

CIP White Paper

Department Name: SPU – Solid Waste Fund

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Section 1 - Overview

Seattle Public Utilities (SPU) is responsible for the collection and disposal of solid waste generated within the City of Seattle. To fulfill this responsibility the City owns major capital facilities, including two recycling and disposal stations, also known as transfer stations, and two household hazardous waste facilities, and a fleet of trucks and heavy equipment. In addition, the Solid Waste Capital Improvement

Plan (CIP) supports post-closure projects on two landfills previously used by the City.

Funding for Solid Waste capital projects comes predominantly from rates charged to customers whose trash, recycling, and composting are handled by the City's solid waste infrastructure and services. Changes to the solid waste rates are proposed in 2012 for the period 2013-2016, and support the 2013-2018 Adopted CIP. There will also be a Solid Waste Fund bond issuance in 2013.

Section 2 - Summary of Upcoming Budget Issues and Challenges

Planned spending in the Solid Waste Fund (SWF) CIP is \$135M over the next six years (excluding Technology). By far the largest projects over this time period are the rebuilding the North Transfer Station between 2013 and 2017, demolishing the old South Transfer Station, and constructing a recycling/re-use facility at the South Transfer Station location between 2015 and 2018. These projects comprise 63% of the total CIP. The other significant projects are the South Park Development project, funding the investigation and closure of the South Park Landfill, and the replacement of the South Household Hazardous Waste facility.

As solid waste management has evolved, the functions of the City's NRDS (North Recycling and Disposal Station) and SRDS (South Recycling and Disposal Station) expanded dramatically, yet the basic buildings and facilities did not change. Today the stations accept more than 10 categories of separated material—from garbage to wood waste to vehicle batteries. Typically, transfer facilities are designed to last for 30 years. Seattle's stations have exceeded this life-span, despite limited maintenance. Overall, they are outmoded and no longer adequately handle current volumes of materials and customers.

Built in the mid-1960s, both transfer stations have experienced close to half a century of hard industrial use that has worn out the buildings considerably and caused significant increases in ongoing maintenance of electrical and other systems. The aged stations are not designed for likely future earthquakes, are overcrowded given the size of Seattle's current population, and have limited space for recycling. The new South Transfer Station will finish construction in 2012. The new North Transfer Station will likely be substantially complete in 2016. Completing both station rebuild projects in a time of declining revenues poses a financial challenge to the utility. SPU has responded by reducing costs and positions in the 2013-2014 Proposed Budget, identifying efficiencies that allow

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services to be delivered more cost effectively, and pairing these with rate increases for 2013-2016 driven by the capital costs of the new transfer stations.

The schedules for the cleanup of the South Park Landfill and the redevelopment of the old transfer station as a Recycling/Re-use center in the Solid Waste CIP are dependent on the construction schedule for the North Transfer Station project. The demolition of the old South Transfer Station will not occur until the North Transfer Station is rebuilt. This will allow the old South Transfer Station to be kept open along with the new South Transfer station during the period when the North Transfer station is closed for construction. SPU is deliberately sequencing construction in this manner to ensure that two facilities are open at all times to accommodate anticipated volumes of solid waste from residents and businesses in Seattle. Once the North Transfer Station has been rebuilt, and the new North and South Transfer Stations are both on line, the old South Recycling and Disposal Station will be demolished. Following demolition, landfill closure activities as defined by the South Park Landfill Cleanup Action Plan will be completed on the old South Transfer Station property

The remediation of the historic landfill in the South Park neighborhood poses another challenge for Solid Waste CIP planners. From the early 20th Century until the mid 1960s, a landfill was located in the South Park neighborhood near the location of the old South Transfer Station. The City previously used the site as a landfill, and SPU currently owns a portion of the site. Thus, the City is among the potentially liable parties in the cleanup of the site. The final cost allocation among parties will not be known until later in the project, and the scope of the remediation has yet to be finalized. As a consequence, total project costs and timing are difficult to accurately estimate at this time.

Section 3 - Thematic Priorities

The SPU Solid Waste Fund has two main priorities: a) managing environmental issues and regulatory requirements related to current and historic Solid Waste facilities, and b) protecting human health and safety. The Mayor's Walk Bike Ride initiative is also supported through design elements of the two transfer station projects.

Managing environmental issues and regulations: SPU is required to improve former landfill sites and take action as necessary when conditions change. For instance, underground gas levels at these sites are monitored. When high gas levels are detected, SPU implements improvements to extract the excess gas or otherwise mitigate the environmental impacts of the increase. Also, the new transfer stations will greatly reduce the environmental impacts of the existing stations on neighboring communities.

Protecting human health and safety: As mentioned above, the old South Transfer Station and the existing North Transfer Station are at the end of their useful lives. Safety standards at these older facilities will be greatly enhanced once the rebuilds are complete. The end result will be greater safety for the public as well as SPU employees. Well-functioning and efficient transfer stations are part of a solid waste collection system that protects human health.

Walk Bike Ride: The new South Transfer Station will include a trail on the east side of the property as a community benefit associated with the street vacation. This trail will create a link in the corridor

between South Park and the Alki neighborhoods. The recommended concept for the rebuilding of the North Transfer Station includes separated traffic, a separate recycling building and approximately 44,000 square feet of publicly accessible green space. SPU is currently engaging with a group of neighbors to help program the green space.

Section 4 - Project Selection Criteria

SPU's capital planners identify candidate CIP projects through an awareness of ongoing planning processes (e.g., comprehensive plans, program plans), external projects and opportunities, and emergencies or other unexpected events that indicate specific investments are possibly recommended.

SPU's Asset Management system then provides rigorous analysis of projects, by using a business case process that establishes whether 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 -- or is a "must do" project (e.g., required by regulation).

After candidate projects have been identified, SPU prioritizes the capital projects for inclusion in the CIP 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 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. Examples of projects in this category include the 1% for Arts program.
- **Infrastructure:** How a project addresses infrastructure conditions or vulnerabilities. Examples of highly ranked projects in this category include the North and South Transfer Station Rebuild projects.
- **Level of Service:** The importance of this project in providing or improving services to customers. Examples of highly ranked projects in this category include the North and South Transfer Station Rebuild projects as well as the Household Hazardous Waste Relocation project.
- **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. An example of a project in this category is the SW Comp Plan Update project.

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

Section 5 - Aligning Infrastructure with Planned Growth

The City's Comprehensive Plan incorporates the Solid Waste six-year CIP by reference to provide the infrastructure needed for the solid waste system. In addition, investments in solid waste infrastructure support the Comprehensive plan's sustainability and zero waste goals.

The City's transfer stations are a part of a comprehensive waste management system that aims to accommodate population growth while still reducing the overall amount of solid waste sent to landfills. The transfer stations balance the capital cost of station construction versus convenience and collection cost minimization. This is reflected in optimizing a north end transfer station and a south end transfer station as opposed to one central mega station or multiple neighborhood based stations.

The South Park Development project will result in an approved cleanup of the historic landfill and put approximately 20 acres of unused property back into productive use and create economic opportunities adjacent to the South Park Urban Village.

SPU's service options reflect the City's urban village strategy. SPU now provides multi-family dwelling, dumpster-based collections for system is also reflected in SPU's gradual shift from a single family can based collection system to more of a multi-family. Also, more intensive downtown residential use has led to the development and expansion of the Clear Alley (aka Dumpster Free Alley) Program.

Section 6 - Future Projects/What is on the Horizon

In the seven years prior to the initiation of the transfer station rebuild projects, the Solid Waste Fund CIP Budget for core SWF Budget Control Levels averaged \$4.7M annually. In the years when the transfer station rebuild projects are included, the SWF core CIP BCL Budget averages \$21M annually. Once the stations are completed, the core Solid Waste Fund CIP is expected to largely return to the lower, historical levels.

For example, once the North and South Transfer Stations are rebuilt, capital investments in station maintenance will be decreased. The old South Transfer Station and existing North Transfer station are at the end of their useful lives and thus require major improvements each year to keep them operational and safe for the public and the SPU employees who work there. Upon completion of the

new stations, costs for annual repairs and upkeep are projected to decrease initially and then increase as equipment replacement/renewal projects are required on the new facilities.

Section 7 - CIP Revenue Sources

SPU’s Solid Waste CIP is funded largely by Solid Waste ratepayers. SPU issues bonds, serviced by ratepayers, that in the current rate period cover 84% of the CIP, with the remainder funded by cash. SPU also actively seeks grants, low interest loans, and other funding sources. The Solid Waste Utility has been under financial stress since 2008 as a result of the economic downturn, which curbed the volume of waste and recyclables, and caused prices for recyclable materials to dip considerably for several months. Rate increases are proposed in 2012 for the period 2013-2016, and include increases for the average residential and commercial customer of 2.7%, or \$1.70 per month, in 2013. The rate increases are a response to declining volumes and the capital investments required to rebuild the City’s two transfer stations.

Section 8 - CIP Spending by Major Category

(in ‘000s)

Solid Waste Fund	2013	2014	2015	2016	2017	2018	Total
New Facilities	\$8,888	\$32,077	\$35,162	\$23,012	\$20,809	\$2,177	\$122,125
Rehabilitation & Heavy Equipment	\$80	\$45	\$145	\$145	\$95	\$45	\$555
Shared Cost Projects	\$2,179	\$2,357	\$1,492	\$2,207	\$1,951	\$1,879	\$12,066
Technology	\$5,612	\$4,892	\$2,316	\$2,042	\$2,070	\$2,122	\$19,054
Total	\$16,760	\$39,370	\$39,116	\$27,407	\$24,924	\$6,222	\$153,800

The investments in the new transfer stations have caused the Solid Waste CIP to increase materially. In the seven years prior to the initiation of the transfer station rebuild projects, the core Solid Waste CIP Budget averaged \$4.7 million annually. During the years when the transfer station rebuild projects are included in the budget, planned spending in the core Solid Waste CIP averages \$22 million annually. However, once these investments are made and the transfer stations are completed, the Solid Waste CIP is expected to return to lower, historical spending levels.

New Facilities

This program plans, designs, and constructs new facilities to enhance solid waste operations. In 2013, SPU continues the implementation of its Solid Waste Facilities Master Plan, which features a two-station configuration. The key project drivers of the New Facilities budget category are the North and South Transfer Station Rebuild projects.

The proposed budget for this BCL decreases by \$2.4M in 2013 and \$13.7M in 2014 as costs shift into future years. Now that a preferred design concept has been recommended by stakeholders and approved by SPU, a design contract for the North Transfer Station (NTS) has been procured and more is known about the likely construction schedule. This has resulted in a slight shift in construction

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timing from 2014 to 2015. The South Park Development Project decreased by \$506k in 2013 and \$11.6M in 2014 as a result of these NTS schedule changes.

Rehabilitation and Heavy Equipment

This program designs and constructs projects to repair and/or upgrade solid waste facilities. The key driver of this budget category is the Kent Highlands Landfill program. Landfill improvements include replacement of existing flares, drainage improvements, groundwater protection and water treatment as required by State environmental policy.

Most of the changes in this BCL are related to the deferral of the Kent Highlands North Pond Diversion project, which has experienced delays obtaining Department of Health approval.

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.

The proposed budget for this BCL decreases by \$28k in 2013 and increases by \$403k in 2014. The key driver is the SWF SCADA program, in which projected spending was delayed one year due to staff resource constraints.

Technology

The Technology capital portfolio is managed via six business-focused program areas, which provide an enterprise-wide view of technology investments in the context of 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. Programmatic investments in 2013 and 2014 were prioritized within the context of SPU's key initiatives, which focus on improving internal controls, improving productivity and performance, improving customer service, transitioning from data rich to knowledge rich, and improving project delivery.

The 2013-2018 Proposed CIP increases Technology CIP spending for all utility funds by \$4.29 million in 2013 and decreases it by \$261,000 in 2014 as compared to the 2012-2017 Adopted CIP. The Solid Waste Utility's Technology CIP amount increased \$4.83 million in 2013 and decreased \$2.65 million in 2014. These amounts are based on the Solid Waste Utility's share of benefit from these projects.

Note: Anticipated Operating Expenses Associated with Capital Facilities Projects

When appropriate, the projects in the Solid Waste CIP include operations and maintenance cost estimates. These estimates will be refined after project completion and will be included as part of SPU's future budget submittals.