

Seattle Public Utilities

Water

Overview

SPU delivers an average of approximately 124 million gallons of drinking water per day to 1.5 million people and businesses in Seattle and 21 suburban water districts and municipalities, plus the Cascade Water Alliance. The water system infrastructure includes:

- The Cedar and South Fork Tolt supply sources (dams, reservoirs, etc.);
- Three groundwater wells;
- Two primary water treatment plants;
- 11 booster chlorination facilities;
- 325 million gallons of treated water storage;
- 30 pump stations;
- 1,823 miles of transmission and distribution system pipelines;
- Almost 200,000 meters and service connections;
- More than 17,000 distribution system valves;
- About 19,000 hydrants;
- Monitoring and control systems; and,
- Various buildings and other related facilities.

In addition to replacing and improving the supply, treatment, transmission and distribution systems, the capital program includes investments in watershed stewardship projects, Cedar River Watershed Habitat Conservation Plan implementation, water conservation programs, vehicles, heavy equipment, and technology.

Planned spending in the Water Capital Improvement Program (CIP) is \$757 million over the next six years. Major projects include:

- Water system improvements associated with transportation projects, including Move Seattle; Madison Street Bus Rapid Transit; East Marginal Way Heavy Haul Corridor; Roosevelt Eastlake Rapid Ride;
- Operational and Regional Facility construction;
- Replacement of the Bitter Lake and Lake Forest Park Reservoirs covers;
- Seismic upgrades of the Eastside and Riverton Reservoirs, Magnolia Tank, and the Cedar River Transmission Pipeline near Renton;
- Pump station improvements at Spokane Pump Station;
- Addressing a slide area through which the Tolt Pipelines pass, upstream of the Tolt Treatment Plant.

The 2022-2027 Adopted CIP also includes many ongoing programs, such as improving the distribution and transmission system water mains, valves, steel storage tanks, and pump stations; watershed stewardship and conservation projects and programs; and facilities, vehicles, and heavy equipment investments. In addition, it includes continued funding for the water system seismic improvement program and funding for dam safety studies and upgrade projects.

SPU funds Water capital projects through a combination of cash and the issuance of bonds. The primary source of cash and debt repayment funds come from sale of water charged to retail and wholesale customers in the region. SPU's approved 2019 Water System Plan, a Washington Department of Health (WDOH) regulatory requirement, describes how SPU meets current and future water demands, ensures

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high quality drinking water, and invests in and maintains its water system at the lowest life-cycle cost for the next 20 years.

Thematic Priorities

The overarching goal of the Water CIP is to ensure that the water system is properly maintained, upgraded, and expanded to reliably deliver high-quality, safe drinking water to customers, protect the environment, and comply with regulations. The primary themes driving the CIP in the next six years are asset preservation, health and human safety, environmental sustainability, and race and social justice.

- SPU is committed to making **asset preservation** investments to create or enhance operational efficiency. SPU uses asset management principles to determine the timing of rehabilitation or replacement of its infrastructure. Projects that fall into this category vary, ranging from water main replacement related to transportation projects to rehabilitation of steel storage facilities.
- SPU's commitment to **health and human safety** is also addressed through SPU's reservoir covering projects. Consistent with Ordinance 120899 and required by state regulators, SPU has finished replacing its open finished drinking water reservoirs with underground structures that will improve water quality and system security. Additionally, SPU will begin constructing new covers on the Lake Forest Park and Bitter Lake reservoirs to replace the existing floating covers that will have reached the end of their useful life. Finally, as a result of a recently completed seismic study, two reservoirs will remain uncovered – Roosevelt and Volunteer – and are disconnected from the drinking water system, filled with treated water and available for emergency storage needs after major emergencies such as earthquakes.
- SPU is committed to **environmental sustainability**. This can best be seen in SPU's responsibilities as outlined in the 50-year Habitat Conservation Plan (HCP), an agreement between local, state and federal agencies. The HCP seeks to ensure the long-term ecological integrity of the Cedar River Watershed, which supplies the majority of the City's drinking water. It simultaneously addresses the needs of protected wildlife species in and along the Cedar River. Investments in the regional conservation and low-income conservation programs also help in management of our natural resources, while helping customers reduce their utility bills.
- SPU is also committed to **race and social justice**. One example of this commitment is the Low-Income Water Conservation Program. This ongoing program provides water use efficiency resources to the City's low-income customers to implement water conservation measures. Typical improvements consist of installing water-efficient fixtures, primarily low water use toilets, but also faucet aerators and common-area efficient clothes washers.

Project Selection Criteria

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 three categories – Priorities 1, 2 and 3, with 1 being the most important and critical. Some projects are part of an externally driven project. Typically, SPU lacks control over the timing of externally driven projects.

Priority rankings are based on the following set of criteria:

- **Regulatory Mandates, Legal Agreements:** The degree to which a 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 highly ranked projects in this category include the dam safety upgrades and the Habitat Conservation Program.
- **External Drivers:** SPU’s responsiveness to, or engagement with, 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 SR 520 Rest of the West phase and the Bitter Lake Reservoir improvement project.
- **Infrastructure:** How a project addresses infrastructure conditions or vulnerabilities. Examples of highly ranked projects in this category include watermain Rehabilitation, seismic upgrades and Tank Improvements programs.
- **Level of Service:** The importance of a project in providing or improving services to customers. Examples of highly ranked projects in this category include the Water Infrastructure – New Taps and Service Renewals 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, outside funding.

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 GM/CEO 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.

In addition to SPU’s internal review process described above, most of SPU’s wholesale customers participate in an Operating Board, and through that Board, conduct an annual review of a subset of SPU’s CIP projects, particularly those involving regional assets and impacting wholesale rates.

CIP Spending by Major Category

(In '000s; total may not sum due to rounding)

Water Fund	2022	2023	2024	2025	2026	2027	Total
Distribution	35,688	44,375	50,675	51,248	59,406	70,448	311,840
Transmission	16,514	12,604	17,623	22,368	9,407	7,639	86,155
Watershed Stewardship	2,170	414	335	328	958	425	4,630
Water Quality & Treatment	3,605	2,120	5,261	23,750	20,250	23,000	77,986
Water Resources	7,053	10,646	9,989	30,970	28,375	15,764	102,796
Habitat Conservation Program	2,604	1,126	1,030	925	1,058	75	6,817
Shared Cost Projects	22,277	28,526	43,541	35,777	16,605	17,919	164,644
Technology	4,244	4,244	4,244	4,243	4,244	4,244	25,461
Grand Total	94,154	104,054	132,698	169,608	140,302	139,513	780,329

Distribution: Projects and programs in this category relate to rehabilitation and improvements to the City's water mains and appurtenances, water storage tanks, pump stations, and other facilities that are part of the system that distributes treated water throughout the City of Seattle and to retail customers outside of the City.

Decreases in the **Distribution BCL** in 2022 are primarily due to shifting seismic improvements and pump station improvements to later years in the 6-year CIP. These decreases are offset by increased investments in water main extension projects at multiple worksites across Seattle's retail area. In 2022 to 2027, the budget increases to rehabilitate and replace water mains because more of this large asset class is reaching the end of its service life.

Transmission: The purpose of this program category is to rehabilitate and improve the City's large transmission pipelines that bring untreated water to the treatment facilities and convey treated water from the treatment facilities to Seattle and to our wholesale customers that purchase a portion of SPU's supply for their retail customers.

Increases in the **Transmission BCL** in 2022 are primarily due to construction of an approximately 2550-foot-long section of rehabilitated raw water pipeline to re-establish functionality and dependability of this raw water transmission supply line through an area of historic slope instability and seismic vulnerability, and scope changes for 430 Pipeline Improvement project that includes more pipeline length and mortar repairs after pipeline inspection.

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Watershed Stewardship: Projects and programs in this category improve protection of our sources of drinking water, provide habitat protection and restoration, sustain the environment, and enhance environmental quality, both locally and regionally. Most of the projects in this program category are located within the Cedar and Tolt River municipal watersheds.

- The Cedar River Municipal Watershed is 90,638 acres of land owned by the City of Seattle and provides about 65% of the drinking water used by 1.5 million people in the greater Seattle area supplied by SPU. The City of Seattle is required by law to maintain a clean drinking water supply. To that end, the City restricts public access and management is guided by a Habitat Conservation Plan. The Cedar River Watershed is an unfiltered surface water supply which produces some of the best water in the world.
- The South Fork Tolt River Watershed is the second supply watershed in SPU's freshwater supply system, providing roughly 35% of SPU's drinking water supply. Located in the foothills of the Cascades in east King County, it first came on-line in 1964, and since 1989 has also supported a small Seattle City Light hydro-electric facility. The Tolt Treatment Facilities, which includes filtration, can provide up to 120 million gallons of drinking water per day.

Increases in the **Watershed Stewardship BCL** in 2022 are due largely to the S. Fork Tolt River Watershed, which is required to satisfy State regulatory requirements. In addition to providing fish passage, this program will reduce the potential for excessive sedimentation, catastrophic infrastructure (i.e. forest road) failure, and impacts to drinking water quality. The increase of \$425K in 2027 is for anticipated bridge replacement project and road work.

Water Quality and Treatment: The purpose of this program category is to construct, rehabilitate or improve water treatment facilities, and cover the remaining open water reservoirs. State and federal drinking water regulations and public health protection are key drivers of investments in this program category. To comply with regulations, SPU has invested hundreds of millions of dollars in building two new primary treatment facilities and covering two and burying five reservoirs that contain treated water that is distributed directly to Seattle retail and wholesale customers for drinking purposes.

The shift in the **Water Quality & Treatment BCL** in 2022-2024 to 2025-2027 is due to an updated cashflow projection for the Lake Forest Park Reservoir Covering Project and Bitter Lake Reservoir Covering Project. The plan is for another floating cover at Lake Forest Park instead of the aluminum roof previously considered. Construction of the Lake Forest Park Reservoir replacement cover began in 2021 and will be completed in 2022. The Bitter Lake Reservoir improvement is anticipated to start towards the end of 2023.

Water Resources: The purpose of this program category is to manage our water resources to meet anticipated demands and in-stream flow requirements – the amount of water provided to the river to support aquatic habitat, wetlands, riparian vegetation, and water quality – and to promote residential and commercial water conservation. The requirements for in-stream flows are detailed in agreements with state and federal agencies and include provisions for minimum stream flows in the Cedar and South Fork Tolt Rivers. Examples of the types of programs/projects in this category include the Dam Safety Program and Sockeye Broodstock Weir and other improvements associated with the hatchery and fish ladder.

Decreases in the **Water Resources BCL** in 2022 are due to the Broodstock Collection Facility Retrofit being delayed. The increase in 2023-27 are due to dam safety projects such as the Tolt Early Warning System

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Upgrade and Tolt Debris Boom, which are both to comply with Federal Energy Regulatory Commission (FERC) requirements. The \$25M increase in 2025 and 2026 are a result of projects under development in the Dam Safety program, one of which is also a FERC requirement.

Habitat Conservation Program: This program category includes projects and programs directly related to implementation of the Cedar River Watershed Habitat Conservation Plan. The Habitat Conservation Plan benefits the utility and the ratepayers it serves by providing legal certainty under the Endangered Species Act for the City's continued operations within the Cedar River Watershed, which supplies 65% of the SPU's drinking water. The Habitat Conservation Program requires SPU to invest \$100 million over 50 years, with \$60 million in the first decade, on approximately 30 capital projects and 60 O&M activities in three areas: management of in-stream flows for people and fish, forest and land conservation activities, and mitigation for the blockage of salmon and steelhead fish as they return to the Cedar River to spawn. The Water Fund's CIP projects in this area are grouped into eight categories: road improvements and decommissioning, stream and riparian restoration, upland forest restoration, Landsburg fish passage, Cedar River sockeye hatchery, improvements to the Ballard Locks for fish passage and water conservation, fish habitat protection and restoration in the lower Cedar River below the municipal watershed boundary, and evaluation of Cedar permanent dead storage in Chester Morse Lake.

Increases in the **Habitat Conservation Program BCL** in 2022 are due to the Downstream Fish Habitat program. These funds will be expended on land acquisition and restoration to improve salmon habitat as part of the Cedar River HCP commitments. All expenditures except for those offset by grant revenue are HCP mitigation requirements.

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) and whose costs are "shared," or paid for, by more than one of SPU's utility funds. For the next six years, the Shared Cost program includes funding for several interdepartmental programs and projects including Move Seattle, SR520 Rest of the West and the Roosevelt Eastlake Rapid Ride. Funding is also included for SPU's Heavy Equipment Purchases and several smaller projects.

Decrease in the **Shared Cost Projects BCL** in 2022 is primarily due to delays in the Center City Streetcar. Projects in the Move Seattle Levy, heavy equipment purchases and other facility construction projects such as retrofits/upgrades to older operational buildings are continued in the out-years.

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 2022 address several of SPU's key initiatives, including:

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

In 2022, SPU will focus 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 already in place, the next major projects for SPU within the Customer Contact and Billing Program would be the Utilities CSS Portal project as well as other projects such as CIS Workflow and the CIS Reporting. Other projects slated would be enhancements to SPU's Enterprise Project Management System (EPMS) as well as the Development Systems Integration project, along with other projects that have been deferred in previous years

CIP Revenue Sources

SPU's Water CIP is funded largely by Water ratepayers. About 75% of the Water Fund's Operating revenues come from retail ratepayers, split approximately evenly between residential and commercial customers. Another 20% of the Water Fund's overall revenues come from wholesale purveyors who serve surrounding jurisdictions. The remaining 5% consists of non-rate revenue, which include such items as tap fees received. SPU issues bonds, serviced by ratepayers, which in the current period covers 70% of the CIP, with the remainder funded by cash, i.e.: directly by ratepayer revenue.

SPU actively seeks grants, low interest loans, and other funding sources whenever possible. And, as mentioned above, SPU also receives payments from developers that are intended to offset the cost of installing new taps when they connect newly constructed buildings to SPU watermain. These "tap fees" are a volatile revenue source, trending with the construction-related sectors of the economy.

Summary of Upcoming Budget Issues and Challenges

These important issues create financial challenges and opportunities for the Water Fund in the future.

Water Conservation: The City of Seattle, Seattle residents and businesses, and Seattle's wholesale water partners have worked together to reduce water consumption. As a result, consumption has declined since the 1980's and is projected to flatten out. In 2018, consumption was 30% below the peak of 1984, despite serving a larger population. Seattle currently has some of the lowest per capita water consumption in the nation. While this accomplishment helps contribute to a sustainable future for the region, it puts financial pressure on the utility because fixed costs, including the costs of the CIP, need to be distributed across fewer units of water sold. This trend also puts pressure on SPU management and employees to deliver services as efficiently as possible. In the future, it may also influence water rate design.

Transitioning from Major Projects toward Asset Management: The Water Fund continues its transition from a period of building large capital projects to a time of physical infrastructure rehabilitation including those driven by dam safety regulations and seismic upgrades. Past investments include water treatment facilities for the Tolt and Cedar water supplies, coverings for seven open reservoirs in response to

federal/state regulations, construction of a second pipeline for the Tolt system, and investments to meet federal requirements embodied in the Cedar River Watershed Habitat Conservation Plan. These investments helped secure the supply and distribution of high-quality drinking water and provide appropriate stewardship of the watersheds consistent with federal and state requirements.

The City of Seattle is now better positioned than many water utilities in the nation in terms of regulatory compliance. Residents, businesses and rate payers will benefit from these investments for years to come. Although the focus will shift from major projects to physical infrastructure rehabilitation, the utility will be paying debt service over the next several budget cycles on the bonds that were issued for these major projects. Against the backdrop of these trends, the 2022-2027 Water CIP has been developed to:

- Provide for water system modifications associated with various Seattle and regional transportation projects;
- Recognize the need to look harder at the water system's resiliency in a major earthquake event and begin to make strategic investments to reduce risk;
- Preserve the transmission and distribution systems through careful investment in aging infrastructure renewal;
- Provide stewardship of the watersheds, to ensure a reliable source of high-quality drinking water;
- Comply with federal and state regulations governing water quality, system reliability, and habitat protection in the watersheds in which SPU operates; and
- Prioritize projects to deliver on infrastructure and regulatory requirements within the limited resources of the Water Fund.

Future Projects/What is on the Horizon

The Water CIP has completed a multi-decade period of investments in major infrastructure projects. These projects have positioned SPU to meet drinking water quality and environmental regulations. Projects have included the Tolt and Cedar Water Treatment Facilities, Tolt Pipeline 2, Reservoir Covering Program, the Cedar River Watershed HCP, and a new Water Quality Laboratory. SPU has also made a major reinvestment in the Supervisory Control and Data Acquisition System which is used to monitor and control the regional and retail water system. However, these investments have also led to increasing debt service payments that constrain future budgets.

The 6-year CIP funds the work to replace covers at the Lake Forest Park and Bitter Lake reservoirs, address the Tolt Pipelines slide area, and construct Operational and Regional Facilities. Beyond these projects, emphasis will be on asset management-based rehabilitation and replacement of distribution system infrastructure (e.g., mains, valves, hydrants, meters), as well as water system infrastructure improvements related to transportation projects, such as the Move Seattle Levy.

Additionally, SPU recognizes the need to look harder at the water system's resiliency in a major earthquake event and begin to make strategic investments to reduce risk. SPU completed a seismic analysis in 2018 that defined recovery time to agreed levels of service and developed a prioritized list of recommended investments to improve resiliency. Initial funding to begin implementation of those improvements is included in this capital program (Eastside and Riverton Reservoirs, Magnolia Tank, and the Cedar River Transmission Pipeline near Renton) while others will be developed over the course of the next several decades. Likewise, initial funding to plan and begin implementation of Dam Safety programs, including those tied to regulatory requirements and seismic risk, are included in this capital program.

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City Council Changes to the Proposed CIP

The City Council made no changes to the 2022-2027 Proposed CIP for the SPU Water Line of Business.

Ballard Locks Improvements

Project No:	MC-SU-C1606	BSL Code:	BC-SU-C160B
Project Type:	Discrete	BSL Name:	Habitat Conservation Program
Project Category:	Improved Facility	Location:	NW 54th St 30th Ave NW
Current Project Stage:	Stage 5 - Construction	Council District:	Council District 6
Start/End Date:	2000 - 2025	Neighborhood District:	Ballard
Total Project Cost:	\$1,302	Urban Village:	Ballard-Interbay Northend

This project provides improvements at the Ballard Locks to upgrade conditions for salmon. Improvements are focused on conserving the amount of freshwater needed to operate the locks to reduce the demand for freshwater from the Cedar River and increase the availability of freshwater for salmon. This project is a requirement of the Cedar River Habitat Conservation Plan (HCP).

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	503	160	165	170	175	180	185	-	1,538
Total:	503	160	165	170	175	180	185	-	1,538
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	503	160	165	170	175	180	185	-	1,538
Total:	503	160	165	170	175	180	185	-	1,538

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.

Beacon Reservoir Seismic

Project No:	MC-SU-C1408	BSL Code:	BC-SU-C140B
Project Type:	Discrete	BSL Name:	Water Quality & Treatment
Project Category:	Improved Facility	Location:	S Spokane St and Beacon Ave S
Current Project Stage:	Stage 5 - Construction	Council District:	Council District 2
Start/End Date:	2001 - 2019	Neighborhood District:	Greater Duwamish
Total Project Cost:	\$11,601	Urban Village:	Not in an Urban Village

This project includes Seismic Retrofits at Beacon Reservoir using the Soil-Structure Interaction Seismic Analysis approach for design to determine its seismic performance during ground shaking and to assess whether or not a seismic deficiency exists.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	11,342	-	-	-	-	-	-	-	11,342
Total:	11,342	-	-	-	-	-	-	-	11,342

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	11,342	-	-	-	-	-	-	-	11,342
Total:	11,342	-	-	-	-	-	-	-	11,342

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.

Cathodic Protection

Project No:	MC-SU-C1208	BSL Code:	BC-SU-C120B
Project Type:	Ongoing	BSL Name:	Transmission
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:	Not in an Urban Village

This ongoing program installs corrosion protection systems that prevent external corrosion of water transmission pipelines located in Seattle and throughout King County. The cathodic protection systems extend the life of buried pipelines made of ductile iron, steel, and concrete cylinder pipe.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	3,783	3,073	3,410	1,944	1,363	3,284	862	4,054	21,772
Total:	3,783	3,073	3,410	1,944	1,363	3,284	862	4,054	21,772

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	3,783	3,073	3,410	1,944	1,363	3,284	862	4,054	21,772
Total:	3,783	3,073	3,410	1,944	1,363	3,284	862	4,054	21,772

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.

Cedar Bridges

Project No:	MC-SU-C1307	BSL Code:	BC-SU-C130B
Project Type:	Ongoing	BSL Name:	Watershed Stewardship
Project Category:	Improved Facility	Location:	Cedar River Watershed
Current Project Stage:	N/A	Council District:	Outside City of Seattle
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 ongoing program replaces aging bridges and related structures, such as abutments, asphalt approaches, and guardrails in the Cedar River Watershed. This project improves aging bridge assets on priority roads in the watershed transportation system to provide City employees, City contractors, and visitors with safe and adequate access to City water supply and hydroelectric assets while minimizing and reducing environmental impacts over time. Work in this program area also maintains compliance with state laws, safety and environmental regulations, and tribal access agreements including Washington Department of Natural Resources (WDNR) forest practice regulations, and Washington Department of Health (DOH) Watershed Protection Plan regulations.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	1,787	950	400	10	100	135	351	322	4,055
Total:	1,787	950	400	10	100	135	351	322	4,055

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	1,787	950	400	10	100	135	351	322	4,055
Total:	1,787	950	400	10	100	135	351	322	4,055

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.

Chamber Upgrades-Distribution

Project No:	MC-SU-C1137	BSL Code:	BC-SU-C110B
Project Type:	Ongoing	BSL Name:	Distribution
Project Category:	Improved Facility	Location:	Citywide
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:	Multiple

This ongoing program improves access to water distribution chambers throughout the water distribution system. The replacement and/or enlargement of the entrance to distribution chambers improves the health and safety of workers who need to access chambers and meets Occupational, Safety, and Health Administration (OSHA) and Washington Safety and Health Administration (WSHA) safety and health requirements.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	255	60	5	5	5	5	5	5	345
Total:	255	60	5	5	5	5	5	5	345
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	255	60	5	5	5	5	5	5	345
Total:	255	60	5	5	5	5	5	5	345

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.

Dam Safety

Project No:	MC-SU-C1506	BSL Code:	BC-SU-C150B
Project Type:	Ongoing	BSL Name:	Water Resources
Project Category:	Improved Facility	Location:	Various
Current Project Stage:	N/A	Council District:	Outside City of Seattle
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 ongoing program maintains the safety of SPU's water supply dams in the Cedar River and South Fork Tolt River Municipal Watersheds and the in-town reservoir dams. Typical improvements may include, but are not limited to, upgrades to the dams' failure warning systems, spillways, outlet works, piping, and other civil, mechanical, and structural systems. This program ensures the continuing safe functioning, operation and monitoring of SPU's water supply dams and associated facilities per Federal Energy Regulatory Commission (FERC), state and local regulations, and SPU requirements to prevent loss of life and/or property damage and loss of SPU's ability to deliver reliable drinking water supply to its customers.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	3,580	5,059	4,939	8,285	6,281	25,413	25,663	12,633	91,853
Total:	3,580	5,059	4,939	8,285	6,281	25,413	25,663	12,633	91,853
Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	3,580	5,059	4,939	8,285	6,281	25,413	25,663	12,633	91,853
Total:	3,580	5,059	4,939	8,285	6,281	25,413	25,663	12,633	91,853

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.

Distribution Infrastructure

Project No:	MC-SU-C1138	BSL Code:	BC-SU-C110B
Project Type:	Ongoing	BSL Name:	Distribution
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 funding for modifications and relocations of existing Distribution System assets resulting from third party project impacts to Distribution System infrastructure located in the right-of-way or on public property. The costs are recovered from third parties and primarily other public utilities and agencies through Memorandums of Agreement and standard charges. This program covers all Distribution System modifications and relocations that are funded by third parties excluding Water main Extension project projects. The benefit of this project is accommodation of third party development by relocating or modifying existing Distribution System infrastructure, while retaining a Distribution System that continues to provide cost effective service to the ratepayer.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	413	113	117	120	122	124	127	129	1,265
Total:	413	113	117	120	122	124	127	129	1,265
Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	413	113	117	120	122	124	127	129	1,265
Total:	413	113	117	120	122	124	127	129	1,265

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.

Distribution System Improvements

Project No:	MC-SU-C1128	BSL Code:	BC-SU-C110B
Project Type:	Ongoing	BSL Name:	Distribution
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 improves service reliability, pressure, capacity, and fire flow in the City's water distribution system. Typical improvements may include, but are not limited to, booster pump station installation, creation of new service zones, and tank elevation or replacement, as well as additional water main pipelines and pressure reducing valves. These improvements to service levels meet Washington Department of Health (DOH) regulations and SPU's Distribution System Pressure Policy to provide greater than 20 psi service pressure. These improvements provide higher flow of water for fire protection which improves public safety and results in smaller and shorter fires.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	244	2,350	2,498	1,798	2,270	2,000	2,000	4,000	17,161
Total:	244	2,350	2,498	1,798	2,270	2,000	2,000	4,000	17,161

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	244	2,350	2,498	1,798	2,270	2,000	2,000	4,000	17,161
Total:	244	2,350	2,498	1,798	2,270	2,000	2,000	4,000	17,161

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.

Distribution System In-Line Gate Valve

Project No:	MC-SU-C1136	BSL Code:	BC-SU-C110B
Project Type:	Ongoing	BSL Name:	Distribution
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 replaces line valves in the water distribution system throughout the City of Seattle that fail or are obsolete due to age or lack of replacement parts. The replacement of these gate valves extends the useful life of the water main and restores the performance of the water distribution system. This ongoing program also adds valves within the system to enhance system performance, enhance operational control, and reduce the number of customers whose service is interrupted during a water main shut down.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	1,902	366	300	300	300	300	300	300	4,067
Total:	1,902	366	300	300	300	300	300	300	4,067
Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	1,902	366	300	300	300	300	300	300	4,067
Total:	1,902	366	300	300	300	300	300	300	4,067

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.

Distribution System Seismic Improvements

Project No:	MC-SU-C1139	BSL Code:	BC-SU-C110B
Project Type:	Ongoing	BSL Name:	Distribution
Project Category:	Rehabilitation or Restoration	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 upgrade critical distribution facilities that are seismically vulnerable and will remain functional after a major earthquake. Facilities that will be upgraded include water storage reservoirs and tanks, pump stations, pipelines and support facilities. The upgrades are scheduled to occur over a 50-year plus time frame.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	-	1,500	600	1,500	2,000	1,400	1,000	1,275	9,275
Total:	-	1,500	600	1,500	2,000	1,400	1,000	1,275	9,275
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	-	1,500	600	1,500	2,000	1,400	1,000	1,275	9,275
Total:	-	1,500	600	1,500	2,000	1,400	1,000	1,275	9,275

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.

Downstream Fish Habitat

Project No:	MC-SU-C1607	BSL Code:	BC-SU-C160B
Project Type:	Discrete	BSL Name:	Habitat Conservation Program
Project Category:	Improved Facility	Location:	Cedar River Watershed
Current Project Stage:	Stage 5 - Construction	Council District:	Outside City of Seattle
Start/End Date:	2008 - 2024	Neighborhood District:	Not in a Neighborhood District
Total Project Cost:	\$17,456	Urban Village:	Not in an Urban Village

This project provides protection and restoration of fish habitat along the lower Cedar River, below the City's municipal watershed boundary at the Landsburg Dam and includes both acquisition of habitat lands and habitat restoration on the main stem of the Cedar River. This project is a requirement of the Cedar River Habitat Conservation Plan (HCP).

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	16,397	150	1,070	4	-	-	-	-	17,621
Total:	16,397	150	1,070	4	-	-	-	-	17,621

Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	16,397	150	1,070	4	-	-	-	-	17,621
Total:	16,397	150	1,070	4	-	-	-	-	17,621

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.

Environmental Stewardship

Project No:	MC-SU-C1301	BSL Code:	BC-SU-C130B
Project Type:	Ongoing	BSL Name:	Watershed Stewardship
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:	Not in an Urban Village

This ongoing program provides improvements to facilities and remediation for identified soil contamination at various locations in City watershed areas, railroad right-of-way, and transmission pipelines.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	1,061	283	292	404	235	193	607	103	3,177
Total:	1,061	283	292	404	235	193	607	103	3,177

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	1,061	283	292	404	235	193	607	103	3,177
Total:	1,061	283	292	404	235	193	607	103	3,177

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.

Hatchery Works

Project No:	MC-SU-C1511	BSL Code:	BC-SU-C150B
Project Type:	Ongoing	BSL Name:	Water Resources
Project Category:	Improved Facility	Location:	Cedar River Watershed
Current Project Stage:	N/A	Council District:	Outside City of Seattle
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 ongoing program provides improvements to the sockeye salmon hatchery, including improvements to the Broodstock collection facility, improvements to the hatchery spring water pumps, improvements to adult holding ponds, and additions for water redundancy. These facilities are a requirement of the Landsburg Mitigation Agreement and the Muckleshoot Settlement Agreement.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	1,355	4,754	50	250	1,250	3,050	-	-	10,709
Total:	1,355	4,754	50	250	1,250	3,050	-	-	10,709
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	1,355	4,754	50	250	1,250	3,050	-	-	10,709
Total:	1,355	4,754	50	250	1,250	3,050	-	-	10,709

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.

Instream Flow Management Studies

Project No:	MC-SU-C1608	BSL Code:	BC-SU-C160B
Project Type:	Ongoing	BSL Name:	Habitat Conservation Program
Project Category:	Improved Facility	Location:	Cedar River Watershed
Current Project Stage:	N/A	Council District:	Outside City of Seattle
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 ongoing program provides research and monitoring to examine the effects of instream flows on salmon species in the Cedar River. This ongoing program monitors flow compliance, verifies accretion flows downstream of Landsburg, improves flow-switching criteria, and develops a better understanding of relationships between stream flow and aquatic habitat. This ongoing program is a requirement of the Cedar River Habitat Conservation Plan (HCP).

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	1,849	100	100	100	100	100	100	-	2,449
Total:	1,849	100	100	100	100	100	100	-	2,449
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	1,849	100	100	100	100	100	100	-	2,449
Total:	1,849	100	100	100	100	100	100	-	2,449

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.

Multiple Utility Relocation

Project No:	MC-SU-C1133	BSL Code:	BC-SU-C110B
Project Type:	Ongoing	BSL Name:	Distribution
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 funding for necessary modifications to the location and depth of water pipes when they come into conflict with street improvements or other utility projects. The benefit is continued water service to customers while accommodating transportation and other needs in the street right-of-way.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	1	1,000	500	500	500	500	500	500	4,001
Total:	1	1,000	500	500	500	500	500	500	4,001

Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	1	1,000	500	500	500	500	500	500	4,001
Total:	1	1,000	500	500	500	500	500	500	4,001

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 Improvements

Project No:	MC-SU-C1135	BSL Code:	BC-SU-C110B
Project Type:	Ongoing	BSL Name:	Distribution
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 makes improvements to water pump stations by replacing electric motors, starters, control systems, and other elements. The benefit is improved reliability of water pump stations which in turn reduces the likelihood of large scale water outages.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	1,581	1,296	778	4,862	6,814	618	450	450	16,849
Total:	1,581	1,296	778	4,862	6,814	618	450	450	16,849

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	1,581	1,296	778	4,862	6,814	618	450	450	16,849
Total:	1,581	1,296	778	4,862	6,814	618	450	450	16,849

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.

Purveyor Meters Replace-SPU

Project No:	MC-SU-C1206	BSL Code:	BC-SU-C120B
Project Type:	Ongoing	BSL Name:	Transmission
Project Category:	Improved Facility	Location:	Regional
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 installs new meters for Seattle's wholesale customers at the customer's request. In addition, existing meters are upgraded to current safety standards. The benefits are accurate metering and billing for Seattle's wholesale customers while meeting their water needs.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	204	226	100	100	110	120	130	135	1,125
Total:	204	226	100	100	110	120	130	135	1,125

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	204	226	100	100	110	120	130	135	1,125
Total:	204	226	100	100	110	120	130	135	1,125

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.

Regional Water Conservation

Project No:	MC-SU-C1504	BSL Code:	BC-SU-C150B
Project Type:	Ongoing	BSL Name:	Water Resources
Project Category:	Improved Facility	Location:	Citywide and Regional
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 customer incentives for residential, commercial, institutional, and industrial water efficiency capital improvements. Typical examples include, but are not limited to, water efficient toilets and urinals, clothes washers, landscape irrigation devices, upgrades in industrial process water, and replacing water-cooled equipment with air-cooled versions. The program benefits both existing and future ratepayers. Water conservation provides low-cost options for meeting potential challenges from climate change, managing Seattle's drinking water resources, and customer efficiency and potential cost savings on water bills.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	26,584	1,780	1,183	1,212	1,243	1,274	1,306	1,338	35,920
Total:	26,584	1,780	1,183	1,212	1,243	1,274	1,306	1,338	35,920

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	26,584	1,780	1,183	1,212	1,243	1,274	1,306	1,338	35,920
Total:	26,584	1,780	1,183	1,212	1,243	1,274	1,306	1,338	35,920

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.

Replace Air Valve Chambers

Project No:	MC-SU-C1209	BSL Code:	BC-SU-C120B
Project Type:	Ongoing	BSL Name:	Transmission
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:	Not in an Urban Village

This ongoing program improves access to the chambers located throughout the transmission water system. The replacement and enlargement of the entrance to transmission chambers increase the safety for workers that need to enter the chambers twice per year.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	1,109	242	140	145	150	155	160	165	2,265
Total:	1,109	242	140	145	150	155	160	165	2,265

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	1,109	242	140	145	150	155	160	165	2,265
Total:	1,109	242	140	145	150	155	160	165	2,265

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.

Reservoir Covering-Bitter Lake

Project No:	MC-SU-C1419	BSL Code:	BC-SU-C140B
Project Type:	Discrete	BSL Name:	Water Quality & Treatment
Project Category:	Improved Facility	Location:	N 143rd St and Linden Ave N
Current Project Stage:	Stage 3 - Design	Council District:	Council District 5
Start/End Date:	2013 - 2025	Neighborhood District:	Northwest
Total Project Cost:	\$45,094	Urban Village:	Not in an Urban Village

This project addresses the need for a new cover on Bitter Lake Reservoir once the existing floating cover has reached the end of its useful life. Replacing the existing structure with a new hard covered structure within the same footprint will be one of the options considered. A new cover will be designed and constructed to improve and maintain the water quality protection and security enhancement functions of the existing cover.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	441	1,200	1,200	1,700	5,000	23,500	20,000	23,000	76,041
Total:	441	1,200	1,200	1,700	5,000	23,500	20,000	23,000	76,041
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	441	1,200	1,200	1,700	5,000	23,500	20,000	23,000	76,041
Total:	441	1,200	1,200	1,700	5,000	23,500	20,000	23,000	76,041

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.

Reservoir Covering-Lake Forest

Project No:	MC-SU-C1418	BSL Code:	BC-SU-C140B
Project Type:	Discrete	BSL Name:	Water Quality & Treatment
Project Category:	Improved Facility	Location:	Lake Forest Park
Current Project Stage:	Stage 3 - Design	Council District:	Outside City of Seattle
Start/End Date:	2013 - 2022	Neighborhood District:	Outside City of Seattle
Total Project Cost:	\$20,519	Urban Village:	Not in an Urban Village

This project addresses the need for a new cover on Lake Forest Park Reservoir once it has reached the end of its useful life. The project will evaluate options for a new cover, including replacing the existing floating Hypolan cover with a similar design. A new cover will be designed and constructed to maintain and improve the water quality protection and security enhancement functions of the existing cover.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	1,167	10,047	2,155	170	11	-	-	-	13,550
Total:	1,167	10,047	2,155	170	11	-	-	-	13,550
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	1,167	10,047	2,155	170	11	-	-	-	13,550
Total:	1,167	10,047	2,155	170	11	-	-	-	13,550

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.

Seattle Direct Water Conservation

Project No:	MC-SU-C1505	BSL Code:	BC-SU-C150B
Project Type:	Ongoing	BSL Name:	Water Resources
Project Category:	Improved Facility	Location:	Citywide and Direct Service
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 water use efficiency resources to the City's low-income customers to implement water conservation measures authorized by Ordinance 120532, adopted in 2001, and supplements funding provided under SPU's Regional Water Conservation project (C1504). Typical improvements consist of, but are not limited to, installing water-efficient fixtures, such as aerating showerheads and faucets, low water use toilets and efficient clothes washers.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	5,117	1,082	681	698	715	733	752	770	10,549
Total:	5,117	1,082	681	698	715	733	752	770	10,549

Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	5,117	1,082	681	698	715	733	752	770	10,549
Total:	5,117	1,082	681	698	715	733	752	770	10,549

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.

Stream & Riparian Restoration

Project No:	MC-SU-C1602	BSL Code:	BC-SU-C160B
Project Type:	Ongoing	BSL Name:	Habitat Conservation Program
Project Category:	Improved Facility	Location:	Cedar River Watershed
Current Project Stage:	N/A	Council District:	Outside City of Seattle
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 ongoing program provides stream and riparian restoration in the Cedar River Watershed, including large woody debris placement, riparian conifer under-planting, and culvert replacement for fish passage and peak storm flows. This program is a requirement under the Cedar River Habitat Conservation Plan (HCP).

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	4,345	98	98	155	152	39	40	-	4,928
Total:	4,345	98	98	155	152	39	40	-	4,928

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	4,345	98	98	155	152	39	40	-	4,928
Total:	4,345	98	98	155	152	39	40	-	4,928

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.

Tank Improvements

Project No:	MC-SU-C1134	BSL Code:	BC-SU-C110B
Project Type:	Ongoing	BSL Name:	Distribution
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 implements water quality, seismic, and other improvements to steel water tanks in Seattle. Functional water tanks are essential to public health protection as they assure that the distribution system is under pressure at all times, even when pump stations or control valves malfunction. Depressurization of the water system may result in siphoning back contaminants from faulty private systems and from the ground into the water pipes.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	5,840	1,846	950	4,000	12,250	8,675	3,300	13,150	50,011
Total:	5,840	1,846	950	4,000	12,250	8,675	3,300	13,150	50,011

Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	5,840	1,846	950	4,000	12,250	8,675	3,300	13,150	50,011
Total:	5,840	1,846	950	4,000	12,250	8,675	3,300	13,150	50,011

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.

Tolt Bridges

Project No:	MC-SU-C1308	BSL Code:	BC-SU-C130B
Project Type:	Discrete	BSL Name:	Watershed Stewardship
Project Category:	Improved Facility	Location:	Tolt River Watershed
Current Project Stage:	Stage 5 - Construction	Council District:	Outside City of Seattle
Start/End Date:	2004 - 2020	Neighborhood District:	Not in a Neighborhood District
Total Project Cost:	\$1	Urban Village:	Not in an Urban Village

This project replaces aging bridges and related structures, such as abutments, asphalt approaches, and guardrails in the Cedar River Watershed. This project improves aging bridge assets on priority roads in the watershed transportation system to provide City employees, City contractors, and visitors with safe and adequate access to City water supply and hydroelectric assets while minimizing and reducing environmental impacts over time. Work in this project also maintains compliance with state laws, safety and environmental regulations, and tribal access agreements including Washington Department of Natural Resources (WDNR) forest practice regulations, and Washington Department of Health (DOH) Watershed Protection Plan regulations.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	51	449	1,479	-	-	-	-	-	1,979
Total:	51	449	1,479	-	-	-	-	-	1,979
Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	51	449	1,479	-	-	-	-	-	1,979
Total:	51	449	1,479	-	-	-	-	-	1,979

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.

Transmission Pipelines Rehab

Project No:	MC-SU-C1207	BSL Code:	BC-SU-C120B
Project Type:	Ongoing	BSL Name:	Transmission
Project Category:	Improved Facility	Location:	Regional
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 rehabilitates and upgrades water pipes and associated structures in the City of Seattle's transmission system. It assists SPU in providing agreed-upon pressure and flow for wholesale customers, limiting drinking water supply outages, and meeting applicable regulatory requirements of the Washington Department of Health.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	8,481	13,215	11,678	7,575	1,756	1,759	1,800	1,850	48,113
Total:	8,481	13,215	11,678	7,575	1,756	1,759	1,800	1,850	48,113

Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	8,481	13,215	11,678	7,575	1,756	1,759	1,800	1,850	48,113
Total:	8,481	13,215	11,678	7,575	1,756	1,759	1,800	1,850	48,113

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.

Transmission System Seismic Improvements

Project No:	MC-SU-C1210	BSL Code:	BC-SU-C120B
Project Type:	Ongoing	BSL Name:	Transmission
Project Category:	Rehabilitation or Restoration	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 upgrade transmission system infrastructure that is seismically vulnerable and will remain functional after a major earthquake. Vulnerable transmission pipelines, reservoirs and pump stations will be upgraded. These upgrades will be completed over a 50-year time period.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	-	1,600	1,050	2,800	14,200	17,000	6,400	1,375	44,425
Total:	-	1,600	1,050	2,800	14,200	17,000	6,400	1,375	44,425

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	-	1,600	1,050	2,800	14,200	17,000	6,400	1,375	44,425
Total:	-	1,600	1,050	2,800	14,200	17,000	6,400	1,375	44,425

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.

Treatment Facility/Water Quality Improvements

Project No:	MC-SU-C1413	BSL Code:	BC-SU-C140B
Project Type:	Ongoing	BSL Name:	Water Quality & Treatment
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 ongoing program provides construction of various smaller-scale water quality and treatment facility rehabilitation and improvement projects that may develop on short notice over the course of each year. It enhances SPU's ability to address water system improvement needs that relate to public health protection and drinking water regulatory compliance.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	1,310	1,967	250	250	250	250	250	-	4,527
Total:	1,310	1,967	250	250	250	250	250	-	4,527
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	1,310	1,967	250	250	250	250	250	-	4,527
Total:	1,310	1,967	250	250	250	250	250	-	4,527

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.

Upland Reserve Forest Restore

Project No:	MC-SU-C1603	BSL Code:	BC-SU-C160B
Project Type:	Ongoing	BSL Name:	Habitat Conservation Program
Project Category:	Improved Facility	Location:	Cedar River Watershed
Current Project Stage:	N/A	Council District:	Outside City of Seattle
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 ongoing program provides upland forest restoration in the Cedar River Watershed, including ecological and restoration thinning, conifer planting, forest inventory and modeling, and species monitoring. This program is a requirement under the Cedar River Habitat Conservation Plan (HCP).

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	2,770	120	123	125	128	130	133	-	3,529
Total:	2,770	120	123	125	128	130	133	-	3,529

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	2,770	120	123	125	128	130	133	-	3,529
Total:	2,770	120	123	125	128	130	133	-	3,529

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.

Water Infrastructure-Hydrant Replace/Relocate

Project No:	MC-SU-C1110	BSL Code:	BC-SU-C110B
Project Type:	Ongoing	BSL Name:	Distribution
Project Category:	Rehabilitation or Restoration	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 renews or replaces existing hydrants in the City's water distribution system. In general, hydrant renewal or replacement may occur as a result of hydrant malfunction, catastrophic failure due to vehicle damage, or to meet SPU criticality criteria such as spacing, location, cost, opportunity projects, or flow and pressure problems. This program improves access to fire hydrants for the Seattle Fire Department (SFD) and helps to reduce the damage as a result of fire by locating fire hydrants in alternate or additional locations.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	1,768	781	235	239	244	249	254	259	4,029
Total:	1,768	781	235	239	244	249	254	259	4,029
Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	1,768	781	235	239	244	249	254	259	4,029
Total:	1,768	781	235	239	244	249	254	259	4,029

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.

Water Infrastructure-New Hydrants

Project No:	MC-SU-C1112	BSL Code:	BC-SU-C110B
Project Type:	Ongoing	BSL Name:	Distribution
Project Category:	New 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 installs new hydrants in the City's water distribution system. In general, new hydrants are installed to meet service requests made by private property owners and to comply with Washington Administrative Code (WAC) or Seattle Fire Department (SFD) requirements. This program also helps to reduce the damage as a result of fire by locating new fire hydrants throughout the City's direct service area.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	254	14	50	50	50	50	50	50	567
Total:	254	14	50	50	50	50	50	50	567
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	254	14	50	50	50	50	50	50	567
Total:	254	14	50	50	50	50	50	50	567

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.

Water Infrastructure-New Taps

Project No:	MC-SU-C1113	BSL Code:	BC-SU-C110B
Project Type:	Ongoing	BSL Name:	Distribution
Project Category:	New 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 installs new drinking water services throughout the City of Seattle. This project provides new connections to existing water mains with no interruption of service to adjacent existing customers, and the installation of metered water service lines from the new tap to the new customer's property lines. This program meets City responsibility for new service connections in the Seattle Municipal Code (SMC) to provide reliable drinking water supply to customers.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	24,739	9,306	7,428	7,428	7,577	7,883	8,000	8,000	80,360
Total:	24,739	9,306	7,428	7,428	7,577	7,883	8,000	8,000	80,360
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	24,739	9,306	7,428	7,428	7,577	7,883	8,000	8,000	80,360
Total:	24,739	9,306	7,428	7,428	7,577	7,883	8,000	8,000	80,360

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.

Water Infrastructure-Service Renewal

Project No:	MC-SU-C1109	BSL Code:	BC-SU-C110B
Project Type:	Ongoing	BSL Name:	Distribution
Project Category:	Rehabilitation or Restoration	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 replaces existing plastic or galvanized water services in the City's water distribution system. Service replacement may occur as a result of leaking, failing, or to reduce damage in case of failure of the water service. This program improves Seattle's water system and extends the life of the water distribution system.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	16,621	6,193	6,317	6,443	6,572	6,704	6,838	6,704	62,391
Total:	16,621	6,193	6,317	6,443	6,572	6,704	6,838	6,704	62,391

Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	16,621	6,193	6,317	6,443	6,572	6,704	6,838	6,704	62,391
Total:	16,621	6,193	6,317	6,443	6,572	6,704	6,838	6,704	62,391

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.

Water Infrastructure-Water Main Extensions

Project No:	MC-SU-C1111	BSL Code:	BC-SU-C110B
Project Type:	Ongoing	BSL Name:	Distribution
Project Category:	New 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 assists developers by adding new water mains to the water system in order to serve new residential and commercial developments. Most of the costs are recovered through standard charges. The benefit of this program is that water service is provided to new housing and businesses throughout Seattle.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	4,640	2,598	2,016	2,057	2,098	2,140	2,183	2,226	19,958
Total:	4,640	2,598	2,016	2,057	2,098	2,140	2,183	2,226	19,958

Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	4,640	2,598	2,016	2,057	2,098	2,140	2,183	2,226	19,958
Total:	4,640	2,598	2,016	2,057	2,098	2,140	2,183	2,226	19,958

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.

Water Supply Flexibility Program

Project No:	MC-SU-C1507	BSL Code:	BC-SU-C150B
Project Type:	Ongoing	BSL Name:	Water Resources
Project Category:	New Investment	Location:	Multiple
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 program improves water system performance, reliability, and flexibility during severe weather events, supply and infrastructure emergencies, as well as enhancing environmental performance for fish and supporting regulatory and policy compliance in these areas. Project improvements include Tolt Reservoir Temperature and the Overflow Dike in Chester Morse Lake, and may include but are not limited to, dam integrity and alternatives to improved crest control, reservoir water temperature, and water quality management. In addition, the S. Fork Tolt Dam is up for relicensing under the Federal Energy Regulatory Commission (FERC), which expires July 19, 2029. The relicensing process will take 5-7 years depending on the relicensing approach taken with Seattle City Light and FERC. Seattle City Light is the Tolt Dam license holder and will lead the relicensing effort but significant support from SPU is anticipated. Both utilities (SPU/SCL) are establishing CIP numbers budgeted for the relicensing process.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	356	400	200	200	500	500	500	500	3,156
Total:	356	400	200	200	500	500	500	500	3,156
Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	356	400	200	200	500	500	500	500	3,156
Total:	356	400	200	200	500	500	500	500	3,156

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.

Water System Dewatering

Project No:	MC-SU-C1205	BSL Code:	BC-SU-C120B
Project Type:	Ongoing	BSL Name:	Transmission
Project Category:	Improved Facility	Location:	Regional
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 improves structures used to empty the water from larger pipelines when necessary for inspection or repair. The new structures better control the impact of the water discharged to the environment and comply with current environmental regulations.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	25	35	136	40	45	50	55	60	446
Total:	25	35	136	40	45	50	55	60	446

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	25	35	136	40	45	50	55	60	446
Total:	25	35	136	40	45	50	55	60	446

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.

Water System Plan

Project No:	MC-SU-C1510	BSL Code:	BC-SU-C150B
Project Type:	Ongoing	BSL Name:	Water Resources
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 develops the Water System Plan. This project meets the State requirement that SPU update a water system plan every ten years and submit the plan to the Washington Department of Health (DOH) for approval as a condition of the operating permit for the drinking water system.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	404	-	-	-	-	-	155	522	1,081
Total:	404	-	-	-	-	-	155	522	1,081

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	404	-	-	-	-	-	155	522	1,081
Total:	404	-	-	-	-	-	155	522	1,081

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.

Watermain Rehabilitation

Project No:	MC-SU-C1129	BSL Code:	BC-SU-C110B
Project Type:	Ongoing	BSL Name:	Distribution
Project Category:	Improved Facility	Location:	Regional
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 replaces or rehabilitates existing water mains in Seattle. Replacements occur when leaks and breaks become too frequent and the cost of ongoing repairs is no longer cost effective. The benefits of this program can include improved service reliability, fire flow, water quality and lower maintenance costs. These benefits vary depending on the specific water main and site conditions.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	25,578	7,042	13,895	15,072	9,874	20,600	34,400	33,400	159,861
Total:	25,578	7,042	13,895	15,072	9,874	20,600	34,400	33,400	159,861

Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	25,578	7,042	13,895	15,072	9,874	20,600	34,400	33,400	159,861
Total:	25,578	7,042	13,895	15,072	9,874	20,600	34,400	33,400	159,861

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.

Watershed Road Improvements/Decommissioning

Project No:	MC-SU-C1601	BSL Code:	BC-SU-C160B
Project Type:	Ongoing	BSL Name:	Habitat Conservation Program
Project Category:	Improved Facility	Location:	Cedar River Watershed
Current Project Stage:	N/A	Council District:	Outside City of Seattle
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 ongoing program provides forest road improvements and decommissioning in the Cedar River Watershed. The purpose of this program is to reduce the delivery of sediment into the waterways in the watershed to protect both aquatic habitat and water quality. This program is a requirement under the Cedar River Watershed Habitat Conservation Plan (HCP).

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Rates	7,231	847	1,048	572	475	475	600	75	11,323
Total:	7,231	847	1,048	572	475	475	600	75	11,323

Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Water Fund	7,231	847	1,048	572	475	475	600	75	11,323
Total:	7,231	847	1,048	572	475	475	600	75	11,323

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.

