

Seattle Public Utilities

Solid Waste

Overview

Seattle Public Utilities (SPU) collects and disposes of solid waste generated within the City of Seattle. To fulfill this responsibility, the City owns and manages the following significant infrastructure:

- Two transfer stations;
- One recycling and re-use facility;
- Two household hazardous waste facilities;
- A fleet of trucks and heavy equipment; and
- Three closed landfills previously used by the City.

The Solid Waste Fund (SWF) Capital Improvement Plan (CIP) is the planning tool for rehabilitating, replacing, improving, and expanding infrastructure, as well as constructing projects that protect, conserve, and enhance our region's environmental resources. Planned spending in the SWF CIP is approximately \$85 million over the next six years, from 2022 through 2027.

Major anticipated projects include:

- Cleanup of the historic South Park Landfill (2023-2025) at the South Park Development Project.
- Minimum operational improvements prior to the full redevelopment of the old South Transfer Station campus (2023-2025).

These projects comprise approximately 62% of the SWF CIP. Other significant projects include the Waste Removal project at the Midway Landfill, replacing two compactors, major repair to the South transfer Station tipping floor, drainage improvements at both Transfer Stations, and SPU's annual equipment investment.

Thematic Priorities

The SWF places a high priority on managing environmental issues and addressing regulatory requirements related to current and historic solid waste facilities while protecting employees and customer health and safety and extending the useful life of the two transfer stations.

- Managing environmental issues and regulations: SPU is required to improve former landfill sites and act as necessary when conditions change. For example, underground gas levels at these sites are monitored. When increasing gas levels are detected, SPU implements improvements to extract the excess gas or otherwise mitigate the environmental impacts of the gas increase. Landfill projects are also triggered by Washington State Department of Transportation improvements to Interstate-5 that require modification to landfill infrastructure in the right-of-way and support of Sound Transit projects that impact the Midway Landfill. Additionally, the new transfer stations are designed to reduce the environmental impacts of the existing stations on neighboring communities.

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

2022-2027 Adopted Capital Improvement Program

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 or Consent Decrees).

Prioritization of SPU projects are based on the following set of criteria:

- **Regulatory Mandates, Legal Agreements:** The degree to which the project is driven by Federal, State, and local laws, permit and regulatory requirements, and consent decrees; as well as by legal agreements with public and private parties. Examples of highly ranked projects in this category include the South Park Development project and Kent Highlands and Midway Landfills programs.
- **External Drivers:** SPU’s responsiveness to, or engagement with, the projects of other departments or jurisdictions, and the specific mandates of the City Council and Mayor. An example of a project in this category is the 1% for Arts program.
- **Infrastructure:** How a project addresses infrastructure conditions or vulnerabilities. An example of a highly ranked project in this category is the operational improvements at the South Transfer Station.
- **Level of Service:** The importance of this project in providing or improving services to customers. An example of a highly ranked project in this category is the replacement of two compactors at the transfer stations.
- **Other Factors:** Other important factors include high net present value or cost-effectiveness, social or environmental benefits that were not otherwise recognized, a project already in progress or near completion, limited time opportunity, demonstration projects, community visibility, or outside funding.

Every project is rated against each criterion. Criteria 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. The ranking scheme and criteria are the same for all LOBs and are approved by the SPU General Manager/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, excluded or deferred from the CIP, and which projects should receive priority attention if a staff or financial resource constraint should arise.

CIP Highlights

2022-2027 Adopted Solid Waste Fund CIP by BCL

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

BCL	2022	2023	2024	2025	2026	2027	Total
New Facilities	6,156	13,009	14,988	4,147	1,503	300	40,102
Rehabilitation & Heavy Eqpt	2,450	550	1,850	350	250	200	5,650
Shared Cost Projects	4,561	2,550	2,517	795	823	338	11,584
Technology	1,508	1,508	1,508	1,507	1,508	1,508	9,045
Total	14,675	17,616	20,862	6,800	4,084	2,345	66,381

New Facilities: This program includes the planning, design, and construction of new facilities to enhance solid waste operations. In 2022, SPU will continue to implement its Solid Waste Facilities Master Plan. The key project drivers of the New Facilities budget are the South Park Development (landfill cleanup) and the South Transfer Station operational improvements projects.

Rehabilitation and Heavy Equipment: This program includes design and construction of projects that repair and/or upgrade solid waste facilities other than the transfer stations. In 2022, the key drivers of this budget level are the Midway projects and new funding for the Solid Waste Plan Update as required by the Washington State Department of Ecology.

Shared Cost Projects: This program includes individual capital improvement projects that typically benefit multiple Lines of Business (LOB) (e.g., the Water LOB and the Drainage and Wastewater LOB) and which costs are "shared," or paid for by more than one of SPU's utility funds. For 2022, the key driver for this budget includes heavy equipment purchases, which reflects the best estimate of the required fleet of trucks and heavy equipment for the transfer stations.

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

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

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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

Much of the SWF CIP is funded through bond proceeds and current cash contributions, the mix of which is determined by SWF financial policies, the overall financial health of the SWF, and the best value and equity to ratepayers. SPU last issued debt in 2014, 2015, and 2016, and refunded 2011 bond debt in 2021. SPU is not planning any SWF bond issuances and will use current cash contributions and existing cash on hand to pay for the CIP. Cash contributions to construction and repayment of debt come from rate-based charges to customers whose solid waste services are handled by the City's solid waste infrastructure and programs.

SPU also actively seeks grants, low-interest loans, and other funding sources whenever possible and prudent. The Solid Waste Utility is currently in the middle of a capital-intensive historic landfill remediation process and operational improvements at the old South Transfer Station. These projects are the primary drivers of CIP spending and have required rate increases for financing.

Summary of Upcoming Budget Issues and Challenges

Solid Waste faces logistical and financial issues as it reconstructs its primary facilities and addresses site cleanup efforts.

- Logistics: SWF is focusing on remediating the South Park Landfill and must continue to use the site for trailer parking and household hazardous waste collection during construction.
- Financial Challenges: Operational improvements at the old South Transfer Station along with site remediation efforts puts considerable short-term financial strain on the SWF. While the SWF is funding and building these major projects, it is working to address environmental stewardship by encouraging waste reduction and recycling, which results in declining demand for disposal services.

Future Projects/What is on the Horizon

Once the South Park Landfill cleanup work and South Transfer Station operational improvements are completed, SPU will begin a thorough planning process to guide the future redevelopment of the South Transfer Station campus. The planning will take broader City needs into consideration before selecting a redevelopment scenario. Spending for the future development will be better defined over the next 3-5 years.

City Council Changes to the Proposed CIP

The City Council made no change to the 2022-2027 Proposed CIP for the SPU Solid Waste Line of Business.

Kent Highlands

Project No:	MC-SU-C2402	BSL Code:	BC-SU-C240B
Project Type:	Ongoing	BSL Name:	Rehabilitation & Heavy Equipment
Project Category:	Improved Facility	Location:	Kent Highlands
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 program funds compliance activities related to the Kent Highlands landfill closure project. These activities include environmental studies to demonstrate the effectiveness of the Kent Highlands landfill closure project, as well as various landfill improvements. The environmental studies are required under the existing Consent Decree with the State Department of Ecology and validate that current environmental controls are effective and reduce the likelihood of additional capital or O&M expenditures. The landfill improvements include replacement of existing flares, drainage improvements, groundwater protection, water treatment and mitigating earthquake risks associated with steep slopes.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Solid Waste Rates	640	68	250	250	1,500	50	50	100	2,907
Total:	640	68	250	250	1,500	50	50	100	2,907
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Solid Waste Fund	640	68	250	250	1,500	50	50	100	2,907
Total:	640	68	250	250	1,500	50	50	100	2,907

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

Midway Landfill

Project No:	MC-SU-C2403	BSL Code:	BC-SU-C240B
Project Type:	Ongoing	BSL Name:	Rehabilitation & Heavy Equipment
Project Category:	Improved Facility	Location:	Kent
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 program funds compliance activities related to the Midway landfill closure project. These activities include environmental studies to demonstrate the effectiveness of the Midway landfill closure project. The studies are required under the existing Consent Decree with the State Department of Ecology and validate that current environmental controls are effective and reduce the likelihood of additional capital or O&M expenditures. The flare improvements are also a regulatory requirement. To ensure that SPU maintains regulatory compliance, a smaller flare or new technology will be required. The current telemetry used to monitor the environmental control systems at the Kent Highlands Landfill and the Midway Landfill, both Superfund sites, are nearly obsolete and the equipment is no longer supported. In addition, the current system only transmits alarm conditions and does not have any data acquisition functionality. This program funds a replacement system that will allow remote data acquisition as well as alarm functionality. The largest effort under this program is the Midway landfill improvement project that funds removal of waste in the WSDOT Right of Way to allow construction of two additional lanes on I-5 and the Sound Transit Federal Way Link project. This is a joint project involving Sound Transit, WSDOT and SPU it is regulated by the Department of Ecology under a Consent Decree Amendment.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Solid Waste Rates	997	12,315	2,100	250	250	50	50	50	16,062
Water Rates	-	1,500	-	-	-	-	-	-	1,500
Total:	997	13,815	2,100	250	250	50	50	50	17,562
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Solid Waste Fund	997	13,815	2,100	250	250	50	50	50	17,562
Total:	997	13,815	2,100	250	250	50	50	50	17,562

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.

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Miscellaneous Station Improvement

Project No:	MC-SU-C2303	BSL Code:	BC-SU-C230B
Project Type:	Ongoing	BSL Name:	New Facilities
Project Category:	Improved Facility	Location:	Multiple
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 provides modifications, upgrades, and wear replacement for the two new City Transfer Stations. The new facilities will require periodic capital upgrades and replacement to extend the useful life of these assets. Examples of this work include replacement of the wear surface on the STS tipping floor, replacement of the large refuse compactors and replacement of HVAC/Life Safety components.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Solid Waste Rates	4,962	750	4,656	2,042	2,952	300	1,300	300	17,262
Total:	4,962	750	4,656	2,042	2,952	300	1,300	300	17,262
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Solid Waste Fund	4,962	750	4,656	2,042	2,952	300	1,300	300	17,262
Total:	4,962	750	4,656	2,042	2,952	300	1,300	300	17,262

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.

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North Transfer Station Rebuild

Project No:	MC-SU-C2306	BSL Code:	BC-SU-C230B
Project Type:	Discrete	BSL Name:	New Facilities
Project Category:	Improved Facility	Location:	N. 34th St.
Current Project Stage:	Stage 6 - Closeout	Council District:	Council District 4
Start/End Date:		Neighborhood District:	Lake Union
Total Project Cost:	\$111,015	Urban Village:	Not in an Urban Village

The project constructs a new North Recycling and Disposal Station to replace the existing, aging facility. The new facility will meet customer and employee needs, regulatory requirements, and waste management goals for at least the next 50 years. Safety, operational, and capacity concerns at the existing transfer station necessitate building a new facility. The new facility will benefit the public by providing reliable transfer of solid waste from the City and preventing the accumulation of waste and unsanitary conditions within the City.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Solid Waste Rates	110,231	-	-	-	-	-	-	-	110,231
Total:	110,231	-	-	-	-	-	-	-	110,231
Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Solid Waste Fund	110,231	-	-	-	-	-	-	-	110,231
Total:	110,231	-	-	-	-	-	-	-	110,231

O&M Impacts: Any O&M needed as a result of this project is included in SPU's Operating Budget.

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South Park Development

Project No:	MC-SU-C2304	BSL Code:	BC-SU-C230B
Project Type:	Discrete	BSL Name:	New Facilities
Project Category:	Improved Facility	Location:	8100 2nd Ave S
Current Project Stage:	Stage 3 - Design	Council District:	Council District 1
Start/End Date:	2007 - 2026	Neighborhood District:	Greater Duwamish
Total Project Cost:	\$22,377	Urban Village:	Greater Duwamish

This project studies, plans, designs and constructs remediation of the historic South Park Landfill site to minimize environmental impacts. SPU owns a portion of the site on which the landfill once operated, and was a historic operator of the landfill at one time. This project will meet the requirements of a Consent Decree with the Washington Department of Ecology for remediation of the historic South Park Landfill. This project is tied to the STS 2 project and some redesign of remedial elements will be required and construction has been delayed three years to 2023.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Solid Waste Rates	5,836	6,000	600	7,100	6,800	500	100	-	26,936
Total:	5,836	6,000	600	7,100	6,800	500	100	-	26,936
Fund Appropriations / Allocations¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Solid Waste Fund	5,836	6,000	600	7,100	6,800	500	100	-	26,936
Total:	5,836	6,000	600	7,100	6,800	500	100	-	26,936

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.

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South Recycling Center

Project No:	MC-SU-C2302	BSL Code:	BC-SU-C230B
Project Type:	Discrete	BSL Name:	New Facilities
Project Category:	Improved Facility	Location:	8100 2nd AVE S
Current Project Stage:	Stage 3 - Design	Council District:	Council District 1
Start/End Date:	2006 - 2025	Neighborhood District:	Greater Duwamish
Total Project Cost:	\$43,202	Urban Village:	Greater Duwamish

SPU postponed South Transfer Station phase construction and a smaller project is proceeding to complete cleanup work at the old South Park Landfill. SPU decided to postpone development plans (including the construction of the recycling facility) to allow a more holistic evaluation of future needs and job opportunities that best support our zero-waste vision. A recycling facility may still be included in the future plans, but partial development of the site at this time could severely limit what we can do in the future. The scope of the project has been reduced to only include the remediation of the South Park Landfill (required under a Consent Decree), minimal operational improvements, and a path along 5th Avenue to mitigate the street vacation at the new South Transfer Station. The reduced STS2 project will be designed during 2021-2022 and constructed in 2023.

Future site development plans will happen over the next 5 years in a parallel process.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Solid Waste Rates	7,373	15,677	900	3,867	5,236	3,347	103	-	36,502
Water Rates	-	(1,500)	-	-	-	-	-	-	(1,500)
Total:	7,373	14,177	900	3,867	5,236	3,347	103	-	35,002
Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Solid Waste Fund	7,373	14,177	900	3,867	5,236	3,347	103	-	35,002
Total:	7,373	14,177	900	3,867	5,236	3,347	103	-	35,002

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.

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SW Comprehensive Plan Update

Project No:	MC-SU-C2407	BSL Code:	BC-SU-C240B
Project Type:	Ongoing	BSL Name:	Rehabilitation & Heavy Equipment
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

A Seattle Solid Waste Management Plan is required by Washington State Code. The plan must be updated every five years. The Comprehensive Plan guides the City's solid waste management.

Resources	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Solid Waste Rates	490	25	100	50	100	250	150	50	1,215
Total:	490	25	100	50	100	250	150	50	1,215

Fund Appropriations / Allocations ¹	LTD Actuals	2021 Revised	2022	2023	2024	2025	2026	2027	Total
Solid Waste Fund	490	25	100	50	100	250	150	50	1,215
Total:	490	25	100	50	100	250	150	50	1,215

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.

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