

Seattle Public Utilities

Drainage and Wastewater

Overview

Seattle Public Utilities (SPU) maintains 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
- 84 City-owned and permitted Combined Sewer Overflow points
- 38 Combined Sewer Overflow control detention tanks/pipes
- 481 miles of storm drains / 290 storm drain outfalls
- 33,750 catch basins
- 65 miles of ditches, 128 miles of culverts
- 30 miles of stream channel (49 creeks, 6 of which are salmon bearing)
- 9 acres of green stormwater infrastructure
- 17 detention/treatment ponds
- 295 drainage flow control facilities
- 578 water quality structures

The Drainage and Wastewater (DWF) Capital Improvement Program (CIP) is the vehicle for rehabilitating, replacing, improving, and expanding this infrastructure, as well as constructing projects that protect and enhance our City's public health and environmental resources. Planned spending in the DWF CIP is approximately \$1.24 billion over the next six years, from 2022 to 2027.

Thematic Priorities/Project Selection Criteria

The 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 flooding and stormwater pollution. Projects in the DWF CIP are guided by various Federal regulations, City policies, long-term plan documents, the Drainage Systems Analysis, the Wastewater System Analysis, and the SPU Asset Management Committee (AMC) benefit criteria. Many DWF CIP projects are outlined in the Plan to Protect Seattle's Waterways and Asset Management Plans. In addition to candidate capital projects identified from these planning documents, projects are identified from external projects and opportunities and emergencies or other unexpected events. All potential capital projects are prioritized for consideration into the CIP budget. Priority rankings are based on the following set of criteria:

- **Public Health, Safety & Environment:** The overriding priority for the DWF is protecting public health and safety, improving services to customers and decreasing our impact on the environment. Examples of highly ranked projects in this category include the South Park Pump Station, Localized Flood Control program, Sanitary Sewer Overflow Capacity program, South Park Water Quality Facility, and NDS Partnering.
- **Infrastructure Reliability & Risk:** How a project addresses infrastructure conditions or vulnerabilities, based on an understanding of the consequence of a risk occurring and its likelihood. Examples of highly ranked projects in this category include the Pipe Rehabilitation and Pump Station improvement programs.

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- **Regulatory, Mandates, Legal Agreements:** The City of Seattle/SPU must meet State and Federal regulatory requirements 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 U.S. Environmental Protection Agency (EPA), and the U.S. Department of Justice (DOJ). The two most significant regulatory drivers associated with the CWA are the National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permit (aka NPDES CSO Permit) and the NPDES Phase I Municipal Stormwater Permit (aka NPDES MS4 Permit). This ranking category considers 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 and the specific mandates of the City Council and Mayor. Examples of highly ranked projects in this category include the Ship Canal Water Quality Project, CSO Retrofits, South Park Water Quality Facility, and Natural Drainage System (NDS) Partnering.
- **External Drivers and Opportunities:** SPU's responsiveness to, or engagement with, the projects of other Departments or jurisdictions, or opportunities to provide multiple benefits, address service equity, or reduce ratepayer costs through outside funding opportunities. Examples of highly ranked projects in this category include the Seattle Department of Transportation's Move Seattle projects.
- **Service Equity:** Factors in service equity are incorporated into the prioritization of potential projects in any program based on amalgamated data from the Office of Sustainability and Environment, including race, education, language and median income. Known disparities of historical service levels are also considered within racial equity planning tools such as stakeholder analyses and inclusive outreach planning.

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 LOB, with reviews by key internal stakeholders. 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, excluded or deferred from the CIP, and which projects should receive priority attention if a staff or financial resource constraint should arise.

To aid SPU in making responsible decisions on behalf of ratepayers prioritized projects must then 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 benefits and costs. The process also recognizes that a project may be a "must-do" project (e.g. required by regulations). Business Cases must be approved by the SPU CEO/General Manager and Asset Management Committee.

DWW Priorities that are also Mayor/Council Priorities

Improvements to DWW infrastructure result in safer communities, a healthier environment, and regulatory compliance which are goals inherent within the Mayor's key values (safe, affordable, vibrant and interconnected City that fosters innovation).

- **Aligning Capital Investments with Community Planning.** SPU has aligned planning for the South Park Water Quality Facility with the Office of Planning and Community Development's Open Space planning in the S. Park Urban Village area and the Duwamish Valley Action Plan.

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- **Aligning Capital Investments with Seattle Department of Transportation’s modal plan.** SPU has several projects to facilitate citywide interconnectivity efforts:
 - Primary investments are around supporting transportation led projects as part of the Move Seattle Levy, described below within the shared costs projects Budget Control Level (BCL).
 - SPU is also leading a joint SPU/SDOT project in the South Park industrial area providing long desired Drainage Conveyance and Roadway infrastructure.
 - The NDS Program, described below, collaborates with SDOT and has identified numerous joint sidewalk/bioretenction project locations.
- **Expand use of Green Stormwater Infrastructure** has been identified by Mayor and Council as a priority. Projects that will help achieve the Citywide stretch goal to manage 700MG of stormwater annually with GSI by 2025, include the following:
 - The Natural Drainage Systems (NDS) Partnering program will use bioretention to reduce storm water pollution in creeks and to improve neighborhoods. The NDS Partnering Program will build natural drainage systems along approximately 66 blocks (330’ block equivalents) in the Longfellow, Thornton, and Pipers Creek watersheds. The first of these projects was 30th Ave NE, with construction led by SDOT, which was completed in 2019.
 - GSI in Urban Villages Program. SPU and Council created the GSI in Urban Villages Program to complement proposed up zones through HALA, as well as the City’s overall growth strategy. This new program has flexibility to address a variety of system problems within urban villages and urban centers, including flooding, sewer backups, water quality, and creek protection. Early Green Infrastructure in Urban Villages projects include Cloverdale Bioretention (South Park neighborhood, construction 2021), Crown Hill GSI and Lake City Floodplain Park (Options Analysis in progress), and a variety of development partnerships.
 - RainWise Program fights water pollution by offering rebates to property owners for controlling stormwater at residences, schools, and businesses. This program was developed by SPU but is now delivered jointly with King County Wastewater Treatment Division. Over 1,500 Seattle residents and businesses have installed voluntary rain gardens or cisterns through this program, managing over 26 million gallons of runoff every year.

CIP Highlights

2022-2027 Adopted Drainage and Wastewater Fund CIP by BCL (In ‘000s; total may not sum due to rounding)

BCL	2022	2023	2024	2025	2026	2027	Total
Protection of Beneficial Uses	20,911	39,473	47,444	50,010	41,235	36,677	235,749
Sediments	4,560	6,789	13,349	17,809	11,543	12,369	66,421
Combined Sewer Overflows	98,151	106,987	70,944	32,364	8,188	33,835	350,470
Rehabilitation	40,685	46,960	40,692	40,144	42,946	33,000	244,428
Flooding, Sewer Backup & Lndsl	29,967	13,292	30,188	18,829	32,865	47,925	173,066
Shared Cost Projects	15,345	34,550	38,263	21,544	19,731	11,278	140,711
Technology	4,299	4,299	4,299	4,299	4,299	4,299	25,794
Total	213,919	252,351	245,179	184,999	160,808	179,383	1,236,639

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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 and preserves the storm water conveyance function of our creeks through stream culvert repair and rehabilitation. The program includes projects to meet regulatory requirements, primarily NDS Partnering Projects (a key component of Seattle’s Plan to Protect Seattle’s Waterways) which improves water quality with GSI approaches while partnering with SDOT to provide streetscape enhancements. The program also includes projects that are part of the SPU and Council-created GSI in Urban Villages Program. Funding in the DWF CIP is focused on cost effective stormwater and water quality projects such as NDS Partnering, GSI in Urban Villages projects, Capitol Hill Water Quality project, and the Taylor Creek Culvert Replacement project.

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 historic contributions from Combined Sewer Overflows (CSO) and storm drain discharges, or other City-owned facilities. 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 studies and analysis for cleanup of contaminated sediment sites in which the City is a participant, for engineering design and construction of actual cleanup of contaminated sites, and for liability allocation negotiations. The study phase of sediment remediation projects often requires multiple years before specific cleanup actions are defined. Current projections reflect cleanup construction adjacent to Gasworks Park, the Duwamish Waterway Sediment Remediation, and East Waterway Remediation projects beginning in 2024 based on preliminary schedules.

Combined Sewer Overflows: This program consists of projects that are mandated by State and Federal regulations to control combined sewer overflows (CSOs) into the City's receiving waters. During heavy rainfall events, the combination of stormwater (about 90 percent of the volume) and sewage may exceed the capacity of the combined sewer system (CSS) and overflow into our waterways – causing a combined sewer overflow (CSO). CSOs spill a mixture of raw sewage and stormwater into local waterways at 85 outfalls throughout the City. In some instances, these spills may violate water quality standards, create unacceptable risk to public health, contaminate sediment and habitat for endangered species and pollute the Puget Sound.

Annual CSOs 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 that limit CSOs to one untreated overflow per outfall location per year. SPU is required by State and Federal law to achieve control of CSOs by 2030. The CSO Long Term Control Plan (LTCP), also called the Plan to Protect Seattle’s Waterways, was approved by regulators in May 2015. Ultimately the Consent Decree requires completion of construction of all CSO reduction projects by December 2030. CSOs must be proven to be controlled one year after completion of construction. Continuing investments in CSO control will enable SPU to achieve compliance with the 2030 milestone.

Projects in the CSO Program include large infrastructure projects (e.g. storage structures, pipes, tunnels, wet weather treatment plants, stormwater separation, pump stations, etc.), smaller retrofits, construction of Green Stormwater Infrastructure (GSI) for CSO control, and development and

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implementation of regulatory required plans such as the Plan to Protect Seattle's Waterways. The largest project in the DWF CIP is the Ship Canal Water Quality Project (SCWQP). The SCWQP consists of a 2.7-mile-long, approximately 18-foot-diameter tunnel that, when completed, will capture and store approximately 75 million gallons of sewage and stormwater flows from Ballard, Fremont, Wallingford and Queen Anne.

Other key efforts in the program include Pump Station 13 Upgrade and Force Main Rehabilitation and Pump Station 22 Retrofit and Force Main Upgrade. Planning work is underway and will continue through the coming years for additional CSO reduction efforts to meet CSO Consent Decree compliance date requirements. SPU currently expects to spend approximately \$350 million over the next six years on CSO reduction projects. The majority of this spending is associated with the SCWQP.

Rehabilitation: This program consists of projects that repair, rehabilitate or replace existing drainage and wastewater assets to maintain or improve the current functionality level of the system. Assets that are addressed include:

- pump station structures, airlift conversions, major mechanical, ventilation and electrical components;
- drainage facilities including water quality structures, flow control structures and large surface water facilities; and
- drainage and wastewater conveyance pipes and structures (catch basins, maintenance holes and sandboxes).

Work within this program is a critical component to achieving SPU's Consent Decree target of four sanitary sewer overflows per 100 miles of sewer pipe annually. Individual projects are defined by the type and method of rehabilitation and/or replacement and include emergency rehabilitation, no-dig pipe lining rehabilitation by crews or contract, full mainline dig pipe replacement by contract, dig point sewer pipe and structure rehabilitation by crews or contract, and pump station repairs or replacement by crew or contractor.

This proposed budget will include a new drainage facility master project to rehabilitate or replace water quality structures, flow control structures and large surface water facilities by crew or contractor.

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 new pipes, ditches, culverts, detention facilities, and GSI that control and/or convey storm runoff to the ultimate discharge locations of creeks, lakes, and the Puget Sound. This program also involves protecting SPU drainage and wastewater infrastructure in landslide prone areas, both from impending small landslides, and providing drainage improvements where surface water generated from the City right-of way is contributing to small landslides. Lastly, this program also includes sewer capacity projects that reduce sewer backups and helps lower the risk of exceeding the Consent Decree target of four sanitary sewer overflows per 100 miles of sewer pipe per year. Major projects in this program include the Pearl Street SSO reduction project, the 12th Avenue drainage project, and the South Park Water Quality and Pump Station project. The South Park Water Quality Facility is a regulatory commitment within the Plan to Protect Seattle's Waterways.

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Shared Cost Projects: This program includes individual capital improvement projects which typically benefit multiple Lines of Business (LOB) (e.g. the Water LOB and the Drainage and Wastewater LOB) and whose costs are "shared," or paid for by more than one of SPU's utility funds.

The Adopted Budget for the Shared Cost program includes budgets for a number of interdepartmental projects including the Alaskan Way Viaduct and Seawall Replacement, Move Seattle, Center City Streetcar, and Sound Transit Link Light Rail. This BCL also includes funding for SPU Facility Improvements such as the South Operations Center, the North Operations Center, and a new dewatering facility near the South Transfer Station. Other programs in this BCL include DWW Heavy Equipment Purchases, 1% for the Arts, and several smaller projects.

Technology: The Technology CIP is managed in six program areas that 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; and
- Asset Information Management.

Investments in 2021 address several of SPU's key initiatives, including:

- Financial Management and Internal Controls;
- Operational Excellence and Performance Management;
- An Easy and Engaged Customer Experience;
- Data-driven Decision Support; and
- Project Delivery/Project Controls.

In 2022, SPU will continue focusing its technology spending on the highest priority business needs. These projects would primarily be within the Customer Contact and Billing Program, Project Delivery and Performance Program, as well as the Asset Information Management Program.

With the new Customer Information System (CIS) already in place, the next major projects for SPU within the Customer Contact and Billing Program include the Utilities Customer Self-Service Portal project, the Customer Contact and Billing Upgrade, CIS Workflow, and the CIS Reporting. Other projects slated would be enhancements to SPU's Enterprise Project Management System and the Development Systems Integration project, and the Maximo Business Intelligence upgrade along with other projects that have been deferred in previous years.

CIP Revenue Sources

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 SPU to fund the CIP. By 2007, a 3-year average of 25 percent of total CIP costs were funded by a cash contribution, with the remaining capital needs being debt financed.

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SPU's DWF CIP is funded largely by Drainage and Sewer ratepayers. SPU issues bonds, serviced by ratepayers that cover approximately 75 percent of the CIP, with the remainder funded by cash. DWF rates were approved by the Mayor and City Council in 2021 for the three-year period of 2022-2025.

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 the Washington State Department of Ecology for up to 50 percent of sediments cleanup project costs.

Summary of Upcoming Budget Issues and Challenges

The biggest challenge for DWF will be continuing to manage priority projects while still complying with regulatory requirements from the EPA, and Washington State Department of Ecology (DOE) - all within the financial limitations of the Fund.

The City negotiated a Consent Decree between the City, the EPA, and the DOJ for compliance with the CWA and State regulations. The Consent Decree was entered in court on July 3, 2013, and includes deadlines for development and implementation of the LTCP and will drive spending in the CSO Reduction Program over the next several years. The Consent Decree also includes requirements to implement a Capacity Management, Operations and Maintenance (CMOM) Program, which drives operations and maintenance spending and CIP spending in the Rehabilitation Program. Additionally, an NPDES permit for stormwater includes requirements to help protect local waterways and the Puget Sound from damaging pollutants and excessive runoff. This increased 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., GSI), CSO retrofits, pipe and pump station rehabilitation, and inflow/infiltration reduction.

- Detention: This focuses on storing stormwater and/or sewage during a rainfall event and can be accomplished through detention ponds (for stormwater), GSI (for stormwater) or underground tanks or tunnels (for both 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: This focuses on removing 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 untreated overflows by allowing stormwater to infiltrate slowly into the ground, cutting the volume of stormwater entering the system, and providing water quality treatment through natural processes as the polluted runoff comes in contact with the soil and vegetation. The use of GSI is required as part of development through Seattle's NPDES permit and Stormwater Code.
- CSO Retrofits: This focuses on optimizing the existing collection, pumping and storage systems, using low-cost repairs and modifications to reduce overflows to waterways.
- Pipe and Pump Station Rehabilitation: This 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.

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- Inflow/Infiltration Reduction: This focuses on filling in cracks in sewer lines that allow groundwater to 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 inflow/infiltration, it is possible to reduce the frequency and volume of SSOs and sewer backups.

Other challenges DWF faces in meeting its obligations:

- 1) Addressing public expectations: it is challenging to address public expectations around our basic service level programs, such as flooding and system capacity. SPU is unable to prioritize these programs at this time due to rate pressure caused by the significant costs of the federally mandated consent decree. The separated drainage and wastewater systems are at capacity during storm events, or lacking the fundamental infrastructure 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.
- 2) Construction Costs: due to market conditions and building large infrastructure in dense urban areas costs to construct drainage and wastewater infrastructure have increased significantly putting additional pressure on the portfolio.
- 3) Climate Change: increasing rainfall intensities resulting from climate change are increasing pressure on drainage and wastewater infrastructure leading to increased CSOs and driving the need for larger solutions and additional system improvements.

Future Projects/What is on the Horizon

Over the next 10 years, the DWF CIP will be driven largely by regulatory requirements, major transportation projects, and Operations Crew Facilities. Major projects include the completion of the Ship Canal Water Quality Project, sediment remediation, and other projects necessary under the LTCP/Plan to Protect Seattle's waterways, and localized flooding reduction in Broadview, and flood reduction and water quality improvements in South Park.

SPU is moving forward with a comprehensive planning effort within the [Shape Our Water](#) plan. The result of this effort will be an integrated system plan, to better identify the highest priority locations and potential funding and financing strategies. The Shape Our Water project will provide a 50-year plan for managing and improving Seattle's drainage and wastewater systems and increasing our water resilience. Through this planning effort, SPU will identify the partnerships, programs, and projects that will improve the performance and resilience of our drainage and wastewater systems while optimizing social and environmental co-benefits for the City. We are developing our plan through technical analysis, robust community engagement and an integrated approach to planning. By the end of 2023, SPU will have near- and long-term plans for drainage and wastewater programs, partnerships, and infrastructure investments over the next 50 years. This planning is part of building a better Seattle by providing drainage and wastewater services that are affordable, safe, green, and just in a climate uncertain future.

City Council Changes to the Proposed CIP

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The City Council made no change to the 2022-2027 Proposed CIP for the SPU Drainage and Wastewater Line of Business.

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Beneficial Uses Program

Project No:	MC-SU-C3317	BSL Code:	BC-SU-C333B
Project Type:	Ongoing	BSL Name:	Protection of Beneficial Uses
Project Category:	Improved Facility	Location:	Various
Current Project Stage:	N/A	Council District:	Multiple
Start/End Date:	N/A	Neighborhood District:	Multiple
Total Project Cost:	N/A	Urban Village:	Multiple

This ongoing project develops drainage related projects to improve the water quality, stream function and habitat in the streams and receiving waters of Seattle. Projects include stream and habitat restoration to reduce flooding, culvert repair and replacements to protect public safety, and green stormwater infrastructure projects to address flooding and control and clean runoff to streams.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	9,370	2,636	966	11,559	17,372	13,768	10,880	10,000	76,551
Total:	9,370	2,636	966	11,559	17,372	13,768	10,880	10,000	76,551

Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	9,370	2,636	966	11,559	17,372	13,768	10,880	10,000	76,551
Total:	9,370	2,636	966	11,559	17,372	13,768	10,880	10,000	76,551

O&M Impacts: This is an ongoing program and any O&M needed as a result of this program is included in SPU's Operating Budget.

Broadview Long-Term Plan

Project No:	MC-SU-C3812	BSL Code:	BC-SU-C380B
Project Type:	Ongoing	BSL Name:	Flooding, Sewer Backup & Landslide
Project Category:	Improved Facility	Location:	Broadview
Current Project Stage:	N/A	Council District:	Council District 5
Start/End Date:	N/A	Neighborhood District:	Northwest
Total Project Cost:	N/A	Urban Village:	Not in an Urban Village

The Broadview Long-Term Plan had been an ongoing program to address longstanding drainage and wastewater problems. The current funded capital project within that program is the 12th Avenue NW Drainage Basin project, which addresses public and private flooding problems in that area by providing stormwater detention and green infrastructure.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	8,572	5,329	4,158	185	-	-	-	-	18,245
Total:	8,572	5,329	4,158	185	-	-	-	-	18,245
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	8,572	5,329	4,158	185	-	-	-	-	18,245
Total:	8,572	5,329	4,158	185	-	-	-	-	18,245

O&M Impacts: This is an ongoing program and any O&M needed as a result of this program is included in SPU's Operating Budget.

Creek Culvert Replacement Program

Project No:	MC-SU-C3314	BSL Code:	BC-SU-C333B
Project Type:	Ongoing	BSL Name:	Protection of Beneficial Uses
Project Category:	Improved Facility	Location:	Various
Current Project Stage:	N/A	Council District:	Multiple
Start/End Date:	N/A	Neighborhood District:	Multiple
Total Project Cost:	N/A	Urban Village:	Multiple

This ongoing project provides for the repair and replacement of stream culverts that are part of SPU's critical drainage infrastructure. Culverts are prioritized for repair or replacement based on structural condition. Projects are then sequenced based on prioritization and other factors such as readiness to proceed, ability to address other drainage needs (e.g., flooding, maintenance), potential partnerships, synergies with other projects and availability of funding.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	5,667	2,032	1,272	1,224	5,893	7,525	10,095	10,077	43,785
Total:	5,667	2,032	1,272	1,224	5,893	7,525	10,095	10,077	43,785
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	5,667	2,032	1,272	1,224	5,893	7,525	10,095	10,077	43,785
Total:	5,667	2,032	1,272	1,224	5,893	7,525	10,095	10,077	43,785

O&M Impacts: This is an ongoing program and any O&M needed as a result of this program is included in SPU's Operating Budget.

CSO Facility Retrofit

Project No:	MC-SU-C3611	BSL Code:	BC-SU-C360B
Project Type:	Ongoing	BSL Name:	Combined Sewer Overflows
Project Category:	Improved Facility	Location:	Various
Current Project Stage:	N/A	Council District:	Multiple
Start/End Date:	N/A	Neighborhood District:	Multiple
Total Project Cost:	N/A	Urban Village:	Not in an Urban Village

This ongoing project retrofits, upgrades, and modifies existing Combined Sewer Overflows (CSO) reduction facilities in Seattle CSO basins. Retrofit projects cost-effectively optimize and maximize existing system operation to minimize CSOs to the greatest extent possible, reducing long term CSO storage needs. This project assists in achieving State Department of Ecology's requirement of an average of no more than one CSO event per outfall per year.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	23,505	5,369	112	-	-	-	-	-	28,987
Total:	23,505	5,369	112	-	-	-	-	-	28,987
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	23,505	5,369	112	-	-	-	-	-	28,987
Total:	23,505	5,369	112	-	-	-	-	-	28,987

O&M Impacts: This is an ongoing program and any O&M needed as a result of this program is included in SPU's Operating Budget.

Drainage Capacity Program

Project No:	MC-SU-C3802	BSL Code:	BC-SU-C380B
Project Type:	Ongoing	BSL Name:	Flooding, Sewer Backup & Landslide
Project Category:	Improved Facility	Location:	Various
Current Project Stage:	N/A	Council District:	Multiple
Start/End Date:	N/A	Neighborhood District:	Multiple
Total Project Cost:	N/A	Urban Village:	Multiple

This ongoing program provides flood control and local drainage and wastewater projects to improve system capacity or increase the existing level of service. Candidate projects are identified through DWW investigations, claims, complaints, studies, and prior planning. Drainage “spot” projects and small landslides prevention projects are also included within this program. The Localized Flood Control Program improves Drainage and Wastewater levels of service.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	22,587	3,195	2,978	4,249	4,069	6,929	7,065	16,725	67,798
Total:	22,587	3,195	2,978	4,249	4,069	6,929	7,065	16,725	67,798
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	22,587	3,195	2,978	4,249	4,069	6,929	7,065	16,725	67,798
Total:	22,587	3,195	2,978	4,249	4,069	6,929	7,065	16,725	67,798

O&M Impacts: This is an ongoing program and any O&M needed as a result of this program is included in SPU's Operating Budget.

Drainage Facilities Rehabilitation

Project No:	MC-SU-C3711	BSL Code:	BC-SU-C370B
Project Type:	Ongoing	BSL Name:	Rehabilitation
Project Category:	Improved Facility	Location:	Citywide
Current Project Stage:	N/A	Council District:	Multiple
Start/End Date:	N/A	Neighborhood District:	Multiple
Total Project Cost:	N/A	Urban Village:	Multiple

This new project provides for improvements and upgrades to SPU-owned drainage facilities including, but not limited to, detention/treatment ponds, flow control facilities, and water quality structures. Typical improvements may include, but are not limited to, the repair, rehabilitation, or replacement of drainage facilities.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	230	770	2,250	2,250	2,250	2,250	2,250	2,000	14,250
Total:	230	770	2,250	2,250	2,250	2,250	2,250	2,000	14,250
Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	230	770	2,250	2,250	2,250	2,250	2,250	2,000	14,250
Total:	230	770	2,250	2,250	2,250	2,250	2,250	2,000	14,250

O&M Impacts: This is an ongoing program and any O&M needed as a result of this program is included in SPU's Operating Budget.

Future CSO Projects

Project No:	MC-SU-C3612	BSL Code:	BC-SU-C360B
Project Type:	Ongoing	BSL Name:	Combined Sewer Overflows
Project Category:	Improved Facility	Location:	N/A
Current Project Stage:	N/A	Council District:	Multiple
Start/End Date:	N/A	Neighborhood District:	Multiple
Total Project Cost:	N/A	Urban Village:	Multiple

This project is for future combined sewer overflow (CSO) reduction projects that will be identified through the CSO Long-Term Control Plan (LTCP) Update. Future projects are most likely to include underground storage projects, wastewater lift station improvements, and/or wastewater conveyance system improvements. Planning for the projects began in 2018, and the projects should complete their construction by 2030.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	3,190	4,295	1,256	827	4,545	6,070	6,210	33,177	59,570
Total:	3,190	4,295	1,256	827	4,545	6,070	6,210	33,177	59,570
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	3,190	4,295	1,256	827	4,545	6,070	6,210	33,177	59,570
Total:	3,190	4,295	1,256	827	4,545	6,070	6,210	33,177	59,570

O&M Impacts: This is an ongoing program and any O&M needed as a result of this program is included in SPU's Operating Budget.

Green Stormwater Infrastructure Program

Project No:	MC-SU-C3610	BSL Code:	BC-SU-C360B
Project Type:	Ongoing	BSL Name:	Combined Sewer Overflows
Project Category:	Improved Facility	Location:	Citywide
Current Project Stage:	N/A	Council District:	Multiple
Start/End Date:	N/A	Neighborhood District:	Multiple
Total Project Cost:	N/A	Urban Village:	Multiple

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 bioretention 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.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	14,888	1,322	310	201	250	250	250	500	17,970
Total:	14,888	1,322	310	201	250	250	250	500	17,970
Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	14,888	1,322	310	201	250	250	250	500	17,970
Total:	14,888	1,322	310	201	250	250	250	500	17,970

O&M Impacts: This is an ongoing program and any O&M needed as a result of this program is included in SPU's Operating Budget.

GSI for Protection of Beneficial Uses

Project No:	MC-SU-C3316	BSL Code:	BC-SU-C333B
Project Type:	Ongoing	BSL Name:	Protection of Beneficial Uses
Project Category:	Improved Facility	Location:	Various
Current Project Stage:	N/A	Council District:	Multiple
Start/End Date:	N/A	Neighborhood District:	Multiple
Total Project Cost:	N/A	Urban Village:	Multiple

This ongoing program provides construction of Green Stormwater Infrastructure (GSI) within the separated stormwater system. Work includes right-of-way retrofits with bioretention and/or biofiltration for water quality treatment and flow control, as well as potential expansion of private property incentives for construction of properly sized and installed rain gardens or cisterns (RainWise program) into creek watersheds. The Natural Drainage Systems Projects within this program will achieve the water quality goals for the NDS Partnering Program identified in Seattle's Plan to Protect Seattle's Waterways (the Long Term Control Plan requirement within our Consent Decree) while coordinating with SDOT and community groups to deliver co-benefits such as sidewalks. The program also includes projects that are part of the SPU and Council created GSI in Urban Villages Program which will deliver multi-purpose green infrastructure projects in urban villages and urban centers through community partnerships and development synergies.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	23,474	16,832	18,673	26,690	24,179	28,717	20,260	16,600	175,424
Total:	23,474	16,832	18,673	26,690	24,179	28,717	20,260	16,600	175,424
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	23,474	16,832	18,673	26,690	24,179	28,717	20,260	16,600	175,424
Total:	23,474	16,832	18,673	26,690	24,179	28,717	20,260	16,600	175,424

O&M Impacts: This is an ongoing program and any O&M needed as a result of this program is included in SPU's Operating Budget.

¹Funds are appropriated through the Adopted Budget at the Budget Summary Level. All Amounts shown above are in thousands of dollars

Long Term Control Plan

Project No:	MC-SU-C3604	BSL Code:	BC-SU-C360B
Project Type:	Ongoing	BSL Name:	Combined Sewer Overflows
Project Category:	Improved Facility	Location:	Various
Current Project Stage:	N/A	Council District:	Multiple
Start/End Date:	N/A	Neighborhood District:	Not in a Neighborhood District
Total Project Cost:	N/A	Urban Village:	Not in an Urban Village

This project supports the ongoing implementation of SPU's Combined Sewer Overflow (CSO) Reduction Long Term Control Plan (LTCP) in accordance with SPU's 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, 2030. 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. The LTCP identified projects and programs to reduce the number and volume of CSOs, meet receiving water quality standards, and protect designated beneficial uses. The LTCP includes flow characterization, monitoring, and hydraulic modeling; development of 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.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	17,062	1,149	100	-	-	-	-	-	18,311
Total:	17,062	1,149	100	-	-	-	-	-	18,311
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	17,062	1,149	100	-	-	-	-	-	18,311
Total:	17,062	1,149	100	-	-	-	-	-	18,311

O&M Impacts: Any O&M needed as a result of this project will be included and/or identified as part of SPU's Operating Budget.

¹Funds are appropriated through the Adopted Budget at the Budget Summary Level. All Amounts shown above are in thousands of dollars

Outfall Rehabilitation Program

Project No:	MC-SU-C3708	BSL Code:	BC-SU-C370B
Project Type:	Ongoing	BSL Name:	Rehabilitation
Project Category:	Improved Facility	Location:	Various
Current Project Stage:	N/A	Council District:	Multiple
Start/End Date:	N/A	Neighborhood District:	Multiple
Total Project Cost:	N/A	Urban Village:	Multiple

This ongoing project 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 project will investigate the condition of each of the outfalls and complete an options analysis, followed by design, construction, and closeout activities.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	4,041	793	500	1,000	1,000	-	-	-	7,334
Total:	4,041	793	500	1,000	1,000	-	-	-	7,334
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	4,041	793	500	1,000	1,000	-	-	-	7,334
Total:	4,041	793	500	1,000	1,000	-	-	-	7,334

O&M Impacts: This is an ongoing program and any O&M needed as a result of this program is included in SPU's Operating Budget.

Pipe Renewal Program

Project No:	MC-SU-C3710	BSL Code:	BC-SU-C370B
Project Type:	Ongoing	BSL Name:	Rehabilitation
Project Category:	Improved Facility	Location:	Various
Current Project Stage:	N/A	Council District:	Multiple
Start/End Date:	N/A	Neighborhood District:	Multiple
Total Project Cost:	N/A	Urban Village:	Multiple

SPU operates and maintains approximately 1,423 miles of wastewater conveyance (combined and separated) pipe. The age of this infrastructure varies; however, significant portions of the system were constructed prior to 1950. This ongoing program repairs, replaces, rehabilitates and renews the conveyance system by SPU crews and various contracting construction projects.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	87,020	38,913	28,942	29,600	30,200	30,500	32,100	31,000	308,275
Total:	87,020	38,913	28,942	29,600	30,200	30,500	32,100	31,000	308,275

Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	87,020	38,913	28,942	29,600	30,200	30,500	32,100	31,000	308,275
Total:	87,020	38,913	28,942	29,600	30,200	30,500	32,100	31,000	308,275

O&M Impacts: This is an ongoing program and any O&M needed as a result of this program is included in SPU's Operating Budget.

Pump Station & Force Main Improvements

Project No:	MC-SU-C3703	BSL Code:	BC-SU-C370B
Project Type:	Ongoing	BSL Name:	Rehabilitation
Project Category:	Improved Facility	Location:	Various
Current Project Stage:	N/A	Council District:	Multiple
Start/End Date:	N/A	Neighborhood District:	Multiple
Total Project Cost:	N/A	Urban Village:	Not in an Urban Village

This ongoing project 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 project enhances and extends the useful life of the existing pump stations which protects water quality.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	24,297	8,099	8,993	14,110	7,242	7,394	8,596	-	78,731
Total:	24,297	8,099	8,993	14,110	7,242	7,394	8,596	-	78,731
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	24,297	8,099	8,993	14,110	7,242	7,394	8,596	-	78,731
Total:	24,297	8,099	8,993	14,110	7,242	7,394	8,596	-	78,731

O&M Impacts: This is an ongoing program and any O&M needed as a result of this program is included in SPU's Operating Budget.

S Henderson CSO Storage

Project No:	MC-SU-C3609	BSL Code:	BC-SU-C360B
Project Type:	Discrete	BSL Name:	Combined Sewer Overflows
Project Category:	Improved Facility	Location:	S Henderson St.
Current Project Stage:	Stage 6 - Closeout	Council District:	Council District 2
Start/End Date:	2001 - 2019	Neighborhood District:	Southeast
Total Project Cost:	\$59,601	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.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	59,617	-	-	-	-	-	-	-	59,617
Total:	59,617	-	-	-	-	-	-	-	59,617

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	59,617	-	-	-	-	-	-	-	59,617
Total:	59,617	-	-	-	-	-	-	-	59,617

O&M Impacts: Any O&M needed as a result of this project will be included and/or identified as part of SPU's Operating Budget.

Sanitary Sewer Overflow Capacity

Project No:	MC-SU-C3804	BSL Code:	BC-SU-C380B
Project Type:	Ongoing	BSL Name:	Flooding, Sewer Backup & Landslide
Project Category:	Improved Facility	Location:	Various
Current Project Stage:	N/A	Council District:	Multiple
Start/End Date:	N/A	Neighborhood District:	Multiple
Total Project Cost:	N/A	Urban Village:	Multiple

This ongoing program is designed to improve sanitary sewer service to Seattle customers by addressing current and projected capacity limitations of the wastewater system through capital project 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.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	13,036	11,807	3,799	2,800	7,300	7,300	7,300	22,200	75,542
Total:	13,036	11,807	3,799	2,800	7,300	7,300	7,300	22,200	75,542

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	13,036	11,807	3,799	2,800	7,300	7,300	7,300	22,200	75,542
Total:	13,036	11,807	3,799	2,800	7,300	7,300	7,300	22,200	75,542

O&M Impacts: This is an ongoing program and any O&M needed as a result of this program is included in SPU's Operating Budget.

Sediment Remediation

Project No:	MC-SU-C3503	BSL Code:	BC-SU-C350B
Project Type:	Ongoing	BSL Name:	Sediments
Project Category:	Improved Facility	Location:	Various
Current Project Stage:	N/A	Council District:	Multiple
Start/End Date:	N/A	Neighborhood District:	Multiple
Total Project Cost:	N/A	Urban Village:	Not in an Urban Village

This ongoing program provides for City of Seattle participation in cleanup of contaminated sediment sites at multiple locations across Seattle 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.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	44,494	3,867	4,560	6,789	13,349	17,809	11,543	12,369	114,782
Total:	44,494	3,867	4,560	6,789	13,349	17,809	11,543	12,369	114,782

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	44,494	3,867	4,560	6,789	13,349	17,809	11,543	12,369	114,782
Total:	44,494	3,867	4,560	6,789	13,349	17,809	11,543	12,369	114,782

O&M Impacts: This is an ongoing program and any O&M needed as a result of this program is included in SPU's Operating Budget.

Ship Canal Water Quality Project

Project No:	MC-SU-C3614	BSL Code:	BC-SU-C360B
Project Type:	Discrete	BSL Name:	Combined Sewer Overflows
Project Category:	Improved Facility	Location:	West Ship Canal
Current Project Stage:	Stage 5 - Construction	Council District:	Multiple
Start/End Date:	2014 - 2027	Neighborhood District:	Multiple
Total Project Cost:	\$570,000	Urban Village:	Multiple

The City of Seattle (the City) has prepared a comprehensive strategy, called The Plan to Protect Seattle's Waterways (the Plan) to reduce overflows and discharge of pollutants from combined sewers and the storm drain system. The City must control sewer discharges to protect public health, the environment, to comply with the Clean Water Act, the United States District Court Consent Decree, and State regulations. On May 29, 2015, the City submitted the plan to EPA and Ecology for approval. The largest project identified in the Plan is the Ship Canal Water Quality Project. This project is a joint project between SPU and King County to design and construct a storage tunnel to capture Combined Sewer Overflows for 5 SPU outfalls and two King County outfalls. The tunnel will be 2.7 miles long and run from Wallingford to Ballard. The tunnel will be approximately 18 feet in diameter and have a storage volume of about 30 million gallons. The purpose of the project is to bring all seven outfalls into compliance with the State's control standard of one untreated overflow per year per outfall on a 20-year moving average. Note all City/County funding allocations are for informational purposes, only. Actual resource allocations will be determined through ongoing project governance agreements and interagency coordination between the City and King County.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	141,213	84,781	66,806	88,452	55,522	20,104	1,729	159	458,766
King County Funds	21,756	40,160	29,567	17,507	10,627	5,940	-	-	125,556
Total:	162,969	124,941	96,373	105,958	66,149	26,044	1,729	159	584,322
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	162,969	124,941	96,373	105,958	66,149	26,044	1,729	159	584,322
Total:	162,969	124,941	96,373	105,958	66,149	26,044	1,729	159	584,322

O&M Impacts: Any O&M needed as a result of this project will be included and/or identified as part of SPU's Operating Budget.

¹Funds are appropriated through the Adopted Budget at the Budget Summary Level. All Amounts shown above are in thousands of dollars

South Park Stormwater Program

Project No:	MC-SU-C3806	BSL Code:	BC-SU-C380B
Project Type:	Discrete	BSL Name:	Flooding, Sewer Backup & Landslide
Project Category:	Improved Facility	Location:	698 S Riverside DR
Current Project Stage:	Stage 3 - Design	Council District:	Council District 1
Start/End Date:	2006 - 2025	Neighborhood District:	Greater Duwamish
Total Project Cost:	\$134,876	Urban Village:	Greater Duwamish

This program constructs a pump station (PS), a water quality facility (WQF), and additional drainage conveyance in South Park. The PS will allow the existing storm drain outfall to drain the system when the tide is high and will support future drainage projects. The WQF will treat most stormwater flows from the basin, reducing pollutant loading to the Duwamish. Excessive flows will bypass the WQF and be pumped directly to the river. This program was formerly titled "South Park Pump Station."

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	23,212	23,008	19,032	6,058	18,819	4,600	18,500	9,000	122,229
Total:	23,212	23,008	19,032	6,058	18,819	4,600	18,500	9,000	122,229

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	23,212	23,008	19,032	6,058	18,819	4,600	18,500	9,000	122,229
Total:	23,212	23,008	19,032	6,058	18,819	4,600	18,500	9,000	122,229

O&M Impacts: Any O&M needed as a result of this project will be included and/or identified as part of SPU's Operating Budget.

Thornton Confluence Improvement

Project No:	MC-SU-C3811	BSL Code:	BC-SU-C380B
Project Type:	Discrete	BSL Name:	Flooding, Sewer Backup & Landslide
Project Category:	Improved Facility	Location:	Thornton Creek
Current Project Stage:	Stage 6 - Closeout	Council District:	Multiple
Start/End Date:	2008 - 2019	Neighborhood District:	Not in a Neighborhood District
Total Project Cost:	\$7,907	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.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Rates	7,607	-	-	-	-	-	-	-	7,607
Total:	7,607	-	-	-	-	-	-	-	7,607
Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Drainage and Wastewater Fund	7,607	-	-	-	-	-	-	-	7,607
Total:	7,607	-	-	-	-	-	-	-	7,607

O&M Impacts: Any O&M needed as a result of this project will be included and/or identified as part of SPU's Operating Budget.

