

**SPU -
SOLID WASTE**

Seattle Public Utilities Solid Waste Division Facilities



▽	Recycling and Disposal Station
○	Household Hazardous Waste Facility



Overview of Facilities and Programs

Seattle Public Utilities (SPU) is responsible for the collection and disposal of solid waste generated within the City of Seattle. The City-owned infrastructure used to accomplish this task consists of two recycling and disposal stations, 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.

The City's solid waste collection system consists of the South Recycling and Disposal Station (SRDS), located in the South Park area of the City, and the North Recycling and Disposal Station (NRDS), located just north of the Ship Canal at Stone Way. The South Household Hazardous Waste (SHHW) facility is located on the same site as the SRDS, while the North Household Hazardous Waste (NHHW) facility is located at 125th Street North, adjacent to the City-owned Haller Lake shops.

Private contractors collect household refuse and recyclables and deliver the waste to the recycling and disposal stations for its ultimate disposal. Self-haulers, private individuals and small contractors can also deliver their own refuse to the stations. Once deposited at a station, the trash is processed through a large compaction machine and placed in a sealed shipping container. This container is hauled by solid waste fleet trucks to the Union Pacific Railhead where it is placed on a train. Three times a week, the trains carry the loaded containers to a privately owned regional landfill in Eastern Oregon, where final disposal is accomplished. The trains return with empty containers to be refilled.

Self-haulers may also bring their recyclables to the recycling and disposal stations. Materials are separated by the customer and placed in large bins. Once full, the Solid Waste Field Operations personnel haul these bins to private recyclers for processing. Large goods (refrigerators, stoves, etc.) may also be brought to the stations for recycling.

Customers can also bring unused pesticides, paints, and solvents to one of the two household hazardous waste sites. The City contracts with a private company to pick up and dispose of these materials. Seattle Public Utilities maintains a list of materials that are still useable and makes these items available to anyone who uses them.

Highlights

- ◆ **Rehabilitation and Improvements:** Seattle Public Utilities is working on long-deferred rehabilitation projects at the recycling and disposal stations as well as landfill maintenance and improvements. These projects include replacement of the large garbage compactors, scalehouse heating, ventilating and air conditioning (HVAC) systems, and the electrical systems at the stations. Projects also include replacing the flares at the Midway Landfill and diversion of the North Pond at Kent Highlands Landfill to surface water.
- ◆ **CIP Management Master Plan:** The recently created Solid Waste Line of Business Team has started to re-evaluate the current Solid Waste Facility Plan. A comprehensive, strategic, long-term master plan for the disposal and recycling stations is being developed. Early in 2001, a facility-planning workshop was held to begin generating ideas for the master plan.
- ◆ **Nisqually Earthquake:** The February 28, 2001 Nisqually Earthquake did not have an impact on the Solid Waste Capital Improvement Plan.

Anticipated Operating Expenses Associated with Capital Facilities Projects

In some projects the Department has identified operations and maintenance costs of zero, or has not calculated a number (N/C). In these cases, the cost impacts of the project are either insignificant or are offset by cost savings realized by other projects.

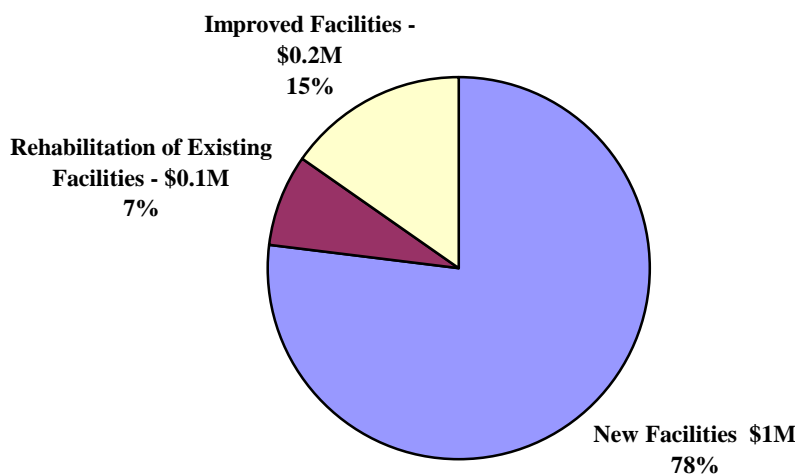
Project Selection Process

In making capital investments in its infrastructure, the City tries to balance three goals:

- ◆ Rehabilitation of existing facilities to avoid the higher costs of deferred maintenance;
- ◆ Increase in the capacity of existing facilities to meet growing demand; and
- ◆ Development of new facilities to provide additional services.

The following chart shows how the Seattle Public Utilities' 2002 Adopted Solid Waste CIP allocates funding to these types of projects:

**2002 SPU Solid Waste Adopted CIP by Project Type
(not including Technology CIP projects)**



Seattle Public Utilities used a comprehensive approach to develop the 2002-2007 Adopted Capital Improvement Program. The department encouraged wide staff participation in the process. Steps included the following:

Project Identification: In late 1999 and early 2000, staff throughout the Department took part in an effort to identify new CIP projects and changes and adjustments to existing projects. The criteria used in identifying projects were the department's goals of environmental stewardship, customer service, strategic technology implementation, neighborhood benefits, infrastructure maintenance demands, and meeting growing demand. A detailed list of new and existing projects was then compiled.

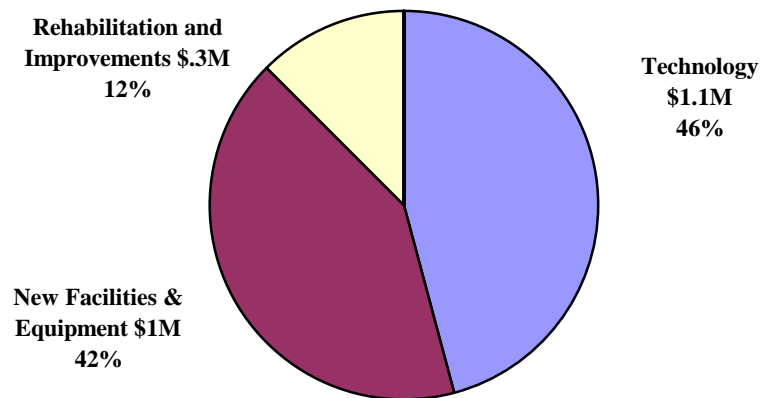
Project Screening, Prioritization, and Selection: Meetings were held with various sections throughout the Department to gain full understanding and consensus of project drivers, demands, and benefits. The full project list was compared to expected available funding based on estimated likely rate increases. The projects were then prioritized, and a decision was made not to carry forward some lower priority projects. Various alternatives were considered for other projects where possible. The most cost-effective approach was selected based on analyses of demand, risk, cost, and benefit.

Project Budget and Workload Scheduling: As a final step, detailed budget and workload estimates were prepared for the selected projects.

Program Category Summaries

The Solid Waste CIP allocates \$38.9 million during the next six-year period. It is comprised of three program categories as summarized below. A detailed listing of all programs for the Solid Waste Capital Improvement Program follows this overview. Solid Waste-supported technology projects are shown grouped with other technology projects following the Department’s three CIP sections.

2002 SPU Solid Waste Adopted CIP by Program Category



New Facilities and Equipment: This program plans, designs and constructs new facilities to enhance solid waste operations and replaces heavy equipment. SPU is in the process of developing a master plan for the Solid Waste system’s long-term facility requirements.

Rehabilitation and Improvements: This program designs and constructs projects to repair and upgrade solid waste facilities. Projects include North Pond diversion to surface water work at Kent Highlands Landfill and replacement of the scalehouse heating, ventilation, and air conditioning system (HVAC), the compactors, and electrical services at the stations.

Technology: This program makes use of recent technology advances to increase efficiency and productivity. Solid Waste-supported technology projects are shown grouped with other technology projects following the Department’s three CIP sections.

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Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
New Facilities and Equipment										
CIP Management/Facilities Master Plan	SWNEW005	0	0	250	250	150	150	150	150	1,100
Facility Investments	SWNEW006	0	0	0	1,300	1,300	14,200	7,000	3,000	26,800
Heavy Equipment Purchases - Solid Waste	C2NW004	0	545	780	811	844	878	912	949	5,719
South Recycling and Disposal Station Maintenance Facility	SWNEW002	50	0	0	0	0	0	0	0	50
South Recycling and Disposal Station Office Replacements	C299003	126	1,615	0	0	0	0	0	0	1,741
South Recycling and Disposal Station Recycling Center	C299008	176	0	0	0	0	0	0	0	176
New Facilities and Equipment Total		352	2,160	1,030	2,361	2,294	15,228	8,062	4,099	35,586
Rehabilitation and Improvements										
Kent Highlands North Pond Diversion	SWNEW003	0	0	200	10	0	0	0	0	210
Recycling and Disposal Stations Compactor Replacement	SWNEW004	0	0	0	2,300	2,300	0	0	0	4,600
Recycling and Disposal Stations Electrical Rehabilitation	C299012	296	0	0	200	688	0	0	0	1,184
Recycling and Disposal Stations Seismic Upgrade	C299002	1,201	0	0	0	0	0	0	0	1,201
Recycling and Drainage Stations Rehabilitation	C299001	0	0	2	0	0	0	0	0	2
Replacement of Scalehouse HVAC	C201001	0	0	89	0	0	0	0	0	89
Rehabilitation and Improvements Total		1,497	0	291	2,510	2,988	0	0	0	7,286
Department Total		1,849	2,160	1,321	4,871	5,282	15,228	8,062	4,099	42,872

*Amounts in thousands of dollars

Fund Source Summary

Funding Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Solid Waste Fund	1,849	2,160	1,321	4,871	5,282	15,228	8,062	4,099	42,872
Department Total	1,849	2,160	1,321	4,871	5,282	15,228	8,062	4,099	42,872

**Amounts in thousands of dollars*

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CIP Management/Facilities Master Plan

Program: New Facilities and Equipment

Start Date: Ongoing

Type: New Facility

End Date: Ongoing

Location:

Project ID: SWNEW005

8100 2ND AV S

Urban Village: South Park

Neighborhood District: Southwest

1350 34TH AV N

Urban Village: Fremont

Neighborhood District: Northwest

This project develops and establishes a Solid Waste CIP master plan to guide SPU towards the construction of facilities that provide the citizens of Seattle with sufficient recycling and solid waste services for the next 30 years. Funding for implementation of the plan is to be provided through the Facility Investments Project.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Solid Waste Fund	0	0	250	250	150	150	150	150	1,100
TOTAL FUNDS	0	0	250	250	150	150	150	150	1,100
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Facility Investments

Program: New Facilities and Equipment

Start Date: Ongoing

Type: New Facility

End Date: Ongoing

Location:

Project ID: SWNEW006

8100 2ND AV S

Urban Village: South Park

Neighborhood District: Southwest

1350 34TH AV N

Urban Village: Fremont

Neighborhood District: Northwest

This project implements the Solid Waste CIP Master Plan. Scope, schedule, and costs of proposed projects are to be further defined upon approval of the Solid Waste CIP Master Plan.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Solid Waste Fund	0	0	0	1,300	1,300	14,200	7,000	3,000	26,800
TOTAL FUNDS	0	0	0	1,300	1,300	14,200	7,000	3,000	26,800
<i>O&M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	0

*Amounts in thousands of dollars

Heavy Equipment Purchases - Solid Waste

Program: New Facilities and Equipment
Type: New Facility
Location:
 N/A

Start Date: Ongoing
End Date: Ongoing
Project ID: C2NW004

This project replaces heavy equipment (such as loaders and bulldozers) used at the Recycling and Disposal stations. This equipment has reached the end of its useful life.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Solid Waste Fund	0	545	780	811	844	878	912	949	5,719
TOTAL FUNDS	0	545	780	811	844	878	912	949	5,719
<i>O&M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	0

Kent Highlands North Pond Diversion

Program: Rehabilitation and Improvements
Type: Improved Facility
Location:
 Outside City Limits in Kent

Start Date: 2002 1st Quarter
End Date: 2003 4th Quarter
Project ID: SWNEW003

This project safely diverts water from the Kent Highlands North Pond to surface waters via the Green River, avoiding costly discharge to the King County Metro sewer. An additional aerator and electrical controls may be added to pre-treat the surface water in the South Pond.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Solid Waste Fund	0	0	200	10	0	0	0	0	210
TOTAL FUNDS	0	0	200	10	0	0	0	0	210
<i>O&M Costs (Savings)</i>			0	(50)	(50)	(50)	(51)	(51)	(252)

*Amounts in thousands of dollars

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Recycling and Disposal Stations Compactor Replacement

Program: Rehabilitation and Improvements

Start Date: 2003 1st Quarter

Type: Rehabilitation or Restoration

End Date: 2004 4th Quarter

Location:
8100 2ND AV S

Project ID: SWNEW004

Urban Village: South Park
1350 34TH AV N

Neighborhood District: Southwest

Urban Village: Fremont

Neighborhood District: Northwest

This project replaces garbage compactors at the recycling and disposal stations. The existing compactors are at the typical industry standard for equipment life of 10 years and are no longer reliable for daily use. The compactors are used 363 days per year, 10 to 12 hours per day in order to load the continuous stream of contract-collected and self-hauled waste containers into rail. This project includes design and installation of new waste compactors at both Recycling and Disposal Stations with the possibility of leaving the existing compactor at the SRDS as a back-up system. The new compactors also provide data-logging capability.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Solid Waste Fund	0	0	0	2,300	2,300	0	0	0	4,600
TOTAL FUNDS	0	0	0	2,300	2,300	0	0	0	4,600
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Recycling and Disposal Stations Electrical Rehabilitation

Program: Rehabilitation and Improvements

Start Date: 1999 1st Quarter

Type: Improved Facility

End Date: 2004 2nd Quarter

Location:
1350 N 34TH ST

Project ID: C299012

Urban Village: In more than one urban village
8100 2ND AV S

Neighborhood District: In more than one district

Urban Village: South Park

Neighborhood District: Southwest

This project upgrades electrical systems and provides wiring improvements at the scalehouses. It also provides electrical schematics and diagrams to allow for better troubleshooting of the system. The project labels all electrical circuits in every pull box and junction box throughout the sites. SPU is preparing a report to identify the requirements for installing a backup power generator system, if necessary.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Solid Waste Fund	296	0	0	200	688	0	0	0	1,184
TOTAL FUNDS	296	0	0	200	688	0	0	0	1,184
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

Recycling and Disposal Stations Seismic Upgrade

Program: Rehabilitation and Improvements
Type: Improved Facility
Location:
 8100 2ND AV S

Start Date: 1999 3rd Quarter
End Date: On hold
Project ID: C299002

Urban Village: South Park
 1350 N 34TH ST

Neighborhood District: Southwest

Urban Village: Fremont

Neighborhood District: Northwest

This project upgrades the seismic resistance of the North and South Recycling and Disposal Stations to allow them to better withstand an earthquake. This upgrade includes structural enhancements to the building shear walls, roofs, wall panel attachments, and roof-wall attachments, as well as repairs to the acoustical insulation, misting system, and concrete structures.

This project is on hold because SPU is developing a comprehensive, strategic, long-term master plan for the disposal and recycling stations.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Solid Waste Fund	1,201	0	0	0	0	0	0	0	1,201
TOTAL FUNDS	1,201	0	0	0	0	0	0	0	1,201
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Recycling and Drainage Stations Rehabilitation

Program: Rehabilitation and Improvements
Type: Rehabilitation or Restoration
Location:
 8100 2ND AV S

Start Date: 1998 2nd Quarter
End Date: 2002 3rd Quarter
Project ID: C299001

Urban Village: South Park
 1350 N 34TH ST

Neighborhood District: Southwest

Urban Village: Fremont

Neighborhood District: Northwest

This project brings Seattle Public Utilities' 30-year old drainage and sewerage systems up to current standards.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Solid Waste Fund	0	0	2	0	0	0	0	0	2
TOTAL FUNDS	0	0	2	0	0	0	0	0	2
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

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Replacement of Scalehouse HVAC

Program: Rehabilitation and Improvements

Start Date: 2002 1st Quarter

Type: Rehabilitation or Restoration

End Date: 2002 4th Quarter

Location:

Project ID: C201001

8100 2ND AV S

Urban Village: South Park

Neighborhood District: Southwest

1350 34TH AV N

Urban Village: Fremont

Neighborhood District: Northwest

This project replaces the heating, ventilation, and air conditioning (HVAC) systems at the south and north recycling and disposal scalehouses. These systems have reached the end of their useful lives. The new systems are more powerful units which can purge the exhaust fumes that currently collect in the buildings.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Solid Waste Fund	0	0	89	0	0	0	0	0	89
TOTAL FUNDS	0	0	89	0	0	0	0	0	89
<i>O&M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	0
Cash Flow		0	74	0	0	0	0	0	

South Recycling and Disposal Station Maintenance Facility

Program: New Facilities and Equipment

Start Date: 2000 1st Quarter

Type: New Facility

End Date: On hold

Location:

Project ID: SWNEW002

8100 2ND AV S

Urban Village: South Park

Neighborhood District: Southwest

8100 2ND AV S

Urban Village: South Park

Neighborhood District: Southwest

This project provides a shelter for Solid Waste's fleet of trucks and heavy equipment. The structure, which is to be either a building or a canopy, prevents weather from interfering with maintenance and repair work.

The project is on hold while SPU develops a comprehensive, strategic, long-term master plan for the disposal and recycling stations.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Solid Waste Fund	50	0	0	0	0	0	0	0	50
TOTAL FUNDS	50	0	0	0	0	0	0	0	50
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

South Recycling and Disposal Station Office Replacements

Program: New Facilities and Equipment **Start Date:** 1999 2nd Quarter
Type: New Facility **End Date:** On hold
Location: **Project ID:** C299003
 8100 2ND AV S
Urban Village: South Park **Neighborhood District:** Southwest

This project installs a manufactured building to replace three office buildings at the South Recycling and Disposal Center. The current buildings are in varying stages of disrepair and the most cost-effective solution is to remove the older structures and install a new manufactured building.

The project is currently on hold while SPU completes the Solid Waste CIP Master Plan.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Solid Waste Fund	126	1,615	0	0	0	0	0	0	1,741
TOTAL FUNDS	126	1,615	0	0	0	0	0	0	1,741
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

South Recycling and Disposal Station Recycling Center

Program: New Facilities and Equipment **Start Date:** 1999 2nd Quarter
Type: New Facility **End Date:** On hold
Location: **Project ID:** C299008
 8100 2ND AV S
Urban Village: South Park **Neighborhood District:** Southwest

This project constructs a Recycling Center at the South Recycling and Disposal Center. This Recycling Center is to be separate from the existing refuse tipping building and allows for the collection of a variety of recyclables before customers enter the tipping building. This stand-alone structure reduces congestion in the tipping building and improves overall customer traffic flow at the South Recycling and Disposal Center.

The project is on hold while SPU develops a comprehensive, strategic, long-term master plan for the disposal and recycling stations.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Solid Waste Fund	176	0	0	0	0	0	0	0	176
TOTAL FUNDS	176	0	0	0	0	0	0	0	176
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars