaduct project due to the delays caused by the tunnel drill. However, changes in costs associated with the Seawall Replacement Project may have significant impacts to the DWF in the next several years. Costs for Operational Facility-Construction have increased, as noted in the Strategic Business Plan, to address shortages of adequate space and future operational functions for SPU.

Technology:

The Technology capital portfolio is managed in six program areas, which provide a department-wide view of technology investments to address SPU's strategic, business, and City-wide priorities. These areas are:

- Customer Contact and Billing
- Enterprise Information Management
- IT Infrastructure
- Project Delivery & Performance
- Science & System Performance
- Asset Information Management

Investments in 2015 and 2016 address SPU's key initiatives, which focus on:

- Improving Internal Controls,
- Improving Productivity and Performance
- Improving Customer Service
- Transitioning from Data Rich to Knowledge Rich
- Improving Project Delivery

SPU will focus technology spending on the highest priority business needs. Increased spending in 2015 reflects major business changes in Project Delivery & Performance driving the

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need for several new technology systems as well as improved integration of the various systems in place. The decrease in 2016 is mainly due to the completion of the Utility Customer Billing System/CCSS project

City Council Provisos to the CIP

There are no Council provisos.

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Project Summary

BCL/Program Name/ Project Title & ID	LTD Actuals	2014	2015	2016	2017	2018	2019	2020	Total
Protection of Beneficial Uses		BCL/Program Code:							C333B
Best Management Practice Program (C3313)	3,260	19	0	0	0	0	0	0	3,280
Capitol Hill Water Quality Project (C3373)	7,269	261	237	2,516	239	695	0	0	11,217
Knickerbocker Floodplain Improvements (C3383)	561	1,868	138	0	0	0	0	0	2,567
Street Sweeping for Water Quality (C3363)	193	90	765	400	0	0	0	0	1,448
Taylor Creek Culvert Replacement (C3353)	1,835	747	800	895	3,247	3,615	291	143	11,573
Venema Creek Natural Drainage System (C3333)	3,165	1,116	2,142	268	108	0	0	0	6,800
Water Quality & Flow Improvements (C3393)	0	0	1,100	1,741	3,473	5,531	5,952	6,202	23,999
Protection of Beneficial Uses	16,284	4,102	5,182	5,821	7,067	9,841	6,243	6,345	60,883
Sediments		BCL/Program Code:							C350B
Sediment Remediation - DWF (C3503)	38,020	3,423	4,797	2,420	3,778	21,315	19,264	17,140	110,155
Sediments	38,020	3,423	4,797	2,420	3,778	21,315	19,264	17,140	110,155
Combined Sewer Overflows		BCL/Program Code:							C360B
Combined Sewer Overflow Facility Retrofit (C3611)	15,740	2,392	13,202	11,957	11,598	5,416	320	0	60,625
Future CSO Projects (C3612)	0	0	6,709	6,709	5,032	12,580	12,580	27,834	71,444
Green Stormwater Infrastructure Program (C3610)	6,976	6,302	9,635	5,123	6,111	4,185	2,500	2,500	43,332
Long Term Control Plan (C3604)	32,218	4,510	1,980	1,000	1,000	1,000	1,000	1,000	43,708
S Genesee Combined Sewer Overflow (C3608)	23,898	14,506	480	0	0	0	0	0	38,883
S Henderson Combined Sewer Overflow Storage (C3609)	18,421	8,206	26,761	23,548	1,149	17	0	0	78,103
Windermere Combined Sewer Overflow Storage (C3605)	38,711	12,915	1,300	0	0	0	0	0	52,926
Combined Sewer Overflows	135,964	48,831	60,067	48,337	24,890	23,197	16,400	31,334	389,021
Rehabilitation		BCL/Program Code:							C370B
Emergency Rehabilitation (C3705)	10,357	1,070	598	598	598	598	598	598	15,014
No Dig Pipe & Maintenance Rehabilitation (C3707)	13,804	1,500	2,500	7,500	13,500	15,000	15,000	17,000	85,804

*Amounts in thousands of dollars

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Project Summary

BCL/Program Name/ Project Title & ID	LTD Actuals	2014	2015	2016	2017	2018	2019	2020	Total
Outfall Rehabilitation Program (C3708)	504	1,893	946	1,500	500	500	500	500	6,843
Point Sewer Pipe Rehabilitation (C3704)	46,769	4,236	2,152	3,152	3,152	3,152	3,152	3,152	68,918
Pump Station and Force Main Improvements (C3703)	9,774	3,251	4,183	3,338	3,020	3,020	3,020	3,020	32,626
Sewer Full Line Replacements (C3702)	0	250	250	250	250	250	250	250	1,750
Rehabilitation	81,207	12,200	10,629	16,338	21,020	22,520	22,520	24,520	210,954
Flooding, Sewer Back-up, and Landslides									BCL/Program Code: C380B
Broadview Long Term Plan (C3812)	1,790	4,000	5,756	8,000	9,000	2,000	2,000	2,000	34,546
Culvert Replacement Program (C3810)	2,229	1,636	1,297	1,000	1,000	1,000	1,000	1,000	10,161
Densmore Basin Drainage Improvements (C3803)	7,588	12	0	0	0	0	0	0	7,600
Localized Flood Control Program (C3802)	6,349	5,309	3,195	5,002	4,741	4,656	4,575	4,497	38,323
Madison Valley Long Term Solution (C3805)	34,896	50	0	0	0	0	0	0	34,946
Meadowbrook Pond Sediment Management (C3808)	3,935	31	0	0	0	0	0	0	3,966
Sanitary Sewer Overflow Capacity (C3804)	5,531	3,340	4,361	4,916	5,631	5,743	5,858	5,975	41,356
South Park Pump Station (C3806)	6,495	1,500	1,500	5,000	6,000	5,500	2,527	2,000	30,523
Thornton Confluence Improvement (C3811)	2,135	4,485	861	42	0	0	0	0	7,523
Flooding, Sewer Back-up, and Landslides	70,948	20,363	16,970	23,960	26,372	18,899	15,961	15,472	208,944
Shared Cost Projects									BCL/Program Code: C410B
1% for Art – DWF (C4118-DWF)	2,303	655	583	762	770	640	502	477	6,690
Alaskan Way Viaduct & Seawall Replacement Program - DWF (C4102-DWF)	10,978	3,708	5,378	3,130	11,787	1,000	349	0	36,330
Bridging the Gap - DWF (C4119-DWF)	184	0	200	220	250	250	250	250	1,604
Emergency Storms - DWF (C4120-DWF)	4,506	100	100	100	100	100	100	100	5,206
First Hill Streetcar - DWF (C4130-DWF)	0	100	400	600	1,200	400	0	0	2,700
Heavy Equipment Purchases - DWF (C4116-DWF)	8,622	2,915	6,000	2,200	2,200	2,200	2,200	2,450	28,787

*Amounts in thousands of dollars

2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Project Summary

BCL/Program Name/ Project Title & ID	LTD Actuals	2014	2015	2016	2017	2018	2019	2020	Total
Integrated Control Monitoring Program - DWF (C4108-DWF)	14,755	800	500	250	250	250	250	250	17,305
Mercer Corridor Project East Phase - DWF (C4114-DWF)	6,294	50	0	0	0	0	0	0	6,344
Mercer Corridor Project West Phase - DWF (C4133-DWF)	244	649	276	0	0	0	0	0	1,169
Meter Replacement - DWF (C4101-DWF)	4,584	585	575	585	594	608	613	623	8,766
Operational Facility - Construction - DWF (C4106-DWF)	9,064	761	1,163	5,275	4,712	3,213	3,077	1,806	29,070
Operational Facility - Other - DWF (C4115-DWF)	329	150	300	100	0	0	0	0	879
Operations Control Center - DWF (C4105-DWF)	2,458	806	340	60	206	310	400	222	4,802
Other Major Transportation Projects - DWF (C4123-DWF)	1	568	160	600	296	750	750	50	3,175
Security Improvements - DWF (C4113-DWF)	1,061	178	180	105	105	105	255	105	2,093
Sound Transit - North Link - DWF (C4135-DWF)	58	108	400	75	75	50	50	50	867
Sound Transit – University Link - DWF (C4110-DWF)	334	127	30	10	0	0	0	0	501
Sound Transit-East Link (C4122-DWF)	0	40	38	10	100	50	25	0	263
Yesler Terrace-DWF (C4136-DWF)	0	2,800	0	0	0	0	0	0	2,800
Shared Cost Projects	65,777	15,099	16,623	14,081	22,645	9,925	8,821	6,382	159,353
Technology									C510B
Asset Information Management (C5407)	2,477	1,345	847	934	886	905	865	988	9,247
Customer Contact & Billing (C5402)	590	4,048	4,243	1,938	1,332	1,230	513	1,025	14,918
Enterprise Information Management (C5403)	54	1,014	965	1,044	451	548	1,056	507	5,638
IT Infrastructure (C5404)	1,444	1,415	923	1,271	800	1,517	902	1,251	9,522
Project Delivery & Performance (C5405)	1,783	1,393	2,476	2,058	1,939	993	943	811	12,397
Science & System Performance (C5406)	992	1,030	1,044	711	742	1,250	500	500	6,770
Technology	7,341	10,245	10,498	7,956	6,149	6,443	4,778	5,081	58,491
Department Total*:	415,542	114,262	124,766	118,912	111,920	112,140	93,986	106,274	1,197,802

*Amounts in thousands of dollars

2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Fund Summary

Fund Name & Code	LTD Actuals	2014	2015	2016	2017	2018	2019	2020	Total
Drainage and Wastewater Fund (44010)	415,542	114,262	124,766	118,912	111,920	112,140	93,986	106,274	1,197,802
Department Total*:	415,542	114,262	124,766	118,912	111,920	112,140	93,986	106,274	1,197,802

**Amounts in thousands of dollars*

SPU-Drainage & Wastewater

1% for Art – DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	Improved Facility	Start Date:	Q1/2001
Project ID:	C4118-DWF	End Date:	ONGOING
Location:	N/A		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	Multiple
Neighborhood District:	Not in a Neighborhood District	Urban Village:	Not in an Urban Village

This ongoing program provides the Drainage & Wastewater funding for Seattle Public Utilities' 1% for Arts contribution. Eligibility is determined at the individual project level, with payment occurring from this program. Funds contributed to the 1% for Art program allow the commission, purchase, and installation of art in City-owned properties that is accessible to the public. The Municipal Arts Plan, which is prepared annually, describes the status of ongoing art projects and establishes the scope of work and allocations for new art projects.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	2,303	655	583	762	770	640	502	477	6,690
Total:	2,303	655	583	762	770	640	502	477	6,690
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	2,303	655	583	762	770	640	502	477	6,690
Total*:	2,303	655	583	762	770	640	502	477	6,690
O & M Costs (Savings)			67	67	67	67	67	67	401
Spending Plan by Fund									
Drainage and Wastewater Fund		710	583	762	770	640	502	477	4,443
Total:		710	583	762	770	640	502	477	4,443

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Alaskan Way Viaduct & Seawall Replacement Program - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	New Facility	Start Date:	Q1/2004
Project ID:	C4102-DWF	End Date:	Q4/2019
Location:	SR 99 / Battery St		
Neighborhood Plan:	In more than one Plan	Council District:	Multiple
Neighborhood District:	In more than one District	Urban Village:	In more than one Urban Village

This program relocates, replaces, and protects drainage and wastewater infrastructure affected by the replacement of the Alaskan Way Viaduct and Seawall. This program encompasses many sub-projects which are collectively known as the "Alaskan Way Viaduct and Seawall Replacement Program" (AWVSR Program.) The Washington State Department of Transportation (WSDOT) is the lead for the SR-99 replacement, while the City of Seattle is the lead on development of the waterfront public space, implementation of the new surface Alaskan Way, and design and construction of the seawall.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	10,978	3,708	5,378	3,130	11,787	1,000	349	0	36,330
Total:	10,978	3,708	5,378	3,130	11,787	1,000	349	0	36,330
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	10,978	3,708	5,378	3,130	11,787	1,000	349	0	36,330
Total*:	10,978	3,708	5,378	3,130	11,787	1,000	349	0	36,330
O & M Costs (Savings)			363	363	363	363	363	363	2,180
Spending Plan by Fund									
Drainage and Wastewater Fund		7,989	5,378	3,130	11,787	1,000	349	0	29,633
Total:		7,989	5,378	3,130	11,787	1,000	349	0	29,633

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Best Management Practice Program

BCL/Program Name:	Protection of Beneficial Uses	BCL/Program Code:	C333B
Project Type:	New Facility	Start Date:	Q2/2000
Project ID:	C3313	End Date:	ONGOING
Location:	Citywide	Council District:	Multiple
Neighborhood Plan:	Not in a Neighborhood Plan	Urban Village:	In more than one Urban Village
Neighborhood District:	In more than one District		

This ongoing program provides high priority water quality improvement projects in the Norfolk, South Park, and Densmore drainage basins. Incorporating Best Management Practices (BMP), projects are identified, developed, and implemented. The results will be improved quality of stormwater runoff from City-owned storm drains, discharged to nearby receiving water bodies such as streams and lakes.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	3,260	19	0	0	0	0	0	0	3,280
Total:	3,260	19	0	0	0	0	0	0	3,280
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	3,260	19	0	0	0	0	0	0	3,280
Total*:	3,260	19	0	0	0	0	0	0	3,280
O & M Costs (Savings)			33	33	33	33	33	33	197
Spending Plan by Fund									
Drainage and Wastewater Fund		65	0	0	0	0	0	0	65
Total:		65	0	0	0	0	0	0	65

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Bridging the Gap - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	Improved Facility	Start Date:	Q1/2008
Project ID:	C4119-DWF	End Date:	ONGOING
Location:	Various		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	Multiple
Neighborhood District:	Not in a Neighborhood District	Urban Village:	Not in an Urban Village

This multi-year, multi-project program funds assessments, repairs, and improvements to SPU's drainage and wastewater utility infrastructure at sites chosen by the Seattle Department of Transportation (SDOT) for bridge improvements and pedestrian and bicycle safety improvements within its "Bridging the Gap" program. SPU assesses the condition of its utility infrastructure at SDOT's project sites and conducts repairs and improvements as needed.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	184	0	200	220	250	250	250	250	1,604
Total:	184	0	200	220	250	250	250	250	1,604
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	184	0	200	220	250	250	250	250	1,604
Total*:	184	0	200	220	250	250	250	250	1,604
O & M Costs (Savings)			16	16	16	16	16	16	96
Spending Plan by Fund									
Drainage and Wastewater Fund		0	0	0	100	100	100	100	400
Total:		0	0	0	100	100	100	100	400

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Broadview Long Term Plan

BCL/Program Name:	Flooding, Sewer Back-up, and Landslides	BCL/Program Code:	C380B
Project Type:	Rehabilitation or Restoration	Start Date:	ONGOING
Project ID:	C3812	End Date:	ONGOING
Location:	Broadview		
Neighborhood Plan:	Broadview-Bitter Lake-Haller Lake	Council District:	5
Neighborhood District:	Northwest	Urban Village:	Not in an Urban Village

Portions of the Broadview neighborhood suffer from significant capacity limitations of the sanitary sewer resulting in numerous sewer backups into residences during wet weather events upon which the City has paid numerous claims dating to at least 1996. It is thought that this results from a combination of infiltration and inflow into the sanitary sewer system during wet weather. Program will develop and implement a plan with the goal of restoring sanitary sewer system capacity.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	1,790	4,000	5,756	8,000	9,000	2,000	2,000	2,000	34,546
Total:	1,790	4,000	5,756	8,000	9,000	2,000	2,000	2,000	34,546
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	1,790	4,000	5,756	8,000	9,000	2,000	2,000	2,000	34,546
Total*:	1,790	4,000	5,756	8,000	9,000	2,000	2,000	2,000	34,546
O & M Costs (Savings)			345	345	345	345	345	345	2,073
Spending Plan by Fund									
Drainage and Wastewater Fund		1,714	5,756	8,000	9,000	2,000	2,000	2,000	30,470
Total:		1,714	5,756	8,000	9,000	2,000	2,000	2,000	30,470

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Capitol Hill Water Quality Project

BCL/Program Name:	Protection of Beneficial Uses	BCL/Program Code:	C333B
Project Type:	New Facility	Start Date:	Q1/2006
Project ID:	C3373	End Date:	Q4/2018
Location:	Yale Ave N/Pontius Ave N/Thomas Street		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	7
Neighborhood District:	Lake Union	Urban Village:	South Lake Union

This project provides construction of four blocks of biofiltration swales in the South Lake Union neighborhood. As part of a regional storm water treatment facility, this project will be constructed in partnership with an adjacent land developer and includes new sidewalks and road surfaces. The project treats runoff from a portion of approximately 435 acres of Capitol Hill.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	7,269	261	237	2,516	239	695	0	0	11,217
Total:	7,269	261	237	2,516	239	695	0	0	11,217
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	7,269	261	237	2,516	239	695	0	0	11,217
Total*:	7,269	261	237	2,516	239	695	0	0	11,217
O & M Costs (Savings)			112	112	112	112	112	112	673
Spending Plan by Fund									
Drainage and Wastewater Fund		270	237	2,516	239	695	0	0	3,956
Total:		270	237	2,516	239	695	0	0	3,956

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Combined Sewer Overflow Facility Retrofit

BCL/Program Name:	Combined Sewer Overflows	BCL/Program Code:	C360B
Project Type:	Rehabilitation or Restoration	Start Date:	Q1/2002
Project ID:	C3611	End Date:	ONGOING
Location:	Various	Council District:	Multiple
Neighborhood Plan:	Not in a Neighborhood Plan	Urban Village:	Not in an Urban Village
Neighborhood District:	In more than one District		

This ongoing program retrofits, upgrades, and modifies existing Combined Sewer Overflows (CSO) reduction facilities in Seattle CSO basins. Retrofit projects cost-effectively optimize system operation and storage, mitigate the extent of CSOs, and postpone and/or downsize large CSO reduction projects. This project assists in achieving State Department of Ecology's requirement of an average of no more than one wet-weather overflow event per outfall per year.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	15,740	2,392	13,202	11,957	11,598	5,416	320	0	60,625
Total:	15,740	2,392	13,202	11,957	11,598	5,416	320	0	60,625
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	15,740	2,392	13,202	11,957	11,598	5,416	320	0	60,625
Total*:	15,740	2,392	13,202	11,957	11,598	5,416	320	0	60,625
O & M Costs (Savings)			606	606	606	606	606	606	3,638
Spending Plan by Fund									
Drainage and Wastewater Fund		4,879	13,202	11,957	11,598	5,416	320	0	47,372
Total:		4,879	13,202	11,957	11,598	5,416	320	0	47,372

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Culvert Replacement Program

BCL/Program Name:	Flooding, Sewer Back-up, and Landslides	BCL/Program Code:	C380B
Project Type:	Rehabilitation or Restoration	Start Date:	Q2/2008
Project ID:	C3810	End Date:	ONGOING
Location:	Various		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	Multiple
Neighborhood District:	In more than one District	Urban Village:	In more than one Urban Village

This ongoing program provides for the repair and replacement of stream culverts that are part of SPU's critical drainage infrastructure. Culverts will be repaired or replaced based on risks and benefits of the project, including flooding and public infrastructure risk and benefits. Replacements will be addressed as part of this capital program, while small repairs and retrofits will be covered within the Operations and Maintenance budget. Funding transfers to from the budget placeholder to culvert replacement projects once they are approved through the AMC process.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	2,229	1,636	1,297	1,000	1,000	1,000	1,000	1,000	10,161
Total:	2,229	1,636	1,297	1,000	1,000	1,000	1,000	1,000	10,161
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	2,229	1,636	1,297	1,000	1,000	1,000	1,000	1,000	10,161
Total*:	2,229	1,636	1,297	1,000	1,000	1,000	1,000	1,000	10,161
O & M Costs (Savings)			102	102	102	102	102	102	610
Spending Plan by Fund									
Drainage and Wastewater Fund		684	1,297	1,000	1,000	1,000	1,000	1,000	6,981
Total:		684	1,297	1,000	1,000	1,000	1,000	1,000	6,981

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Densmore Basin Drainage Improvements

BCL/Program Name:	Flooding, Sewer Back-up, and Landslides	BCL/Program Code:	C380B
Project Type:	New Facility	Start Date:	Q1/2009
Project ID:	C3803	End Date:	Q2/2014
Location:	Densmore Basin		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	5
Neighborhood District:	Northwest	Urban Village:	Bitter Lake Village

This program reduces surface water flooding and stormwater pollutant loading within the Densmore Basin. Improvements may include increasing the detention volume of the existing Stone Pond facility in order to address stormwater flow, and using traditional storage facilities and/or low impact development techniques to reduce flooding impacts at key locations in the upper Densmore Basin.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	7,588	12	0	0	0	0	0	0	7,600
Total:	7,588	12	0	0	0	0	0	0	7,600
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	7,588	12	0	0	0	0	0	0	7,600
Total*:	7,588	12	0	0	0	0	0	0	7,600
O & M Costs (Savings)			76	76	76	76	76	76	456
Spending Plan by Fund									
Drainage and Wastewater Fund		59	0	0	0	0	0	0	59
Total:		59	0	0	0	0	0	0	59

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Emergency Rehabilitation

BCL/Program Name:	Rehabilitation	BCL/Program Code:	C370B
Project Type:	Rehabilitation or Restoration	Start Date:	Q1/1998
Project ID:	C3705	End Date:	ONGOING
Location:	Citywide	Council District:	Multiple
Neighborhood Plan:	Not in a Neighborhood Plan	Urban Village:	In more than one Urban Village
Neighborhood District:	In more than one District		

This ongoing project provides emergency sewer response to collapsed mainlines, surface street subsidence or voids resulting from leaking pipes, and storm-related incidents in Seattle, as well as emergency rehabilitation to drainage pipes that collapse, cause surface problems, or otherwise endanger public health or welfare. Typical improvements may include, but are not limited to, rehabilitation or replacement of structurally damaged pipes that caused the emergency and restoring surrounding areas. Rehabilitation or replacement quickly corrects the situation, avoids repeat incident, and extends the life of the asset.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	10,357	1,070	598	598	598	598	598	598	15,014
Total:	10,357	1,070	598	598	598	598	598	598	15,014
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	10,357	1,070	598	598	598	598	598	598	15,014
Total*:	10,357	1,070	598	598	598	598	598	598	15,014
O & M Costs (Savings)			150	150	150	150	150	150	901
Spending Plan by Fund									
Drainage and Wastewater Fund		1,539	598	598	598	598	598	598	5,126
Total:		1,539	598	598	598	598	598	598	5,126

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Emergency Storms - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	Rehabilitation or Restoration	Start Date:	Q3/2007
Project ID:	C4120-DWF	End Date:	ONGOING
Location:	Various		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	N/A
Neighborhood District:	Not in a Neighborhood District	Urban Village:	Not in an Urban Village

This ongoing program funds Drainage & Wastewater infrastructure capital improvement projects resulting from previous and possible future storm events. These projects are potentially Federal Emergency Management Agency (FEMA) reimbursable and need to be separated out for tracking and reimbursement purposes. Typical improvements include, but are not limited to, repairing and mitigating landslides, restoring detention ponds, and replacing culverts and detention walls. All projects resulting from previous storms events have been completed. This program will now serve as a placeholder for any future storm events.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	4,506	100	100	100	100	100	100	100	5,206
Total:	4,506	100	100	100	100	100	100	100	5,206
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	4,506	100	100	100	100	100	100	100	5,206
Total*:	4,506	100	100	100	100	100	100	100	5,206
O & M Costs (Savings)			52	52	52	52	52	52	312

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

First Hill Streetcar - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	Improved Facility	Start Date:	Q1/2010
Project ID:	C4130-DWF	End Date:	Q4/2020
Location:	First Hill		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	N/A
Neighborhood District:	In more than one District	Urban Village:	In more than one Urban Village

This project plans and relocates drainage and wastewater facilities that will be impacted by the SDOT-led First Hill Streetcar project, which will connect major employment centers on First Hill to the regional light rail system stations on Capitol Hill and in the International District. Currently this project is in the planning phase and no specific capitalizable betterments have been identified for the 2014-2019 timeframe but if they are, necessary funding will be requested.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	0	100	400	600	1,200	400	0	0	2,700
Total:	0	100	400	600	1,200	400	0	0	2,700
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	0	100	400	600	1,200	400	0	0	2,700
Total*:	0	100	400	600	1,200	400	0	0	2,700
O & M Costs (Savings)			27	27	27	27	27	27	162

**This detail is for information only. Funds are appropriated in the budget at the Budget Control Level. Amounts are in thousands of dollars.*

2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Future CSO Projects

BCL/Program Name:	Combined Sewer Overflows	BCL/Program Code:	C360B
Project Type:	Improved Facility	Start Date:	Q1/2015
Project ID:	C3612	End Date:	Q4/2025
Location:			
Neighborhood Plan:	Not in Neighborhood Plan	Council District:	
Neighborhood District:		Urban Village:	

This program is for future combined sewer overflow (CSO) reduction projects that will be identified through the CSO Long-Term Control Plan (LTCP). Future projects are most likely to include underground storage projects, wastewater lift station improvements, and/or wastewater conveyance system improvements. Planning for the projects will begin around 2015, and the projects should complete their construction by 2025.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	0	0	6,709	6,709	5,032	12,580	12,580	27,834	71,444
Total:	0	0	6,709	6,709	5,032	12,580	12,580	27,834	71,444
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	0	0	6,709	6,709	5,032	12,580	12,580	27,834	71,444
Total*:	0	0	6,709	6,709	5,032	12,580	12,580	27,834	71,444
O & M Costs (Savings)			714	714	714	714	714	714	4,287

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Green Stormwater Infrastructure Program

BCL/Program Name:	Combined Sewer Overflows	BCL/Program Code:	C360B
Project Type:	New Facility	Start Date:	Q1/2011
Project ID:	C3610	End Date:	ONGOING
Location:	Citywide	Council District:	Multiple
Neighborhood Plan:	Not in a Neighborhood Plan	Urban Village:	In more than one Urban Village
Neighborhood District:	In more than one District		

This ongoing program provides construction of Green Stormwater Infrastructure (GSI) as a component of combined sewer overflow (CSO) reduction within the uncontrolled CSO basins. Work includes roadside raingardens, permeable pavement alleys, and the RainWise program. RainWise provides financial incentives to private property owners within our uncontrolled CSO basins for construction of properly sized and installed raingardens or cisterns. The program supports the City's current regulatory strategy for compliance with CSO National Pollutant Discharge Elimination System (NPDES) permit.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	6,976	6,302	9,635	5,123	6,111	4,185	2,500	2,500	43,332
Total:	6,976	6,302	9,635	5,123	6,111	4,185	2,500	2,500	43,332
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	6,976	6,302	9,635	5,123	6,111	4,185	2,500	2,500	43,332
Total*:	6,976	6,302	9,635	5,123	6,111	4,185	2,500	2,500	43,332
O & M Costs (Savings)			433	433	433	433	433	433	2,600
Spending Plan by Fund									
Drainage and Wastewater Fund		4,498	9,635	5,123	6,111	4,185	2,500	2,500	34,551
Total:		4,498	9,635	5,123	6,111	4,185	2,500	2,500	34,551

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Heavy Equipment Purchases - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	New Investment	Start Date:	ONGOING
Project ID:	C4116-DWF	End Date:	ONGOING
Location:	N/A		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	N/A
Neighborhood District:	Not in a Neighborhood District	Urban Village:	Not in an Urban Village

This ongoing program provides SPU's Drainage and Wastewater Utility crews with new and replacement heavy equipment that is used throughout Seattle. Typical purchases include vactors, backhoes, loaders, service trucks, "TV" trucks and dump trucks, as well as retrofitting existing equipment to meet SPU operational needs and initiatives. This equipment transports work crews and tools to jobsites and supports the safe and efficient replacement, repair, and maintenance of Seattle's Drainage and Wastewater system. This program is one of three SPU fund-specific heavy equipment CIP programs.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	8,622	2,915	6,000	2,200	2,200	2,200	2,200	2,450	28,787
Total:	8,622	2,915	6,000	2,200	2,200	2,200	2,200	2,450	28,787
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	8,622	2,915	6,000	2,200	2,200	2,200	2,200	2,450	28,787
Total*:	8,622	2,915	6,000	2,200	2,200	2,200	2,200	2,450	28,787
O & M Costs (Savings)			288	288	288	288	288	0	1,439
Spending Plan by Fund									
Drainage and Wastewater Fund		1,723	6,000	2,200	2,200	2,200	2,200	2,450	18,973
Total:		1,723	6,000	2,200	2,200	2,200	2,200	2,450	18,973

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Integrated Control Monitoring Program - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	New Investment	Start Date:	Q1/2002
Project ID:	C4108-DWF	End Date:	Q4/2019
Location:	Various		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	N/A
Neighborhood District:	Not in a Neighborhood District	Urban Village:	Not in an Urban Village

This ongoing program funds improvements to the centralized monitoring and control of the drainage and wastewater portion of the overall Supervisory Control and Data Acquisition (SCADA) system infrastructure throughout Seattle. Infrastructure affected may include, but is not limited to, pipes related to potential combined sewer overflows, rain gauges, and wastewater pump stations. This program enhances and protects the quality and condition of lakes and streams, and addresses the Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) permit requirements.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	14,755	800	500	250	250	250	250	250	17,305
Total:	14,755	800	500	250	250	250	250	250	17,305
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	14,755	800	500	250	250	250	250	250	17,305
Total*:	14,755	800	500	250	250	250	250	250	17,305
O & M Costs (Savings)			173	173	173	173	173	173	1,038

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Knickerbocker Floodplain Improvements

BCL/Program Name:	Protection of Beneficial Uses	BCL/Program Code:	C333B
Project Type:	Rehabilitation or Restoration	Start Date:	Q3/2012
Project ID:	C3383	End Date:	Q4/2015
Location:			
Neighborhood Plan:	Not in Neighborhood Plan	Council District:	
Neighborhood District:		Urban Village:	

This project provides design, permits and construction of a floodplain restoration project on the south branch of Thornton Creek to contribute to reduced system-wide stream-side flooding and improve instream and riparian habitat and water quality. Project elements include stream realignment, floodplain excavation, installation of a hyporheic zone (a subsurface volume of sediment and porous space adjacent to a stream through which stream water readily exchanges), replacement of a pedestrian bridge, and riparian plantings. This project is consistent with a number of long-term plans (including the DWW Urban Watershed Strategy, 2004 Mayor’s Aquatic Ecology Strategy, and 1999 Thornton Creek Watershed Action Plan) and follows the path mapped out by the Thornton Creek Confluence project which also increases floodplain area to provide stream water storage.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	561	1,868	138	0	0	0	0	0	2,567
Total:	561	1,868	138	0	0	0	0	0	2,567
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	561	1,868	138	0	0	0	0	0	2,567
Total*:	561	1,868	138	0	0	0	0	0	2,567
O & M Costs (Savings)			26	26	26	26	26	26	154
Spending Plan by Fund									
Drainage and Wastewater Fund		1,620	138	0	0	0	0	0	1,758
Total:		1,620	138	0	0	0	0	0	1,758

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Localized Flood Control Program

BCL/Program Name:	Flooding, Sewer Back-up, and Landslides	BCL/Program Code:	C380B
Project Type:	New Facility	Start Date:	Q1/2007
Project ID:	C3802	End Date:	ONGOING
Location:	Various		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	5
Neighborhood District:	Northwest	Urban Village:	Bitter Lake Village

This ongoing program provides flood control and local drainage and wastewater projects in under-served parts of Seattle to improve system capacity or increase the existing level of service. Candidate projects are identified through claims, complaints, studies, and field investigations. Drainage and Landslide Spot projects are also included within this program. The Localized Flood Control Program improves Drainage and Wastewater levels of service.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	6,349	5,309	3,195	5,002	4,741	4,656	4,575	4,497	38,323
Total:	6,349	5,309	3,195	5,002	4,741	4,656	4,575	4,497	38,323
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	6,349	5,309	3,195	5,002	4,741	4,656	4,575	4,497	38,323
Total*:	6,349	5,309	3,195	5,002	4,741	4,656	4,575	4,497	38,323
O & M Costs (Savings)			383	383	383	383	383	383	2,299
Spending Plan by Fund									
Drainage and Wastewater Fund		3,859	3,195	5,002	4,741	4,656	4,575	4,497	30,525
Total:		3,859	3,195	5,002	4,741	4,656	4,575	4,497	30,525

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Long Term Control Plan

BCL/Program Name:	Combined Sewer Overflows	BCL/Program Code:	C360B
Project Type:	New Facility	Start Date:	Q3/2008
Project ID:	C3604	End Date:	Q4/2025
Location:	N/A		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	N/A
Neighborhood District:	Not in a Neighborhood District	Urban Village:	Not in an Urban Village

This program creates a Long Term Control Plan (LTCP) in accordance with SPU's Combined Sewer Overflow (CSO) National Pollutant Discharge Elimination System (NPDES) permit and the Federal CSO Control Policy. On May 1, 2012, the Environmental Protection Agency/Department of Justice issued a draft Consent Decree to the City of Seattle which requires the development and submission of a Long-Term Control Plan for approval by May 30, 2015. It further stipulates that all CSO Control Measures are to be constructed as expeditiously as practicable, and in no event later than December 31, 2025. The Consent Decree also allows the City to propose storm water control project(s) as part of an Integrated Plan, in addition to the CSO Control Measures. If approved, the storm water projects can be constructed first and the CSO Control Measures deferred beyond the December 2025 due date.

The LTCP will reduce the number and volume of its CSO overflows, meet receiving water quality standards, and protect designated beneficial uses. The LTCP includes, flow characterization, monitoring, and hydraulic modeling; development CSO control alternatives; development of control alternatives that takes into consideration costs and performance; operational plan revisions; public participation; implementation schedule; and post-construction monitoring. The Program also includes a Programmatic SEPA EIS (Note: includes the Alaskan Way Viaduct & Seawall Program C4102). The Plan and EIS will be submitted to EPA/ Washington State Department of Ecology for approval in 2015 and will include all City of Seattle CSO basins except existing CSO Projects at Windermere, Genesee, Henderson and Central Waterfront (except as noted).

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	32,218	4,510	1,980	1,000	1,000	1,000	1,000	1,000	43,708
Total:	32,218	4,510	1,980	1,000	1,000	1,000	1,000	1,000	43,708
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	32,218	4,510	1,980	1,000	1,000	1,000	1,000	1,000	43,708
Total*:	32,218	4,510	1,980	1,000	1,000	1,000	1,000	1,000	43,708
O & M Costs (Savings)			437	437	437	437	437	437	2,622
Spending Plan by Fund									
Drainage and Wastewater Fund		2,775	1,980	1,000	1,000	1,000	1,000	1,000	9,755
Total:		2,775	1,980	1,000	1,000	1,000	1,000	1,000	9,755

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Madison Valley Long Term Solution

BCL/Program Name:	Flooding, Sewer Back-up, and Landslides	BCL/Program Code:	C380B
Project Type:	New Facility	Start Date:	Q1/2007
Project ID:	C3805	End Date:	Q2/2014
Location:	Various		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	N/A
Neighborhood District:	Central	Urban Village:	Not in an Urban Village

This project provides stormwater flood control facilities to greatly reduce the potential for flooding in the Madison Valley area, especially in the vicinity of 30th Ave E. and E. John St, and in the area of 29th Ave E. and E. Madison St. Work will include construction of a large stormwater pipe in the NW section of the Madison Valley basin, a new stormwater storage facility in Washington Park, and an expanded stormwater retention area at 30th Ave E. and E. John St.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	34,896	50	0	0	0	0	0	0	34,946
Total:	34,896	50	0	0	0	0	0	0	34,946
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	34,896	50	0	0	0	0	0	0	34,946
Total*:	34,896	50	0	0	0	0	0	0	34,946
O & M Costs (Savings)			349	349	349	349	349	349	2,097
Spending Plan by Fund									
Drainage and Wastewater Fund		1,478	0	0	0	0	0	0	1,478
Total:		1,478	0	0	0	0	0	0	1,478

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Meadowbrook Pond Sediment Management

BCL/Program Name:	Flooding, Sewer Back-up, and Landslides	BCL/Program Code:	C380B
Project Type:	Improved Facility	Start Date:	Q1/2012
Project ID:	C3808	End Date:	Q4/2014
Location:	35th AVE NE/NE 105th ST/NE 110th ST		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	5
Neighborhood District:	Not in a Neighborhood District	Urban Village:	Not in an Urban Village

The project provides for dredging of sediment in Meadowbrook Pond and modifying existing structures to improve functionality of the facility. These tasks will improve the maintenance operations and the cost efficiency and management of Meadowbrook Pond by reducing flow volume, sediments, and contaminants; capturing sediments more efficiently to improve maintenance and worker safety; improving dredging methods; developing definitive maintenance triggers; modifying structures to manage debris, improving flood control; expanding bypass capacity; and increasing water quality in the pond and downstream.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	3,935	31	0	0	0	0	0	0	3,966
Total:	3,935	31	0	0	0	0	0	0	3,966
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	3,935	31	0	0	0	0	0	0	3,966
Total*:	3,935	31	0	0	0	0	0	0	3,966
O & M Costs (Savings)			40	40	40	40	40	40	238
Spending Plan by Fund									
Drainage and Wastewater Fund		32	0	0	0	0	0	0	32
Total:		32	0	0	0	0	0	0	32

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Mercer Corridor Project East Phase - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	Improved Facility	Start Date:	Q1/2007
Project ID:	C4114-DWF	End Date:	Q4/2014
Location:	South Lake Union	Council District:	7/3
Neighborhood Plan:	South Lake Union	Urban Village:	South Lake Union
Neighborhood District:	Lake Union		

This program funds the repair, relocation, protection, and upgrade of drainage and wastewater infrastructure related to the redevelopment of the South Lake Union neighborhood. Program work includes, but is not limited to, flow modeling and development of green roofs. This effort identifies SPU drainage and wastewater system direct impacts, opportunities for system improvements, and cost responsibility. This program also funds planning-level coordination with other city departments on projects within the South Lake Union area.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	6,294	50	0	0	0	0	0	0	6,344
Total:	6,294	50	0	0	0	0	0	0	6,344
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	6,294	50	0	0	0	0	0	0	6,344
Total*:	6,294	50	0	0	0	0	0	0	6,344
O & M Costs (Savings)			63	63	63	63	63	63	381

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Mercer Corridor Project West Phase - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	Improved Facility	Start Date:	Q1/2010
Project ID:	C4133-DWF	End Date:	Q4/2015
Location:	Mercer St/Elliott Ave W/Dexter Ave N		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	Multiple
Neighborhood District:	In more than one District	Urban Village:	In more than one Urban Village

This project provides drainage and wastewater utility improvements and relocations related to the Mercer Corridor project, West phase. The project will convert Mercer Street to a two-way street between Dexter Ave. and Elliott Ave. West. The Mercer underpass at Aurora Ave will be widened to allow for six travel lanes and a bicycle/pedestrian shared-use path between Dexter Ave and 5th Ave North. Roy Street, between Aurora and Queen Anne Ave., will also be converted to a two-way street with on-road bicycle lanes.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	244	649	276	0	0	0	0	0	1,169
Total:	244	649	276	0	0	0	0	0	1,169
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	244	649	276	0	0	0	0	0	1,169
Total*:	244	649	276	0	0	0	0	0	1,169
O & M Costs (Savings)			12	12	12	12	12	12	70
Spending Plan by Fund									
Drainage and Wastewater Fund		512	276	0	0	0	0	0	788
Total:		512	276	0	0	0	0	0	788

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Meter Replacement - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	Rehabilitation or Restoration	Start Date:	Q1/2004
Project ID:	C4101-DWF	End Date:	ONGOING
Location:	Citywide	Council District:	Multiple
Neighborhood Plan:	Not in a Neighborhood Plan	Urban Village:	In more than one Urban Village
Neighborhood District:	In more than one District		

This ongoing program funds replacement of existing water meters when they fail or become obsolete. Meters measuring up to two inches are replaced when they stop running. Meters measuring three inches or more are repaired when possible, but are replaced when repair costs exceed replacement costs. Accurate water meters ensure that customers are billed fairly for the water they use. Since water meters also are used to bill customers for their wastewater discharges, 48 percent of the funding is allocated to the Drainage and Wastewater line of business.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	4,584	585	575	585	594	608	613	623	8,766
Total:	4,584	585	575	585	594	608	613	623	8,766
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	4,584	585	575	585	594	608	613	623	8,766
Total*:	4,584	585	575	585	594	608	613	623	8,766
O & M Costs (Savings)			88	88	88	88	88	88	526
Spending Plan by Fund									
Drainage and Wastewater Fund		534	575	585	594	608	613	623	4,132
Total:		534	575	585	594	608	613	623	4,132

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

No Dig Pipe & Maintenance Rehabilitation

BCL/Program Name:	Rehabilitation	BCL/Program Code:	C370B
Project Type:	Rehabilitation or Restoration	Start Date:	Q1/1998
Project ID:	C3707	End Date:	ONGOING
Location:	Citywide	Council District:	N/A
Neighborhood Plan:	Not in a Neighborhood Plan	Urban Village:	In more than one Urban Village
Neighborhood District:	In more than one District		

This ongoing project provides trenchless technology to reline wastewater pipe in Seattle. Generally, prioritized critical sewer pipe that is intact though leaking, and very near the end of its useful life, is relined by a specialized vendor. Installation of the liner extends pipe segment life for more than fifty years.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	13,804	1,500	2,500	7,500	13,500	15,000	15,000	17,000	85,804
Total:	13,804	1,500	2,500	7,500	13,500	15,000	15,000	17,000	85,804
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	13,804	1,500	2,500	7,500	13,500	15,000	15,000	17,000	85,804
Total*:	13,804	1,500	2,500	7,500	13,500	15,000	15,000	17,000	85,804
O & M Costs (Savings)			858	858	858	858	858	858	5,148
Spending Plan by Fund									
Drainage and Wastewater Fund		1,571	2,500	7,500	13,500	15,000	15,000	17,000	72,071
Total:		1,571	2,500	7,500	13,500	15,000	15,000	17,000	72,071

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Operational Facility - Construction - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	Improved Facility	Start Date:	Q1/2004
Project ID:	C4106-DWF	End Date:	ONGOING
Location:	Citywide		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	Multiple
Neighborhood District:	In more than one District	Urban Village:	Not in an Urban Village

This ongoing facilities program renovates, rehabilitates, and replaces existing buildings and constructs new facilities at various locations within the city limits to address deficiencies, failures, and functional changes in the SPU Lines of Business. Typical improvements include, but are not limited to, roof replacements, exterior wall or cladding replacements, and improvements to administrative office space, crew and shop space, lighting, heating and ventilation systems, and facilities structures. These improvements increase the useful life of the facilities, preserve the value of the assets, and provide a safe working environment.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	9,064	761	1,163	5,275	4,712	3,213	3,077	1,806	29,070
Total:	9,064	761	1,163	5,275	4,712	3,213	3,077	1,806	29,070
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	9,064	761	1,163	5,275	4,712	3,213	3,077	1,806	29,070
Total*:	9,064	761	1,163	5,275	4,712	3,213	3,077	1,806	29,070
O & M Costs (Savings)			261	291	291	291	291	291	1,714
Spending Plan by Fund									
Drainage and Wastewater Fund		884	1,163	5,275	4,712	3,213	3,077	1,806	20,129
Total:		884	1,163	5,275	4,712	3,213	3,077	1,806	20,129

**This detail is for information only. Funds are appropriated in the budget at the Budget Control Level. Amounts are in thousands of dollars.*

2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Operational Facility - Other - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	Improved Facility	Start Date:	Q1/2006
Project ID:	C4115-DWF	End Date:	ONGOING
Location:	Various		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	N/A
Neighborhood District:	Not in a Neighborhood District	Urban Village:	Not in an Urban Village

This ongoing facilities program provides funding to purchase, replace, or install new building materials or building equipment within the city limits to address deficiencies, failures, and functional changes in the SPU Lines of Business. Typical improvements include, but are not limited to, drainage systems, prefabricated buildings, storage buildings, and fencing.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	329	150	300	100	0	0	0	0	879
Total:	329	150	300	100	0	0	0	0	879
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	329	150	300	100	0	0	0	0	879
Total*:	329	150	300	100	0	0	0	0	879
O & M Costs (Savings)			9	9	9	9	9	9	53

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Operations Control Center - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	Improved Facility	Start Date:	Q1/2003
Project ID:	C4105-DWF	End Date:	ONGOING
Location:	2700 Airport Way S		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	2
Neighborhood District:	Greater Duwamish	Urban Village:	Duwamish

This ongoing facilities program renovates, rehabilitates, replaces existing buildings, and constructs new facilities at the Operations Control Center located at 2700 Airport Way South to improve the efficiency and effectiveness of the field crews delivering utility services to customers. Typical improvements include, but are not limited to, roof and other exterior replacements, improvements to public spaces, office and crew spaces and lighting, and heating and ventilation systems. These improvements increase the useful life of the facility, preserve the value of the asset, and provide a safe work and public space environment.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	2,458	806	340	60	206	310	400	222	4,802
Total:	2,458	806	340	60	206	310	400	222	4,802
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	2,458	806	340	60	206	310	400	222	4,802
Total*:	2,458	806	340	60	206	310	400	222	4,802
O & M Costs (Savings)			48	48	48	48	48	48	288
Spending Plan by Fund									
Drainage and Wastewater Fund		493	340	60	206	310	400	222	2,031
Total:		493	340	60	206	310	400	222	2,031

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Other Major Transportation Projects - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	Rehabilitation or Restoration	Start Date:	Q2/2008
Project ID:	C4123-DWF	End Date:	ONGOING
Location:	Various		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	N/A
Neighborhood District:	Not in a Neighborhood District	Urban Village:	Not in an Urban Village

This ongoing program funds Drainage and Wastewater projects that mitigate undesirable impacts from, and takes advantage of opportunities generated by, capital transportation projects of the Washington State Department of Transportation (WSDOT) and the Seattle Department of Transportation (SDOT) throughout the city. Work may include, but is not limited to, physically protecting the infrastructure during the transportation construction process, repairing and replacing damaged infrastructure, and improving existing infrastructure to meet higher standards. Project sites may include, but are not limited to, State Route 520, Interstate 5, and Interstate 90.

		LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources										
Drainage and Wastewater Rates		1	568	160	600	296	750	750	50	3,175
Total:		1	568	160	600	296	750	750	50	3,175
Fund Appropriations/Allocations										
Drainage and Wastewater Fund		1	568	160	600	296	750	750	50	3,175
Total*:		1	568	160	600	296	750	750	50	3,175
O & M Costs (Savings)				32	32	32	32	32	32	191
Spending Plan by Fund										
Drainage and Wastewater Fund			430	160	600	296	750	750	50	3,036
Total:			430	160	600	296	750	750	50	3,036

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Outfall Rehabilitation Program

BCL/Program Name:	Rehabilitation	BCL/Program Code:	C370B
Project Type:	Rehabilitation or Restoration	Start Date:	Q1/2012
Project ID:	C3708	End Date:	ONGOING
Location:	Various		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	Multiple
Neighborhood District:	In more than one District	Urban Village:	In more than one Urban Village

This ongoing program provides rehabilitation of outfalls throughout Seattle Public Utilities service area. Typical improvements may include, but are not limited to, repair, rehabilitation or replacement of outfall structures. This program will investigate the condition of each of the outfalls and complete an options analysis, followed by design, construction, and closeout activities.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	504	1,893	946	1,500	500	500	500	500	6,843
Total:	504	1,893	946	1,500	500	500	500	500	6,843
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	504	1,893	946	1,500	500	500	500	500	6,843
Total*:	504	1,893	946	1,500	500	500	500	500	6,843
O & M Costs (Savings)			68	68	68	68	68	68	411
Spending Plan by Fund									
Drainage and Wastewater Fund		1,565	946	1,500	500	500	500	500	6,011
Total:		1,565	946	1,500	500	500	500	500	6,011

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Point Sewer Pipe Rehabilitation

BCL/Program Name:	Rehabilitation	BCL/Program Code:	C370B
Project Type:	Rehabilitation or Restoration	Start Date:	Q1/2003
Project ID:	C3704	End Date:	ONGOING
Location:	Citywide	Council District:	Multiple
Neighborhood Plan:	Not in a Neighborhood Plan	Urban Village:	Not in an Urban Village
Neighborhood District:	In more than one District		

This ongoing project provides complex point sewer rehabilitation of sewer mains that are greater than seventeen feet deep in the downtown corridor, landslide prone areas, or difficult access areas. Failed or nonfunctional sections of pipe are assessed and prioritized for rehabilitation through one or two public works contracts. This project also provides point sewer rehabilitation of sewer mains that are less than seventeen feet deep in non-arterial Seattle roadways. In these cases, failed or nonfunctional sections of pipe are assessed and prioritized for rehabilitation by Seattle Public Utilities field operation crews. Sewer trouble spots and voids are addressed while increasing the sewer main asset life and function.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	46,769	4,236	2,152	3,152	3,152	3,152	3,152	3,152	68,918
Total:	46,769	4,236	2,152	3,152	3,152	3,152	3,152	3,152	68,918
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	46,769	4,236	2,152	3,152	3,152	3,152	3,152	3,152	68,918
Total*:	46,769	4,236	2,152	3,152	3,152	3,152	3,152	3,152	68,918
O & M Costs (Savings)			686	686	686	686	686	686	4,115
Spending Plan by Fund									
Drainage and Wastewater Fund		5,500	2,152	3,152	3,152	3,152	3,152	3,152	23,413
Total:		5,500	2,152	3,152	3,152	3,152	3,152	3,152	23,413

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Pump Station and Force Main Improvements

BCL/Program Name:	Rehabilitation	BCL/Program Code:	C370B
Project Type:	New Facility	Start Date:	Q1/2008
Project ID:	C3703	End Date:	ONGOING
Location:	Various	Council District:	Multiple
Neighborhood Plan:	Not in a Neighborhood Plan	Urban Village:	Not in an Urban Village
Neighborhood District:	In more than one District		

This ongoing program provides for improvements and upgrades to the 68 SPU-owned wastewater pump stations and force mains. Typical improvements may include, but are not limited to, replacement of existing pump station assets including pumps, motors, and valves, and installation of new assets such as SCADA systems, generators, and emergency plugs. This program enhances and extends the useful life of the existing pump stations which, in turn, protects water quality.

		LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources										
Drainage and Wastewater Rates		9,774	3,251	4,183	3,338	3,020	3,020	3,020	3,020	32,626
Total:		9,774	3,251	4,183	3,338	3,020	3,020	3,020	3,020	32,626
Fund Appropriations/Allocations										
Drainage and Wastewater Fund		9,774	3,251	4,183	3,338	3,020	3,020	3,020	3,020	32,626
Total*:		9,774	3,251	4,183	3,338	3,020	3,020	3,020	3,020	32,626
O & M Costs (Savings)				326	326	326	326	326	326	1,958
Spending Plan by Fund										
Drainage and Wastewater Fund			2,785	4,183	3,338	3,020	3,020	3,020	3,020	22,386
Total:			2,785	4,183	3,338	3,020	3,020	3,020	3,020	22,386

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

S Genesee Combined Sewer Overflow

BCL/Program Name:	Combined Sewer Overflows	BCL/Program Code:	C360B
Project Type:	New Facility	Start Date:	Q1/2005
Project ID:	C3608	End Date:	Q4/2015
Location:	S. Genesee St.		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	Multiple
Neighborhood District:	Southeast	Urban Village:	Not in an Urban Village

This project provides construction of combined sewer overflows (CSO) facilities in the Genesee area in the southeast part of Seattle. Facilities will be built to meet level of service requirements for CSOs and comply with state and federal regulations. The project will meet requirements of the City's current National Pollutant Discharge Elimination System (NPDES) Wastewater Discharge Permit.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	23,898	14,506	480	0	0	0	0	0	38,883
Total:	23,898	14,506	480	0	0	0	0	0	38,883
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	23,898	14,506	480	0	0	0	0	0	38,883
Total*:	23,898	14,506	480	0	0	0	0	0	38,883
O & M Costs (Savings)			389	389	389	389	389	389	2,333
Spending Plan by Fund									
Drainage and Wastewater Fund		13,535	480	0	0	0	0	0	14,015
Total:		13,535	480	0	0	0	0	0	14,015

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

S Henderson Combined Sewer Overflow Storage

BCL/Program Name:	Combined Sewer Overflows	BCL/Program Code:	C360B
Project Type:	New Facility	Start Date:	Q1/2005
Project ID:	C3609	End Date:	Q4/2018
Location:	S Henderson St.		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	2
Neighborhood District:	Southeast	Urban Village:	Not in an Urban Village

This project provides construction of combined sewer overflows (CSO) facilities in the Henderson area in the southeast part of Seattle. Facilities will be built to meet level of service requirements for CSOs and comply with state and federal regulations. The project will meet requirements of the City's current National Pollutant Discharge Elimination System (NPDES) Wastewater Discharge Permit. Maintenance costs will not begin until after 2020, when the project completes construction.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	18,421	8,206	26,761	23,548	1,149	17	0	0	78,103
Total:	18,421	8,206	26,761	23,548	1,149	17	0	0	78,103
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	18,421	8,206	26,761	23,548	1,149	17	0	0	78,103
Total*:	18,421	8,206	26,761	23,548	1,149	17	0	0	78,103
O & M Costs (Savings)			781	781	781	781	781	781	4,686
Spending Plan by Fund									
Drainage and Wastewater Fund		9,247	26,761	23,548	1,149	17	0	0	60,723
Total:		9,247	26,761	23,548	1,149	17	0	0	60,723

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Sanitary Sewer Overflow Capacity

BCL/Program Name:	Flooding, Sewer Back-up, and Landslides	BCL/Program Code:	C380B
Project Type:	New Investment	Start Date:	Q2/2002
Project ID:	C3804	End Date:	ONGOING
Location:	Various		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	Multiple
Neighborhood District:	In more than one District	Urban Village:	In more than one Urban Village

The Wastewater Capacity Improvement Program is designed to enhance sanitary sewer service to Seattle customers by addressing current and projected capacity limitations of the wastewater system through structural (CIP) improvements. Such improvements may include demand management measures such as infiltration and inflow (I/I) reduction, increased conveyance capacity, and individual customer measures such as installation of backflow preventers or grinder pumps to reduce the risk that customers will experience backups of sewage into their homes and businesses during storm events.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	5,531	3,340	4,361	4,916	5,631	5,743	5,858	5,975	41,356
Total:	5,531	3,340	4,361	4,916	5,631	5,743	5,858	5,975	41,356
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	5,531	3,340	4,361	4,916	5,631	5,743	5,858	5,975	41,356
Total*:	5,531	3,340	4,361	4,916	5,631	5,743	5,858	5,975	41,356
O & M Costs (Savings)			414	414	414	414	414	414	2,481
Spending Plan by Fund									
Drainage and Wastewater Fund		2,461	4,361	4,916	5,631	5,743	5,858	5,975	34,947
Total:		2,461	4,361	4,916	5,631	5,743	5,858	5,975	34,947

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Security Improvements - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	Improved Facility	Start Date:	Q1/2007
Project ID:	C4113-DWF	End Date:	ONGOING
Location:	Citywide	Council District:	Multiple
Neighborhood Plan:	Not in a Neighborhood Plan	Urban Village:	Not in an Urban Village
Neighborhood District:	In more than one District		

This ongoing program provides physical integrated security system components throughout the City of Seattle. Typical improvements may include, but are not limited to, fences, gates, access control card readers, intercoms, lighting, door and hatch contacts, CCTV cameras, motion detection devices, and fiber and conduit. This program enhances protection of SPU's critical infrastructure and addresses vulnerabilities identified in U.S. Environmental Protection Agency (EPA) mandated vulnerability assessments.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	1,061	178	180	105	105	105	255	105	2,093
Total:	1,061	178	180	105	105	105	255	105	2,093
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	1,061	178	180	105	105	105	255	105	2,093
Total*:	1,061	178	180	105	105	105	255	105	2,093
O & M Costs (Savings)			21	21	21	21	21	21	126
Spending Plan by Fund									
Drainage and Wastewater Fund		230	180	105	105	105	255	105	1,085
Total:		230	180	105	105	105	255	105	1,085

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Sediment Remediation - DWF

BCL/Program Name:	Sediments	BCL/Program Code:	C350B
Project Type:	Rehabilitation or Restoration	Start Date:	Q4/2000
Project ID:	C3503	End Date:	ONGOING
Location:	Various	Council District:	Multiple
Neighborhood Plan:	Not in a Neighborhood Plan	Urban Village:	Not in an Urban Village
Neighborhood District:	In more than one District		

This ongoing program provides for City of Seattle participation in cleanup of contaminated sediment sites at multiple locations across the city for which the City's drainage and wastewater utilities may have some liability. Typical phases of such projects include preliminary studies and analyses, preliminary engineering for actual cleanup efforts, and liability allocation negotiations. This program enhances the natural environment of Seattle and addresses both state and federal regulatory agency requirements.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	38,020	3,423	4,797	2,420	3,778	21,315	19,264	17,140	110,155
Total:	38,020	3,423	4,797	2,420	3,778	21,315	19,264	17,140	110,155
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	38,020	3,423	4,797	2,420	3,778	21,315	19,264	17,140	110,155
Total*:	38,020	3,423	4,797	2,420	3,778	21,315	19,264	17,140	110,155
O & M Costs (Savings)			1,102	1,102	1,102	1,102	1,102	1,102	6,609
Spending Plan by Fund									
Drainage and Wastewater Fund		3,176	4,797	2,420	3,778	21,315	19,264	17,140	71,887
Total:		3,176	4,797	2,420	3,778	21,315	19,264	17,140	71,887

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Sewer Full Line Replacements

BCL/Program Name:	Rehabilitation	BCL/Program Code:	C370B
Project Type:	Rehabilitation or Restoration	Start Date:	Q1/2001
Project ID:	C3702	End Date:	ONGOING
Location:	Citywide	Council District:	Multiple
Neighborhood Plan:	Not in a Neighborhood Plan	Urban Village:	In more than one Urban Village
Neighborhood District:	In more than one District		

This ongoing program provides for replacement of existing sewer lines citywide with pipes of the same diameter and capacity. Closed circuit television inspections identify defects in sewer mainlines, and each mainline defect is catalogued in an SPU database and assigned a priority that reflects the urgency of repair. Replacement is done by pipe-bursting methods that avoid extended pavement cutting.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	0	250	250	250	250	250	250	250	1,750
Total:	0	250	250	250	250	250	250	250	1,750
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	0	250	250	250	250	250	250	250	1,750
Total*:	0	250	250	250	250	250	250	250	1,750
O & M Costs (Savings)			18	18	18	18	18	18	105
Spending Plan by Fund									
Drainage and Wastewater Fund		485	250	250	250	250	250	250	1,985
Total:		485	250	250	250	250	250	250	1,985

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Sound Transit - North Link - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	New Facility	Start Date:	Q1/2012
Project ID:	C4135-DWF	End Date:	Q4/2020
Location:	Various		
Neighborhood Plan:	In more than one Plan	Council District:	Multiple
Neighborhood District:	In more than one District	Urban Village:	In more than one Urban Village

This program funds relocation, replacement, and protection of drainage and wastewater infrastructure affected by the development of Sound Transit's Link Light Rail System. Sound Transit is constructing the third segment of their electrical light rail transit system that includes 4.3 mile light rail extension, three additional stations, and other supporting facilities from the University of Washington to Northgate.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	58	108	400	75	75	50	50	50	867
Total:	58	108	400	75	75	50	50	50	867
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	58	108	400	75	75	50	50	50	867
Total*:	58	108	400	75	75	50	50	50	867
O & M Costs (Savings)			9	9	9	9	9	9	52
Spending Plan by Fund									
Drainage and Wastewater Fund		259	400	75	75	50	50	50	959
Total:		259	400	75	75	50	50	50	959

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Sound Transit – University Link - DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	New Facility	Start Date:	Q1/2007
Project ID:	C4110-DWF	End Date:	Q2/2016
Location:	Various		
Neighborhood Plan:	In more than one Plan	Council District:	Multiple
Neighborhood District:	In more than one District	Urban Village:	In more than one Urban Village

This program funds relocation, replacement, and protection of drainage and wastewater infrastructure affected by the development of Sound Transit's Link Light Rail System. Sound Transit is constructing the second segment of their electrical light rail transit system that includes 3.15 miles of tunnel, two additional stations, and other supporting facilities from downtown to the University of Washington.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	334	127	30	10	0	0	0	0	501
Total:	334	127	30	10	0	0	0	0	501
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	334	127	30	10	0	0	0	0	501
Total*:	334	127	30	10	0	0	0	0	501
O & M Costs (Savings)			5	5	5	5	5	5	30
Spending Plan by Fund									
Drainage and Wastewater Fund		101	30	10	0	0	0	0	142
Total:		101	30	10	0	0	0	0	142

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Sound Transit-East Link

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	New Facility	Start Date:	Q2/2013
Project ID:	C4122-DWF	End Date:	Q4/2020
Location:	Various		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	Multiple
Neighborhood District:	Not in a Neighborhood District	Urban Village:	Not in an Urban Village

This program funds relocation, replacement, and protection of drainage and wastewater infrastructure affected by the development of Sound Transit's Link Light Rail System. Sound Transit is constructing the next segment of their electrical light rail transit system that includes 14 mile light rail extension, 10 additional stations total (one in Seattle) and other supporting facilities from the International District (ID) across I-90 to Bellevue/Redmond.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	0	40	38	10	100	50	25	0	263
Total:	0	40	38	10	100	50	25	0	263
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	0	40	38	10	100	50	25	0	263
Total*:	0	40	38	10	100	50	25	0	263
O & M Costs (Savings)			3	3	3	3	3	3	16
Spending Plan by Fund									
Drainage and Wastewater Fund		53	38	10	100	50	25	0	275
Total:		53	38	10	100	50	25	0	275

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

South Park Pump Station

BCL/Program Name:	Flooding, Sewer Back-up, and Landslides	BCL/Program Code:	C380B
Project Type:	New Facility	Start Date:	Q3/2008
Project ID:	C3806	End Date:	Q4/2019
Location:	698 S Riverside DR/Holden/Austin		
Neighborhood Plan:	South Park	Council District:	1
Neighborhood District:	Greater Duwamish	Urban Village:	Duwamish

This project constructs a pump station (PS) and water quality facility (WQF) in South Park. The PS allows the existing storm drain trunk to meet the 2004 Comprehensive Drainage Plan level of service and allows future projects expanding the collection system to address flooding complaints. The WQF will treat most stormwater flows from the basin, reducing pollutant loading to the Duwamish. Flows over 11 CFS will bypass the WQF and be pumped directly to the river.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	6,495	1,500	1,500	5,000	6,000	5,500	2,527	2,000	30,523
Total:	6,495	1,500	1,500	5,000	6,000	5,500	2,527	2,000	30,523
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	6,495	1,500	1,500	5,000	6,000	5,500	2,527	2,000	30,523
Total*:	6,495	1,500	1,500	5,000	6,000	5,500	2,527	2,000	30,523
O & M Costs (Savings)			305	305	305	305	305	305	1,831
Spending Plan by Fund									
Drainage and Wastewater Fund		726	1,500	5,000	6,000	5,500	2,527	2,000	23,253
Total:		726	1,500	5,000	6,000	5,500	2,527	2,000	23,253

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Street Sweeping for Water Quality

BCL/Program Name:	Protection of Beneficial Uses	BCL/Program Code:	C333B
Project Type:	New Investment	Start Date:	Q1/2011
Project ID:	C3363	End Date:	ONGOING
Location:	Various		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	Multiple
Neighborhood District:	In more than one District	Urban Village:	In more than one Urban Village

This program provides for a cost-effective, significant reduction in the potentially toxic pollutant load carried by stormwater runoff discharged by SPU's storm drain system to Puget Sound using new, high efficiency street sweeping technology. The Program is a partnership between Seattle Public Utilities, who sets the program direction, provides water quality expertise, and funding for the portion of routes that drain to the municipal separate storm sewer system (MS4), which discharges directly to our receiving waters and Seattle Department of Transportation, who provides operational expertise, street sweeping services, and funding for the portion of the routes that drain to the combined sewer system (CSS).

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	193	90	765	400	0	0	0	0	1,448
Total:	193	90	765	400	0	0	0	0	1,448
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	193	90	765	400	0	0	0	0	1,448
Total*:	193	90	765	400	0	0	0	0	1,448
O & M Costs (Savings)			14	14	14	14	14	14	87
Spending Plan by Fund									
Drainage and Wastewater Fund		110	765	400	0	0	0	0	1,275
Total:		110	765	400	0	0	0	0	1,275

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Taylor Creek Culvert Replacement

BCL/Program Name:	Protection of Beneficial Uses	BCL/Program Code:	C333B
Project Type:	New Facility	Start Date:	Q4/1999
Project ID:	C3353	End Date:	Q4/2016
Location:	Taylor Creek at Rainier Ave S	Council District:	2
Neighborhood Plan:	Not in a Neighborhood Plan	Urban Village:	Not in an Urban Village
Neighborhood District:	Southeast		

This project provides funding to replace the barrier culvert at Rainier Avenue South for lower Taylor Creek. Design alternatives include rerouting and other habitat improvements. The Taylor Creek culvert at Rainier Avenue South is the number one fish-passage barrier in the city that blocks access to a majority of spawning and rearing habitat in upper Taylor Creek to all species of salmonids.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	1,835	747	800	895	3,247	3,615	291	143	11,573
Total:	1,835	747	800	895	3,247	3,615	291	143	11,573
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	1,835	747	800	895	3,247	3,615	291	143	11,573
Total*:	1,835	747	800	895	3,247	3,615	291	143	11,573
O & M Costs (Savings)			116	116	116	116	116	116	694
Spending Plan by Fund									
Drainage and Wastewater Fund		378	800	895	3,247	3,615	291	143	9,369
Total:		378	800	895	3,247	3,615	291	143	9,369

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Thornton Confluence Improvement

BCL/Program Name:	Flooding, Sewer Back-up, and Landslides	BCL/Program Code:	C380B
Project Type:	Improved Facility	Start Date:	Q1/2008
Project ID:	C3811	End Date:	Q4/2015
Location:	Thornton Creek		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	Multiple
Neighborhood District:	Not in a Neighborhood District	Urban Village:	Not in an Urban Village

This project provides creek realignment, floodplain excavation, culvert replacement, and riparian plantings at the confluence of the north and south branches of Thornton Creek. SPU has acquired a number of flood prone properties in this area over the last decade. Using these properties, this project increases culvert capacity, floodplain area and flood storage, and provides stream habitat benefits. The project will help alleviate flooding and reduce maintenance at Meadowbrook Pond.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	2,135	4,485	861	42	0	0	0	0	7,523
Total:	2,135	4,485	861	42	0	0	0	0	7,523
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	2,135	4,485	861	42	0	0	0	0	7,523
Total*:	2,135	4,485	861	42	0	0	0	0	7,523
O & M Costs (Savings)			75	75	75	75	75	75	451
Spending Plan by Fund									
Drainage and Wastewater Fund		4,291	861	42	0	0	0	0	5,194
Total:		4,291	861	42	0	0	0	0	5,194

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Venema Creek Natural Drainage System

BCL/Program Name:	Protection of Beneficial Uses	BCL/Program Code:	C333B
Project Type:	New Facility	Start Date:	Q1/2003
Project ID:	C3333	End Date:	Q4/2017
Location:	1st and 2nd Ave NW/NW 120th St/NW 122nd St		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	5
Neighborhood District:	Northwest	Urban Village:	Not in an Urban Village

This project provides stormwater flow control and water quality treatment using a Natural Drainage System approach within the Venema Creek sub basin of Pipers Creek. Proposed design uses the concept developed for the Pinehurst Natural Drainage System project (parking on only one side of road, large bioretention swale on the other side of road). Alley improvements using permeable pavements are also being considered. The project focus is retrofitting stormwater runoff from the 105-acre residential and commercial land area in an effort to reduce the effect of stormwater flow on the aquatic biota within Venema Creek.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	3,165	1,116	2,142	268	108	0	0	0	6,800
Total:	3,165	1,116	2,142	268	108	0	0	0	6,800
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	3,165	1,116	2,142	268	108	0	0	0	6,800
Total*:	3,165	1,116	2,142	268	108	0	0	0	6,800
O & M Costs (Savings)			68	68	68	68	68	68	408
Spending Plan by Fund									
Drainage and Wastewater Fund		1,071	2,142	268	108	0	0	0	3,590
Total:		1,071	2,142	268	108	0	0	0	3,590

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Water Quality & Flow Improvements

BCL/Program Name:	Protection of Beneficial Uses	BCL/Program Code:	C333B
Project Type:	New Facility	Start Date:	Q1/2017
Project ID:	C3393	End Date:	ONGOING
Location:			
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	Multiple
Neighborhood District:	In more than one District	Urban Village:	In more than one Urban Village

This program is for future Protection of Beneficial Uses projects that will protect and improve water quality and flow in creeks and other habitats. Types of projects will include natural drainage system (NDS) projects, creek daylighting projects, fish passage improvements, stream/creek habitat improvements, and passive or active stormwater treatment facilities.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	0	0	1,100	1,741	3,473	5,531	5,952	6,202	23,999
Total:	0	0	1,100	1,741	3,473	5,531	5,952	6,202	23,999
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	0	0	1,100	1,741	3,473	5,531	5,952	6,202	23,999
Total*:	0	0	1,100	1,741	3,473	5,531	5,952	6,202	23,999
O & M Costs (Savings)			240	240	240	240	240	240	1,440

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Windermere Combined Sewer Overflow Storage

BCL/Program Name:	Combined Sewer Overflows	BCL/Program Code:	C360B
Project Type:	New Facility	Start Date:	Q2/2002
Project ID:	C3605	End Date:	Q4/2015
Location:	NE 65th St./Sand Point Way NE		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	4
Neighborhood District:	Northeast	Urban Village:	Not in an Urban Village

This project provides construction of off-line storage and best management practice combined sewer overflow (CSO) facilities in the Windermere area in the northeast part of Seattle. Facilities will be built to meet water quality standards for Lake Washington in accordance with state and federal regulations. The project also intends to meet requirements of the City's current CSO National Pollutant Discharge Elimination System (NPDES) permit.

	LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources									
Drainage and Wastewater Rates	38,711	12,915	1,300	0	0	0	0	0	52,926
Total:	38,711	12,915	1,300	0	0	0	0	0	52,926
Fund Appropriations/Allocations									
Drainage and Wastewater Fund	38,711	12,915	1,300	0	0	0	0	0	52,926
Total*:	38,711	12,915	1,300	0	0	0	0	0	52,926
O & M Costs (Savings)			389	389	389	389	389	389	2,333
Spending Plan by Fund									
Drainage and Wastewater Fund		9,333	1,300	0	0	0	0	0	10,633
Total:		9,333	1,300	0	0	0	0	0	10,633

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2015 - 2020 Adopted Capital Improvement Program

SPU-Drainage & Wastewater

Yesler Terrace-DWF

BCL/Program Name:	Shared Cost Projects	BCL/Program Code:	C410B
Project Type:	New Facility	Start Date:	Q1/2014
Project ID:	C4136-DWF	End Date:	Q4/2014
Location:	Yesler and Broadway		
Neighborhood Plan:	Not in a Neighborhood Plan	Council District:	3
Neighborhood District:	Central	Urban Village:	Not in an Urban Village

Seattle Housing Authority (SHA) is leading a major project to replace Yesler Terrace's aging public housing buildings with a new mixed-income community. This project provides funding for SPU Drainage and Wastewater infrastructure investments in association with this project.

		LTD Actuals	2014 Rev	2015	2016	2017	2018	2019	2020	Total
Revenue Sources										
Drainage and Wastewater Rates		0	2,800	0	0	0	0	0	0	2,800
Total:		0	2,800	0	0	0	0	0	0	2,800
Fund Appropriations/Allocations										
Drainage and Wastewater Fund		0	2,800	0	0	0	0	0	0	2,800
Total*:		0	2,800	0	0	0	0	0	0	2,800
O & M Costs (Savings)				28	28	28	28	28	28	168

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2015 - 2020 Adopted Capital Improvement Program