

CIP White Paper Template

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 garbage, recycling, and organics are handled by the City's solid waste infrastructure and services. Changes to the solid waste rates were approved in 2012 for the period 2013-2016, and support the 2013-2018 Adopted CIP. There are planned Solid Waste Bond issues in 2014, 2015 and 2017.

Planned spending in the Solid Waste Fund (SWF) CIP is \$153 million over the next six years. By far the largest projects over this time period are the rebuilding the North Transfer Station between 2013 and 2016, constructing a recycling/re-use facility at the South Transfer Station Location between 2015 and 2017 and the South Park Development Project. These projects comprise 63% of the total CIP. The other significant projects would be funding the investigation and closure of the South Park Landfill, and the replacement of the South Household Hazardous Waste facility.

Transfer Station Replacement

The replacement of the existing transfer stations drives most of the Solid Waste CIP, as stated in the 2013 Seattle Solid Waste Management Plan. 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] have 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 have a life-span of 30 years. Seattle's stations have exceeded this life-span, despite limited maintenance. Overall, they are outmoded and can no longer adequately handle current volumes of materials and customers.

A Solid Waste Facilities Master Plan was prepared to address its capital needs, specifically improvements to the existing transfer stations. In addition, the plan addressed ways to ensure that the city can continue to transfer waste and recyclables out of Seattle. The Solid Waste Facilities Master Plan recommended upgrading the waste management facilities in Seattle which would improve and expand the City of Seattle's two transfer stations. This would increase the size of the NRDS and SRDS by adding properties at each station. These improvements would also increase customer service and reduce the adverse environmental impacts, while expanding recycling and recovery of reusable materials.

The approved reconstruction of NRDS and SRDS was implemented in three distinct stages:

South Transfer Station (STS)

The first stage (Phase 1) involved constructing a new facility to replace the existing SRDS on a 9.12 acre site (bus yard property). The property is diagonally adjacent to the north of the existing SRDS, north of S. Kenyon Street. The design and construction period for the first phase was about 3 years. Because of soil contamination and existing buildings on the property, soil remediation and site preparation had to be conducted before construction. Facility construction began late in 2010 and was completed in March 2013. The new facility is called the South Transfer Station (STS). Currently the city has three stations until demolition starts at NRDS.

North Transfer Station (NTS)

The second stage will be reconstruction of the NRDS. The reconstructed facility will be called the North Transfer Station (NTS). The project will occur at the existing NRDS site, the associated recycling area in the Wallingford neighborhood at 1350 N 34th Street, and the acquired property to the east at 1550 N 34th Street. Construction will not start until 2014. This sequencing provides another facility for customers while the north facility is closed during reconstruction. During reconstruction of the north facility, solid waste, recycling, yard waste and other materials, will be temporarily redirected to SRDS.

South Recycling and Disposal Station (SRDS)

Finally, when STS is operational and the new North Transfer Station opens, demolition of the current SRDS structures will start (sometimes called Phase 2), on SRDS's 11.37-acre parcel located to the south of South Kenyon Street. Plans to redevelop the former SRDS site were postponed while SPU focuses on the STS and NTS projects. Recycling at the STS will be located inside the new building, similar to the arrangement at the old SRDS. When SPU begins redevelopment of the former SRDS site, it will include a relocated recycling drop-off facility, a reuse area, a new household hazardous waste drop-off facility and additional trailer parking to support the transfer station.

Section 2 - Summary of Upcoming Budget Issues and Challenges

As mentioned above, the two major pieces of SWF infrastructure, the North Transfer Station in Fremont and the old South Transfer Station in South Park are at the end of their useful lives. 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 has led to significant increases in ongoing maintenance of electrical and other systems. These 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 was completed in 2013. 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 to the challenge by reducing costs and positions in the 2013-2014 Proposed Budget, identifying efficiencies that would allow services to be delivered more cost effectively, and pairing these with rate increases for 2013-2016.

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 the construction in this manner to ensure that two facilities are open at all times to the public 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 clean up. The final cost allocation among parties will not be known until later in the project. 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; managing environmental issues and regulatory requirements related to current and historic Solid Waste facilities, and 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 gas 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 and existing North transfer stations 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 for 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 design for the new North Transfer Station includes separated traffic, a separate recycling building and approximately 44,000 square feet of publicly accessible green space. SPU engaged neighbors to help program the green space.

Section 4 - 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 regulations).

SPU prioritizes its capital projects into three categories – Priorities 1, 2 and 3, with 1 being the most important and critical. Some of these projects are part of an externally driven project. Typically, SPU lacks control over the timing of such projects. Priority rankings are based on the following set of criteria:

- **Regulatory Mandates, Legal Agreements:** The degree to which the project is driven by Federal, State, and Local laws, permit and regulatory requirements, and consent decrees; as well as by legal agreements with public and private parties. Examples of 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 which were not otherwise recognized, 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 projects.

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 reviews 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, 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.

The City's urban village strategy is also reflected in SPU's gradual shift from a single family can based collection system to more of a multi-family dumpster based collection system. 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 \$4.7 million annually. In the years when the transfer station rebuild projects are included, the SWF core CIP BCL Budget averages \$21 million annually. Once the stations are completed, the core Solid Waste Fund CIP is expected to largely return to the lower, historical levels.

In addition, once the North and South Transfer Stations are rebuilt, the expectation is that continued capital investments at the stations will be decreased. The old South and existing North stations are at the end of their useful lives. While the old South station is being replaced and will be decommissioned, the facility continues to need maintenance while the North station continues to require major improvements each year to keep it operational and safe for both the public and SPU employees who work there. Upon completion of the new stations, annual costs for 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 almost entirely by Solid Waste ratepayers. SPU issues bonds, serviced by ratepayers that in the current rate period cover 89% of projected CIP, with the remainder funded by current operating revenues. SPU also actively seeks grants, low interest loans, and other funding sources whenever possible. The Solid Waste Utility has faced challenges since 2008 as a result of fuel prices and the economic downturn, which have reduced demand while increasing required payments to contractors. Approved 2013-16 rates include average annual increases of 4.5% for residential and commercial customers. This includes a \$2.30 monthly increase in 2013 for typical residential customers.

Section 8 - CIP Spending by Major Category

Solid Waste Fund (000s)	2014	2015	2016	2017	2018	2019	Total
C230 - New Facilities	26,574	48,569	25,621	20,608	177	-	121,549
C240 - Rehabilitation & Heavy Equipment	45	25	425	25	25	425	970
C410 - Shared Cost Projects	2,239	1,682	1,418	1,847	1,910	1,917	11,013
C510 - Technology	5,337	5,269	3,122	2,443	2,352	1,482	20,005
TOTAL	34,195	55,545	30,586	24,923	4,464	3,824	153,537
<i>*total may not sum up due to rounding</i>							

New Facilities: This program plans, designs, and constructs new facilities to enhance solid waste operations. In 2014, SPU will continue 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 has decreased by \$5.5 million for 2014 and increases by \$13.4 million in 2015 as costs shift into future years. Having a preferred design concept that has been recommended by stakeholders and approved by SPU, a design contract for the North Transfer Station (NTS) has been procured and now more is known about the construction schedule. This has resulted in a slight shift in construction timing from 2014 to 2015. The schedule for the South Park Development Project has shifted out as a result of changes to the NTS.

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 the replacement of existing flares, drainage improvements, groundwater protection and water treatment as required by State environmental policy.

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 will decrease by \$117K in 2014 and increase by \$189K in 2015 compared to the adopted budget for the respective years. One of the key drivers for the change in 2014 would be the SWF SCADA program. Other changes in the budget for 2014 and 2015 were related to changes that were made in the calculation for the 1% for Arts – Solid Waste Project.

Technology: The Technology capital portfolio is managed via six business-focused program areas, which provide a holistic, 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 2014 and 2015 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 2014-2019 Proposed CIP increases Technology CIP spending for all utility funds by \$2.9 million in 2014 and \$10.5 million in 2015 as compared to the 2013-2018 Adopted CIP. Solid Waste Utility's Technology CIP amount increases by \$45K in 2014 and increases by \$2.9 million in 2015. These amounts are based on the Solid Waste Utility's share of benefit from these projects. Detailed information on the Technology Program is presented in a separate Technology CIP White Paper.