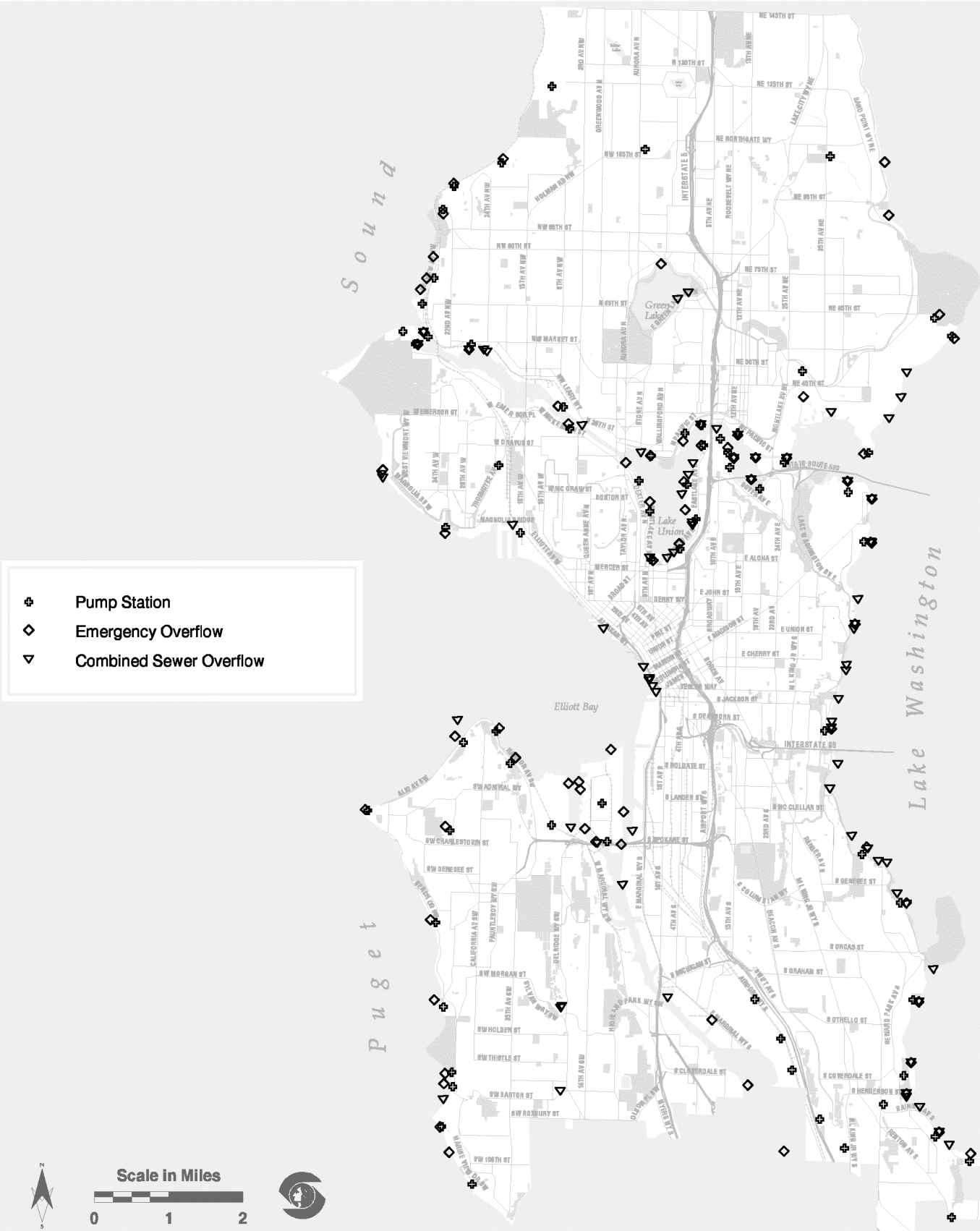


**SPU -
DRAINAGE AND
WASTEWATER**

Seattle Public Utilities Drainage and Wastewater Division Facilities



Overview of Facilities and Programs

Seattle Public Utilities (SPU) is responsible for maintaining the network of sewer and drainage systems throughout the City of Seattle. The system includes approximately 530 miles of sanitary sewers, 500 miles of storm drains, 1,020 miles of combined sewers, 73 pump stations, 113 combined sewer and pump station outfalls, 277 storm drain outfalls, and 43 combined sewer overflow control detention tanks/pipes.

Three different types of systems to control stormwater and collect sanitary sewage from homes and businesses serve the City. Twenty-nine percent of the City is served by combined sewers, which carry sewage and stormwater through one pipe. Combined sewers are designed with overflow pipes so that during heavy rains, excess water in the system flows into lakes, rivers, or Puget Sound rather than back up into houses. Forty-five percent of the City has separate piped systems for stormwater and sanitary sewers. Separate sanitary sewers and a drainage system consisting of ditches, culverts, and creeks to carry stormwater runoff serve the remaining 26% of the City.

The City's sewer collector system connects to large interceptor lines operated by the Water Pollution Control Division of the King County Department of Natural Resources (formerly Metro). Most of Seattle's sewage flows to the West Point Treatment Plant. Following treatment, wastewater from West Point is discharged into the deep waters of Puget Sound. The West Point plant provides secondary treatment in compliance with the federal Clean Water Act. Secondary treatment involves a biological process that removes approximately 90% of solids suspended within the water column.

The City's drainage systems address the flooding problems associated with stormwater and water pollution carried by runoff. The City's Comprehensive Drainage Plan, originally adopted in 1988, was updated in 1995. The initial plan focused on five major drainage basins: Carkeek Park (Pipers Creek), Thornton Creek, Delridge (Longfellow Creek), South Park, and Seola Beach. The 1995 update added five additional basins that also have drainage problems: Broadview, Densmore, Lake Washington North, Puget Ridge, and Norfolk. The plan presents a citywide management program for capital improvements and ongoing maintenance. It establishes a monitoring program and identifies measures to control flooding and pollution, including regulatory controls and public education.

Highlights

- ◆ **Combined Sewer Overflows (CSO):** Seattle Public Utilities is spending approximately \$37 million in 2002-2007 on the Combined Sewer Overflow Program. The largest project is the design and construction of the Denny Way/Lake Union CSO improvements (Project C3AA104). The Department completes its update of the CSO Plan in 2001 in order to guide the CSO program until 2007.
- ◆ **Drainage Improvements:** Seattle Public Utilities is spending approximately \$170 million for drainage improvements over the next six years. In addition to local drainage improvements, projects include stormwater detention and fish passage improvements. The Westlake Storm Drain Rehab project replaces a failed storm drain with several promising stormwater treatment technologies, which are to be evaluated over time for effectiveness and long-range costs.
- ◆ **Endangered Species Act:** Seattle Public Utilities has set aside funding for its share of the City's response to the listing of Chinook salmon under the Endangered Species Act. Approximately \$5.4 million is included in the 2002-2007 Adopted Drainage and Wastewater CIP for these projects.
- ◆ **Nisqually Earthquake:** SPU does not have any drainage or wastewater CIP projects directly related to the February 28th Nisqually Earthquake.

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.

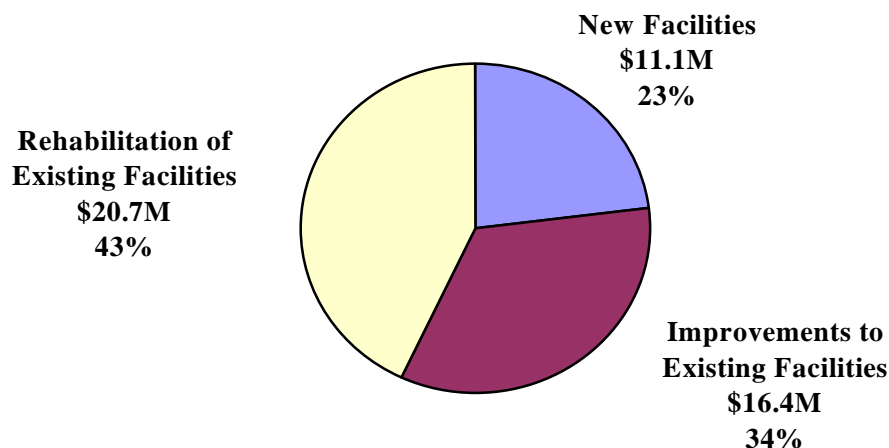
Combined Sewer Overflow Monitoring: The City’s Combined Sewer Overflow National Pollutant Discharge Elimination System permit requires that monitoring devices be installed in all CSO outfalls. Since this installation was completed in 2000, funds are used to monitor special locations to assess problem overflows, and for in-system monitoring as needed to support the development of reduction alternatives for the CSO plan. The estimated maintenance cost of these monitoring activities is \$315,000 annually.

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.

**2002 SPU Drainage & Wastewater 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. The process included the following steps:

Project Identification: In late 2000 and early 2001, SPU staff took part in a department-wide effort to identify new CIP projects and changes and adjustments to existing projects. The general criteria used in identifying projects were the Department's goals of environmental stewardship, customer service, strategic technology implementation, neighborhood benefits, infrastructure maintenance requirements, partnerships, and meeting growing demand. A detailed list of new and existing projects was then compiled.

Project Screening, Prioritization, and Selection: Multiple 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 in order to fit within available funding. Various alternatives were considered for other projects where possible and the most cost-effective approach was selected based on analyses of demand, risk, cost, and benefit.

The first step in establishing criteria for prioritizing projects was to identify general criteria based on SPU's mission, goals, and strategic objectives as stated in the department's Strategic Business Plan and Comprehensive Drainage Plan. Essentially, these are to maintain, manage, plan, and construct drainage systems to safeguard public health and control flooding while protecting our streams, lakes, and Puget Sound. While doing this, we must provide reliable, professional, and cost-effective services. Projects should be designed to protect the public and minimize property damage from excess stormwater, collect and convey stormwater, and limit the occurrence and extent of flooding, while preserving or extending the useful life of the City's drainage system. Projects should also preserve the environment by minimizing the adverse effects of stormwater. They may be constructed to limit the release of contaminants and protect or restore surface water environments damaged by discharges from the City's stormwater systems. Finally, projects should include community partnerships and neighborhood participation to promote and maintain credibility and confidence in local government.

The next step was to identify program-specific selection criteria for each of SPU's major CIP programs.

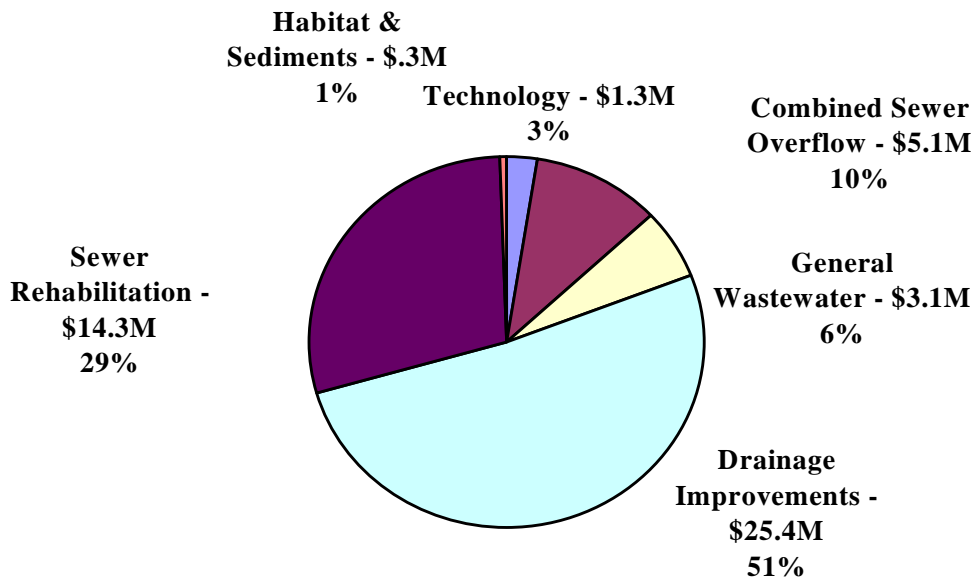
Project Budget and Workload Scheduling: As a final step, detailed budget and workload estimates were prepared for the selected projects.

Program Category Summaries

The Drainage and Wastewater CIP (including Technology projects funded by the Drainage and Wastewater fund) allocates approximately \$306 million during the next six-year period, and approximately \$48.2 million in 2002. It is comprised of six program categories as displayed in the following chart and summarized below. A detailed listing of all programs for the Drainage and Wastewater Capital Improvement Program follows this overview. Drainage and Wastewater-supported technology projects are shown grouped with other technology projects following the Department's three CIP sections.

SPU – DRAINAGE AND WASTEWATER

2002 Drainage & Wastewater Proposed CIP By Program Category



Combined Sewer Overflow: This program designs and constructs facilities to control overflows from the combined drainage and wastewater system. Of the City’s 113 identified Combined Sewer Overflows (CSOs), 99 are now substantially controlled. Seattle Public Utilities addresses a number of the remaining CSOs over the next three years.

Drainage Improvements: This program makes improvements to the City’s drainage system to address flooding, restore urban creeks, and reduce the risk from landslides. Projects address neighborhood drainage problems in areas of the City that have informal drainage systems, and focus on landslide-prone areas and water quality issues. Projects are also being developed in response to the Endangered Species Act listing of Chinook salmon.

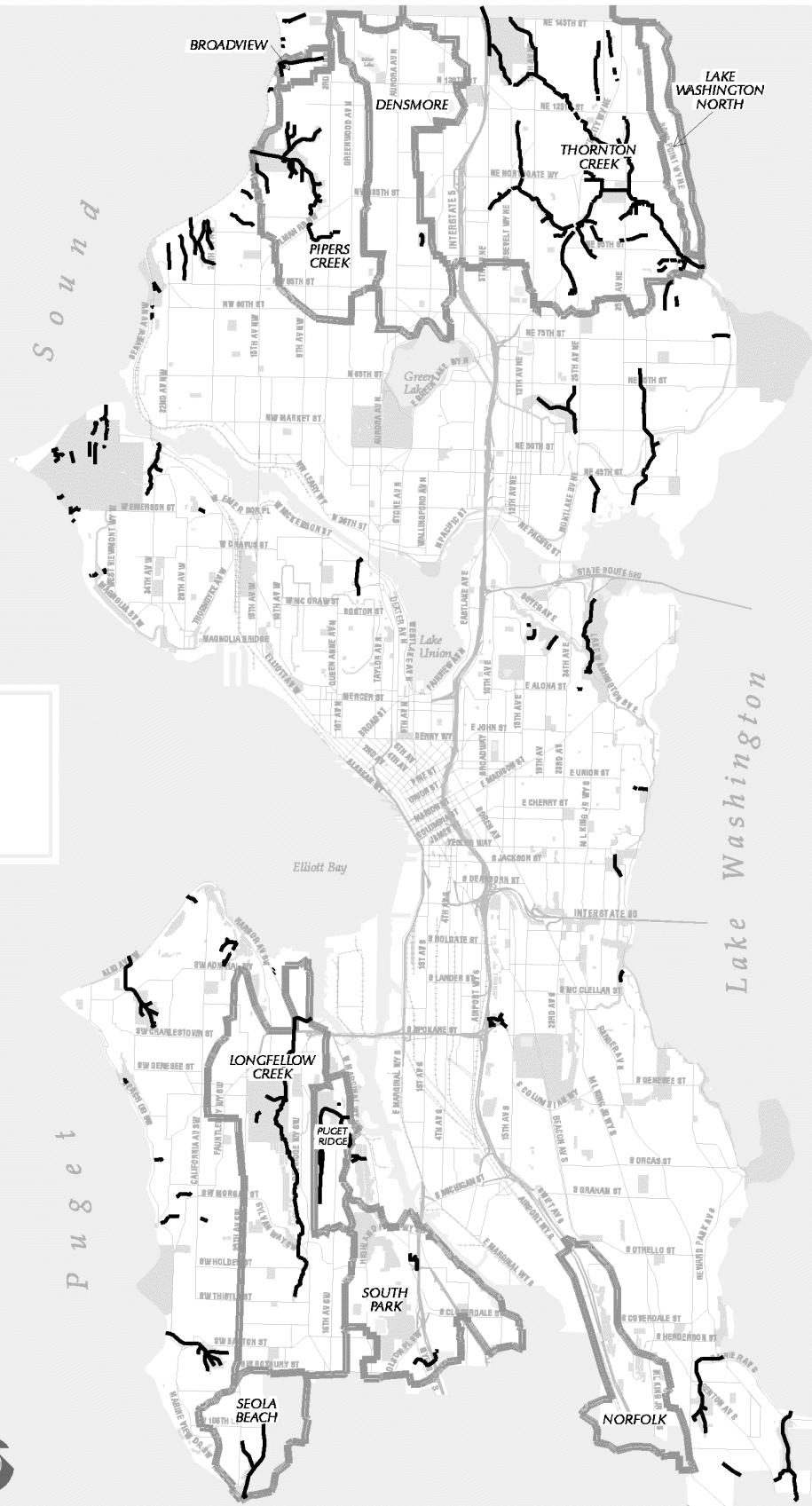
Habitat and Sediments Program: This program restores and rehabilitates natural resources in or along Seattle’s waterways. The program includes funds for a portion of the City’s ESA program, as well as sediment and habitat projects the City is completing as an agent of the Elliott Bay/Duwamish Restoration Program Panel.



General Sewer Program: This program improves and increases the effectiveness of the Department’s wastewater system and provides new wastewater service to customers.

Sewer Rehabilitation: This program repairs the City’s sewer lines and pump stations. In 2002-2007, work continues on pipe rehabilitation and pump station projects. The spot repair program includes relatively small repair/rehabilitation projects that are identified through inspections.

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

Seattle Public Utilities Drainage and Wastewater Division Drainage Basins and Creeks



	Drainage Basin Boundary
	Stream/Culvert



SPU - DRAINAGE & WASTEWATER

Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
Combined Sewer Overflow										
CSO Modeling and Assessment	C399101	885	402	275	54	440	451	58	60	2,625
CSO Monitoring-Installation	C3AA108	963	690	20	107	0	0	0	0	1,780
CSO Plan Implementation	C305199	0	930	500	3,424	3,510	4,764	5,825	5,853	24,806
CSO Plan Update	C3AA103	452	1,000	0	107	385	395	463	477	3,279
South Lake Union Combined Sewer Overflow Phase II	C3AA106	628	1,503	420	1,510	0	0	0	0	4,061
South Lake Union CSO - King County Payments	C3AA104	4,974	3,400	3,850	3,368	471	0	0	0	16,063
Combined Sewer Overflow Total		7,902	7,925	5,065	8,570	4,806	5,610	6,346	6,390	52,614
Drainage Improvements										
11812 57th Avenue South	C301313	0	25	225	0	0	0	0	0	250
19th & 20th Avenue NE Local Drainage	C301317	0	50	125	400	0	0	0	0	575
23rd SW & SW Andover-Landslide	C301357	0	50	150	0	0	0	0	0	200
39th Ave NE & NE 105th St Drainage	C301315	0	110	250	0	0	0	0	0	360
55th Ave SW & SW Olga St Drainage	C301312	0	170	5	0	0	0	0	0	175
Additional Environmental Stewardship Projects	C301341	0	20	20	20	0	0	0	0	60
Alki Landslide Mitigation	C399310	2,478	135	10	10	0	0	0	0	2,633
Atlas Pl SW & SW Juneau Landslide Mitigation	C300344	0	50	75	500	500	0	0	0	1,125
Burke Gilman/NE 144th Landslide Mitigation	C301355	0	50	250	500	500	0	0	0	1,300
Chinook Salmon-Contaminant Sediment	C300341	118	200	250	215	220	0	0	0	1,003
Comprehensive Creeks Inventory/Needs Assessment	C300308	88	85	150	150	0	0	0	0	473

**Amounts in thousands of dollars*

SPU - DRAINAGE & WASTEWATER

Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
Drainage Improvements										
Comprehensive Ditch and Culvert Program	C3AA307	575	240	140	150	0	0	0	0	1,105
Comprehensive Drainage Plan Update	C302301	0	0	500	500	0	0	0	0	1,000
Comprehensive Retrofit/BMP Study	C300316	30	50	200	125	0	0	0	0	405
Creeks CIP Adjustments	C302331	0	245	100	100	100	0	0	0	545
Creeks CIP Monitoring & Repair Program	C300309	98	90	90	95	88	90	116	125	792
Creeks Emerging Issues Program	C305NW 1	0	0	0	0	0	564	578	600	1,742
Creeks Needs Assessment Implementation Program	C302NW 3	0	0	0	0	551	1,692	1,734	1,400	5,377
Creekside Reforestation Program	C300312	58	60	60	60	50	50	50	0	388
Creekside Spot Erosion Improvements Program	C300311	61	50	50	50	0	0	0	0	211
Delridge Basin Phase II Channel Improvements	C3AA319	772	1,050	750	0	0	0	0	0	2,572
Drainage Design Services/Preliminary Engineering	C300301	0	300	0	0	0	0	0	0	300
Drainage Spot Improvements	C300303	2,873	830	460	500	880	902	925	950	8,320
East Boston Terrace Project	C300320	31	108	300	200	0	0	0	0	639
Fairview Ave N Drainage Assessment	C300321	0	65	195	0	0	0	0	0	260
Georgetown Drainage Basin Study	C302NW 1	0	0	71	0	0	0	0	0	71
Golden Gardens/NW 90th Landslide	C302351	0	0	100	200	0	0	0	0	300
Heavy Equipment Purchases - Drainage	C300399	762	397	320	347	264	177	520	500	3,287
In-Stream Gravel Management Program	C300317	0	50	25	0	0	0	0	0	75
Interlaken Blvd & 20th E/Retreat Center Landslide	C302352	0	0	150	400	0	0	0	0	550

**Amounts in thousands of dollars*

SPU - DRAINAGE & WASTEWATER

Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
Drainage Improvements										
Jackson Park Detention Phase 2	C399305	852	1,000	3,045	3,500	0	0	0	0	8,397
Lake Dell/33 E Landslide Mitigation	C301352	0	75	400	25	0	0	0	0	500
Lake Washington/Lower Duwamish Habitat Protection	C300342	0	250	600	644	660	902	925	950	4,931
Landslide-Prone Area Program	C300302	649	960	1,015	1,300	1,651	1,692	1,734	2,168	11,169
Linden Avenue Swale	C3AA318	151	400	50	0	0	0	0	0	601
Local Basin Plan Implementation Program	C300325	16	270	753	2,160	3,000	4,000	4,000	5,000	19,199
Local Emerging Issues Program	C300326	0	72	0	300	2,852	3,000	3,000	3,000	12,224
Longfellow Creek - Graham/Willow Improvements	C399309	174	0	0	0	0	0	0	0	174
Longfellow Creek - SW Brandon to Juneau	C302NW 4	0	50	150	500	0	0	0	0	700
Longfellow Creek - Yancy Street Monitoring	C302NW 5	0	0	75	81	83	0	0	0	239
Mapes Creek - Dam & Reforest Study	C300333	41	60	100	0	0	0	0	0	201
Marine View Drive Landslide Mitigation	C399321	96	249	423	0	0	0	0	0	768
Marine View Drive Landslide Mitigation-South	C301358	0	214	200	750	336	0	0	0	1,500
NW 90th Street & 12th Ave NW Drainage	C301314	0	150	1,185	50	0	0	0	0	1,385
Parks - Gray to Green Projects	C300353	0	50	500	500	0	0	0	0	1,050
Pipers - Metro Culverts Fish Passage Assessment	C301334	0	30	100	0	0	0	0	0	130
Pipers Creek Detention	C304NW 1	9	50	150	680	0	0	0	0	889
Pipers Creek Restoration, Monitor and Adjust	C300334	16	50	50	54	0	0	0	0	170
Property Acquisition	C3AA302	0	781	400	500	500	500	500	500	3,681

**Amounts in thousands of dollars*

SPU - DRAINAGE & WASTEWATER

Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
Drainage Improvements										
Rainier Beach/S Perry Landslide	C302353	0	0	50	200	0	0	0	0	250
Salmon Bay Drainage Improvements	C300327	0	50	150	700	0	0	0	0	900
SEA Street #2 Drainage	C300329	0	50	700	100	0	0	0	0	850
SeaTran - Drainage	C301388	0	860	1,185	1,113	1,146	1,180	1,216	1,252	7,952
SeaTran Tree Pit Expansion Assessment	C300318	19	30	30	0	0	0	0	0	79
Seola Beach Drive Culvert	C399327	93	412	0	0	0	0	0	0	505
South Norfolk Basin Plan	C300306	0	235	0	0	0	0	0	0	235
South Park Drainage Phase 2	C399317	117	300	215	0	0	0	0	0	632
Stormwater Plan	C300307	35	254	50	0	0	0	0	0	339
SW College St & 52 Ave SW Landslide Mitigation	C300345	0	250	50	0	0	0	0	0	300
SW Jacobsen & Alaska Ave SW Landslide Mitigation	C301353	0	50	50	400	0	0	0	0	500
SW Juneau Storm Drain 2	C302NW 2	0	195	1,000	0	0	0	0	0	1,195
SW Myrtle St & Delridge Way SW Drainage Assessment	C300331	0	17	5	265	0	0	0	0	287
SW Sylvan Way & 24th Ave SW PSD	C300332	0	30	200	1,800	0	0	0	0	2,030
Taylor Creek - Phase 3 Restoration	C300313	26	30	100	107	0	0	0	0	263
Taylor Creek Culverts Phase 2	C399315	268	153	130	400	900	0	0	0	1,851
Thornton - 1511 NE 130th Culvert Headwall	C301337	0	10	100	0	0	0	0	0	110
Thornton - Homewood Wetland/Stream Improvements	C301338	0	50	10	150	0	0	0	0	210
Thornton - Lake City Way & NE 100th St Culvert	C301331	0	200	25	600	0	0	0	0	825
Thornton - N Branch Fish Barriers	C301NW 5	0	100	100	360	0	0	0	0	560

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
Drainage Improvements										
Thornton - Park 6 Instream Improvements	C301333	0	50	50	50	0	0	0	0	150
Thornton - Restoration Downstream of Lake City Way	C301339	0	20	50	0	0	0	0	0	70
Thornton Creek - 35th Avenue NE/NE 125th	C399322	133	1,100	100	0	0	0	0	0	1,333
Thornton Creek - Fish Passage at 95th	C301NW6	0	50	15	300	0	0	0	0	365
Thornton Creek Basin Hydraulic Study	C3AA330	0	500	0	0	0	0	0	0	500
Thornton Creek Lake City Detention Ph 4	C301301	0	50	150	600	0	0	0	0	800
Thornton Creek Outfall	C3AA329	146	125	100	147	0	0	0	0	518
Thornton Creek Watershed Action Plan Implementation	C3AA304	543	40	160	0	0	0	0	0	743
Trunk Drainage Implementation	C300330	0	5,362	1,591	3,398	11,995	13,868	14,193	13,950	64,357
Vactor Dump Station - Catch Basin Solids Decant	C399328	0	30	250	250	0	0	0	0	530
Waterway 18 N/N Lake Storm Drain Replacement	C3AA321	120	6	140	0	0	0	0	0	266
West Seattle Golf - Fish Passage	C399307	301	43	200	300	1,500	0	0	0	2,344
Westlake Drainage	C3AA328	781	305	4,000	200	0	0	0	0	5,286
WPA Drains Study & Repair Program	C300338	5	150	250	250	250	250	250	250	1,655
Drainage Improvements Total		12,535	20,298	25,423	27,256	28,026	28,867	29,741	30,645	202,791
General Wastewater										
Carkeek Sewer Overflow - King County	C3AA203	82	125	0	0	0	0	0	0	207
Forced Side Sewer Repairs	C3AA201	203	100	150	161	165	169	173	179	1,300
Heavy Equipment Purchases - Wastewater	C300499	1,069	338	480	616	715	804	707	357	5,086

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
General Wastewater										
Meter Replacement - Direct Service	C520000	601	699	1,344	1,443	1,690	1,733	1,776	1,829	11,115
Public Toilet Program	C399202	124	390	0	0	0	0	0	0	514
SeaTran - Wastewater	C301488	0	831	919	973	781	946	606	995	6,051
Sewage System Modeling	C3AA206	493	829	100	1,162	1,192	1,221	1,253	119	6,369
Sewer Backup Prevention Program	C302201	0	100	100	32	33	34	35	36	370
Sewer Improvements Driven by Other Agencies	C34NW05	0	0	0	549	840	1,036	1,140	1,174	4,739
General Wastewater Total		2,572	3,412	3,093	4,936	5,416	5,943	5,690	4,689	35,751
Habitat and Sediments										
NOAA Sediment	C3AA502	1,424	0	0	0	0	0	0	0	1,424
Potential Sediment Remediation Projects	C300501	0	240	320	717	735	754	772	772	4,310
Habitat and Sediments Total		1,424	240	320	717	735	754	772	772	5,734
Sewer Rehabilitation										
"No Dig" Pipe and Maintenance Hole Rehabilitation	C3AA403	9,983	1,622	808	1,003	414	664	680	700	15,874
1234 S Concord-Sewer Rehabilitation	C302401	0	168	0	0	0	0	0	0	168
2223 Western-Sewer Rehabilitation	C302402	0	265	0	0	0	0	0	0	265
3511 S Dearborn Street - Sewer Rehabilitation	C302403	0	61	0	0	0	0	0	0	61
3869 & 4029 Rainier Avenue S-Sewer Rehabilitation	C302404	5	629	0	0	0	0	0	0	634
56th Avenue NE/ NE 73rd Street - Sewer Rehabilitation	C302405	0	208	0	0	0	0	0	0	208
Beach Dr. SW/SW Jacobson Rd. - Sewer Rehabilitation	C302406	0	111	0	0	0	0	0	0	111
Bonair Place SW/ 53rd Avenue SW - Sewer Rehabilitation	C302407	0	121	0	0	0	0	0	0	121

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
Sewer Rehabilitation										
Minor Facility Upgrades - Rehabilitation	C3AA402	438	100	100	113	116	169	173	179	1,388
Pump Station Rehabilitation	C3AA406	784	1,089	1,074	1,074	1,101	1,410	1,445	1,489	9,466
S Brandon Street/27th Avenue S - Sewer Rehabilitation	C302408	0	134	0	0	0	0	0	0	134
S Morgan Street/MLK Jr. Way S - Sewer Rehabilitation	C301401	0	220	0	0	0	0	0	0	220
Sewer Emergency Repairs	C3AA404	1,050	300	300	268	275	282	289	298	3,062
Sewer Full Line Replacements	C300488	0	0	10,472	6,304	5,175	7,368	7,265	8,823	45,407
Spot Sewer Pipe Repairs	C300401	1,181	2,338	1,310	880	660	790	809	834	8,802
Wastewater Rehabilitation Project Evaluation	C3AA401	617	75	200	86	88	90	93	95	1,344
Sewer Rehabilitation Total		14,058	7,441	14,264	9,728	7,829	10,773	10,754	12,418	87,265
Department Total		38,491	39,316	48,165	51,207	46,812	51,947	53,303	54,914	384,155

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Fund Source Summary

Funding Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	38,491	39,316	48,165	51,207	46,812	51,947	53,303	54,914	384,155
Department Total	38,491	39,316	48,165	51,207	46,812	51,947	53,303	54,914	384,155

**Amounts in thousands of dollars*

SPU - DRAINAGE & WASTEWATER

"No Dig" Pipe and Maintenance Hole Rehabilitation

Program: Sewer Rehabilitation **Start Date:** Ongoing
Type: Rehabilitation or Restoration **End Date:** Ongoing
Location: Citywide **Project ID:** C3AA403

Urban Village: Not applicable **Neighborhood District:** In more than one district

The purpose of this ongoing program is to rehabilitate sewer lines using "No Dig" methods. Also included in this project is a program to repair maintenance holes.

<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 Drainage and Wastewater Fund	9,983	1,622	808	1,003	414	664	680	700	15,874
TOTAL FUNDS	9,983	1,622	808	1,003	414	664	680	700	15,874
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

11812 57th Avenue South

Program: Drainage Improvements **Start Date:** 2001 1st Quarter
Type: Improved Facility **End Date:** 2002 4th Quarter
Location: 11812 57TH AV S **Project ID:** C301313

Urban Village: Not in an urban village **Neighborhood District:** Greater Duwamish

This project installs two new catch basins on the north and south sides of S Wallace Street at the intersection of 57th Avenue S. Asphalt concrete swales are installed on the east side of 57th Avenue South between Beacon Avenue S and 11280 57th Avenue S, to assist in routing runoff to the two catch basins. A 12-inch pipe is also constructed on S Wallace St. and an 18-inch pipe is connected to an existing 30-inch pipe on 59th Avenue S.

<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 Drainage and Wastewater Fund	0	25	225	0	0	0	0	0	250
TOTAL FUNDS	0	25	225	0	0	0	0	0	250
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

1234 S Concord-Sewer Rehabilitation

Program: Sewer Rehabilitation
Type: Rehabilitation or Restoration
Location:
 1234 S CONCORD ST

Start Date: 2002 1st Quarter
End Date: 2002 4th Quarter
Project ID: C302401

Urban Village: South Park

Neighborhood District: Greater Duwamish

This project replaces a deteriorated section of eight-inch vitrified clay sanitary sewer on S Concord Street between 12th Avenue and 14th Avenue with new eight-inch ductile iron pipe. The depth of this mainline varies from four to nine feet and has nine active connections to reconnect.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	168	0	0	0	0	0	0	168
TOTAL FUNDS	0	168	0	0	0	0	0	0	168
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

19th & 20th Avenue NE Local Drainage

Program: Drainage Improvements
Type: Improved Facility
Location:
 20th AV NE and NE 137TH ST

Start Date: 2001 1st Quarter
End Date: 2003 4th Quarter
Project ID: C301317

Urban Village: Not in an urban village

Neighborhood District: North

This project develops a plan and makes improvements to solve spot drainage problems and issues related to a ditch along 20th Avenue NE. High velocity flows in the ditch have caused undercutting of the banks near residential properties. Reshaping the ditch creates a safer ditch, while also decreasing the water velocity.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	50	125	400	0	0	0	0	575
TOTAL FUNDS	0	50	125	400	0	0	0	0	575
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

**Amounts in thousands of dollars*

SPU - DRAINAGE & WASTEWATER

2223 Western-Sewer Rehabilitation

Program: Sewer Rehabilitation
Type: Rehabilitation or Restoration
Location:
 2223 WESTERN AV

Start Date: 2001 1st Quarter
End Date: 2002 4th Quarter
Project ID: C302402

Urban Village: Commercial Core

Neighborhood District: Downtown

This project replaces two consecutive mainline sections of eight-inch vitrified clay sanitary sewer which have deteriorated in the alley east of Western Avenue between Bell Street and Blanchard Street. These mainlines are approximately 17 feet deep and have four active connections to be reconnected.

<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 Drainage and Wastewater Fund	0	265	0	0	0	0	0	0	265
TOTAL FUNDS	0	265	0	0	0	0	0	0	265
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

23rd SW & SW Andover-Landslide

Program: Drainage Improvements
Type: New Facility
Location:
 23RD AV SW and SW ANDOVER ST

Start Date: 2001 3rd Quarter
End Date: 2002 4th Quarter
Project ID: C301357

Urban Village: Not in an urban village

Neighborhood District: Delridge

This project constructs a drainage system in a landslide-prone area to convey storm water down the hill to an appropriate discharge point, to reduce the likelihood and damage of future landslides.

<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 Drainage and Wastewater Fund	0	50	150	0	0	0	0	0	200
TOTAL FUNDS	0	50	150	0	0	0	0	0	200
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

3511 S Dearborn Street - Sewer Rehabilitation

Program: Sewer Rehabilitation	Start Date: 2001 1st Quarter
Type: Rehabilitation or Restoration	End Date: 2002 4th Quarter
Location: 3511 S DEARBORN ST	Project ID: C302403
Urban Village: Not in an urban village	Neighborhood District: Central

This project repairs two deteriorated side sewer connections at S Dearborn Street between 12th Avenue and 14th Avenue with 12-inch ductile iron pipe.

<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 Drainage and Wastewater Fund	0	61	0	0	0	0	0	0	61
TOTAL FUNDS	0	61	0	0	0	0	0	0	61
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

3869 & 4029 Rainier Avenue S-Sewer Rehabilitation

Program: Sewer Rehabilitation	Start Date: 2001 1st Quarter
Type: Rehabilitation or Restoration	End Date: 2002 4th Quarter
Location: 3869 RAINIER AV S	Project ID: C302404
Urban Village: Columbia City	Neighborhood District: Southeast

This project replaces two deteriorated mainline sections of 10-inch to 12-inch vitrified clay sanitary sewer at Rainier Avenue S with new 12-inch ductile iron pipe.

<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 Drainage and Wastewater Fund	5	629	0	0	0	0	0	0	634
TOTAL FUNDS	5	629	0	0	0	0	0	0	634
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

**Amounts in thousands of dollars*

SPU - DRAINAGE & WASTEWATER

39th Ave NE & NE 105th St Drainage

Program: Drainage Improvements

Start Date: 2001 1st Quarter

Type: New Facility

End Date: 2002 4th Quarter

Location:

Project ID: C301315

39TH AV NE and NE 105TH ST

Urban Village: Not applicable

Neighborhood District: North

This project reduces flooding between 39th Avenue NE and 40th Avenue NE immediately south of NE 105th Street by routing stormwater via a new system within the public right-of-way. Flooding and chronically saturated soil conditions occur because this area lies at the base of a 35-acre drainage basin which drains from generally steep slopes in the southwest towards Thornton Creek. A 48-inch diameter pipe is constructed within the NE 105th Street right-of-way, to lower the hydraulic grade line of stormwater within the system. In addition, the existing storm drain catch basins are connected to alleviate flooding. The project scope includes planning, design, construction, and closeout for the recommended alternative.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	110	250	0	0	0	0	0	360
TOTAL FUNDS	0	110	250	0	0	0	0	0	360
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

55th Ave SW & SW Olga St Drainage

Program: Drainage Improvements

Start Date: 2001 1st Quarter

Type: Improved Facility

End Date: 2002 2nd Quarter

Location:

Project ID: C301312

55TH AV SW and ALKI AV SW

Urban Village: Not in an urban village

Neighborhood District: Southwest

This project adds two large structures to intercept sediment-laden surface storm water before it enters the combined sewer system in 55th Avenue SW. Sedimentation problems stem from a seasonal drainage swale to the east of the property at 2466 55th Avenue SW near the projection of SW Olga Street. Design is currently in the final stages, the project has received an exemption from SEPA requirements, and SPU is working towards obtaining an easement for the operation and maintenance of the planned improvements.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	170	5	0	0	0	0	0	175
TOTAL FUNDS	0	170	5	0	0	0	0	0	175
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

56th Avenue NE/ NE 73rd Street - Sewer Rehabilitation

Program: Sewer Rehabilitation
Type: Rehabilitation or Restoration
Location:
 56TH AV NE and NE 73RD ST

Start Date: 2001 1st Quarter
End Date: 2002 4th Quarter
Project ID: C302405

Urban Village: Not in an urban village

Neighborhood District: Northeast

This project replaces 280 linear feet of eight-inch vitrified clay sanitary sewer at 56th Avenue NE and NE 73rd Street with new eight-inch concrete pipe.

<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 Drainage and Wastewater Fund	0	208	0	0	0	0	0	0	208
TOTAL FUNDS	0	208	0	0	0	0	0	0	208
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Additional Environmental Stewardship Projects

Program: Drainage Improvements
Type: Improved Facility
Location:
 various

Start Date: 2001 2nd Quarter
End Date: Ongoing
Project ID: C301341

Urban Village: Not applicable

Neighborhood District: In more than one district

This project supports community-based stewardship projects designed to restore riparian corridors and wetlands located along public land.

<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 Drainage and Wastewater Fund	0	20	20	20	0	0	0	0	60
TOTAL FUNDS	0	20	20	20	0	0	0	0	60
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Alki Landslide Mitigation

Program: Drainage Improvements

Start Date: 1998 4th Quarter

Type: New Facility

End Date: 2003 4th Quarter

Location:

Project ID: C399310

Alki Ave SW near Duwamish Head

Urban Village: Admiral District

Neighborhood District: Southwest

This project is intended to protect local residents from potential property damage and personal injury, and to protect City property including streets and existing utilities by constructing a subsurface drainage system to drain the greenbelt above Alki Avenue. The City obtained a \$1.32 million grant from the Federal Emergency Management Agency under the Hazard Mitigation Grant Program to implement this project as a result of disastrous landslides in the Puget Sound region in early 1997. Private property owners are providing a portion of the funding for this project (up to \$350,000 of the total) through a Local Improvement District.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	2,478	135	10	10	0	0	0	0	2,633
TOTAL FUNDS	2,478	135	10	10	0	0	0	0	2,633
<i>O&M Costs (Savings)</i>			5	5	5	5	5	5	30

Atlas PI SW & SW Juneau Landslide Mitigation

Program: Drainage Improvements

Start Date: 2001 3rd Quarter

Type: New Facility

End Date: 2004 4th Quarter

Location:

Project ID: C300344

Atlas PI SW and SW JUNEAU ST

Urban Village: Not in an urban village

Neighborhood District: Southwest

This project constructs a drainage system in a landslide-prone area to convey the storm water down the hill to an appropriate discharge point. The drainage system reduces the likelihood and damage of future landslides.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	50	75	500	500	0	0	0	1,125
TOTAL FUNDS	0	50	75	500	500	0	0	0	1,125
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Beach Dr. SW/SW Jacobson Rd. - Sewer Rehabilitation

Program: Sewer Rehabilitation	Start Date: 2001 1st Quarter
Type: Rehabilitation or Restoration	End Date: 2002 4th Quarter
Location: SW Beach Dr./SW Jacobson Road	Project ID: C302406
Urban Village: Not in an urban village	Neighborhood District: Southwest

This project replaces an eight-inch sanitary sewer mainline with eight-inch ductile iron pipe, using the pipe bursting method.

<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 Drainage and Wastewater Fund	0	111	0	0	0	0	0	0	111
TOTAL FUNDS	0	111	0	0	0	0	0	0	111
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Bonair Place SW/ 53rd Avenue SW - Sewer Rehabilitation

Program: Sewer Rehabilitation	Start Date: 2001 1st Quarter
Type: Rehabilitation or Restoration	End Date: 2002 4th Quarter
Location: BONAIR PL SW and 53RD AV SW	Project ID: C302407
Urban Village: Not in an urban village	Neighborhood District: Southwest

This project replaces approximately 80 feet of failing line with a new eight-inch diameter pipe. The new mainline is to be located on or near the center line of Bonair Place SW. Two new sewer lines are installed and the existing line is abandoned.

<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 Drainage and Wastewater Fund	0	121	0	0	0	0	0	0	121
TOTAL FUNDS	0	121	0	0	0	0	0	0	121
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Burke Gilman/NE 144th Landslide Mitigation

Program: Drainage Improvements

Start Date: 2001 1st Quarter

Type: Improved Facility

End Date: 2005 4th Quarter

Location:

Project ID: C301355

NE 145TH ST and 38TH AV NE

Urban Village: Not in an urban village

Neighborhood District: North

This project investigates and develops a long-range plan to address flooding and slope instability problems in northeast Seattle. The plan includes researching historical information, drilling soil samples, identifying and developing solutions to problem areas, and developing planning-level cost estimates.

<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 Drainage and Wastewater Fund	0	50	250	500	500	0	0	0	1,300
TOTAL FUNDS	0	50	250	500	500	0	0	0	1,300
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Carkeek Sewer Overflow - King County

Program: General Wastewater

Start Date: 2000 1st Quarter

Type: Rehabilitation or Restoration

End Date: 2001 4th Quarter

Location:

Project ID: C3AA203

Carkeek Park

Urban Village: Not in an urban village

Neighborhood District: Northwest

This project funds a study of the King County Carkeek Park Pump Station, which overflows into Puget Sound. Wastewater flows from Seattle contribute to the overflow. SPU is paying for half of the costs of a study of the overflows, with King County paying the other half.

<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 Drainage and Wastewater Fund	82	125	0	0	0	0	0	0	207
TOTAL FUNDS	82	125	0	0	0	0	0	0	207
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Chinook Salmon-Contaminant Sediment

Program: Drainage Improvements **Start Date:** 2000 3rd Quarter
Type: Rehabilitation or Restoration **End Date:** 2004 4th Quarter
Location: Various Watershed **Project ID:** C300341

Urban Village: Not applicable **Neighborhood District:** In more than one district

This project identifies and completes research and monitoring programs, studies, and projects to assist the City in determining the most appropriate, scientifically-based, and cost-effective actions in response to the listing of the Chinook salmon as a threatened species.

<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 Drainage and Wastewater Fund	118	200	250	215	220	0	0	0	1,003
TOTAL FUNDS	118	200	250	215	220	0	0	0	1,003
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Comprehensive Creeks Inventory/Needs Assessment

Program: Drainage Improvements **Start Date:** 2000 2nd Quarter
Type: Rehabilitation or Restoration **End Date:** 2003 4th Quarter
Location: Citywide **Project ID:** C300308

Urban Village: Not applicable **Neighborhood District:** In more than one district

This project funds a multi-year study to investigate Seattle's smaller streams to identify problems and future projects, assess existing conditions, improve existing documentation, and develop criteria to select creeks and define project scopes for SPU's work.

<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 Drainage and Wastewater Fund	88	85	150	150	0	0	0	0	473
TOTAL FUNDS	88	85	150	150	0	0	0	0	473
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Comprehensive Ditch and Culvert Program

Program: Drainage Improvements **Start Date:** 1998 2nd Quarter
Type: Rehabilitation or Restoration **End Date:** 2003 4th Quarter
Location: Citywide **Project ID:** C3AA307

Urban Village: In more than one urban village **Neighborhood District:** In more than one district

This ongoing and expanded data collection, analysis, and management program completes the inventory of ditches around the city for input into the City's Geographic Information System. Work to date has involved the use of a Global Positioning System (GPS) to map locations and selected attributes of the surface drainage system. More than 1000 miles of City right-of-way have been mapped.

<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 Drainage and Wastewater Fund	575	240	140	150	0	0	0	0	1,105
TOTAL FUNDS	575	240	140	150	0	0	0	0	1,105
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Comprehensive Drainage Plan Update

Program: Drainage Improvements **Start Date:** 2002 1st Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: Citywide **Project ID:** C302301

This project revises and updates the City's Comprehensive Drainage Plan, which was originally written in 1988. The revised plan addresses drainage and water quality problems citywide. It includes a status report on the work accomplished since 1988 and provides a 20-year plan for capital improvements in accordance with the Drainage Policy Study adopted by Council in 1999. The plan also includes recommendations for water quality monitoring and education programs in compliance with the City's NPDES permit and ESA regulations as well as a long-term maintenance plan and funding analysis. Development of the plan includes a public input process and environmental review.

<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 Drainage and Wastewater Fund	0	0	500	500	0	0	0	0	1,000
TOTAL FUNDS	0	0	500	500	0	0	0	0	1,000
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Comprehensive Retrofit/BMP Study

Program: Drainage Improvements	Start Date: 2000 2nd Quarter
Type: New Facility	End Date: 2003 4th Quarter
Location: Citywide	Project ID: C300316

This project identifies, develops, and implements a Best Management Practices (BMP) program. The program identifies appropriate sites and types of structural BMPs to be installed at various locations. The BMPs are installed to improve water quality entering the surrounding receiving waters (e.g. streams or lakes).

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	30	50	200	125	0	0	0	0	405
TOTAL FUNDS	30	50	200	125	0	0	0	0	405
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Creeks CIP Adjustments

Program: Drainage Improvements	Start Date: 2001 1st Quarter
Type: Improved Facility	End Date: Ongoing
Location: Citywide	Project ID: C302331

Urban Village: Not applicable

Neighborhood District: In more than one district

This project funds necessary adjustments to capital projects in Seattle's creeks. Creek projects are placed in dynamic streams, and require modifications as projects settle in and adapt to high flows. This project funds those adjustments, rather than having separate budgets to adjust each creek restoration project. If the creek structures are in satisfactory condition, the funds are not spent.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	245	100	100	100	0	0	0	545
TOTAL FUNDS	0	245	100	100	100	0	0	0	545
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

**Amounts in thousands of dollars*

SPU - DRAINAGE & WASTEWATER

Creeks CIP Monitoring & Repair Program

Program: Drainage Improvements **Start Date:** Ongoing
Type: Rehabilitation or Restoration **End Date:** Ongoing
Location: Citywide **Project ID:** C300309

Urban Village: Not applicable **Neighborhood District:** In more than one district

This project monitors the success of instream projects and collects baseline data before construction. The results are used to adjust projects for maximum performance. In addition, stream data related to fish and habitat are collected.

<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 Drainage and Wastewater Fund	98	90	90	95	88	90	116	125	792
TOTAL FUNDS	98	90	90	95	88	90	116	125	792
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Creeks Emerging Issues Program

Program: Drainage Improvements **Start Date:** 2005 1st Quarter
Type: Improved Facility **End Date:** 2007 4th Quarter
Location: Citywide **Project ID:** C305NW1

Urban Village: Not applicable **Neighborhood District:** In more than one district

This project identifies, designs, and constructs stream-related projects. These projects are related to fish passage, erosion control on public property, enhancement of riparian corridor, and habitat improvements. This project also addresses emerging issues which are not foreseeable in the budget process.

<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 Drainage and Wastewater Fund	0	0	0	0	0	564	578	600	1,742
TOTAL FUNDS	0	0	0	0	0	564	578	600	1,742
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Creeks Needs Assessment Implementation Program

Program: Drainage Improvements **Start Date:** 2004 1st Quarter
Type: Improved Facility **End Date:** Ongoing
Location: Citywide **Project ID:** C302NW3

Urban Village: Not applicable **Neighborhood District:** In more than one district

This project implements various urban creek and lake projects that address fish passage, water quality improvements, bank stabilization, and habitat improvements. Projects are identified by the Comprehensive Creek Inventory and Needs Assessment Study.

<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 Drainage and Wastewater Fund	0	0	0	0	551	1,692	1,734	1,400	5,377
TOTAL FUNDS	0	0	0	0	551	1,692	1,734	1,400	5,377
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Creekside Reforestation Program

Program: Drainage Improvements **Start Date:** 2000 3rd Quarter
Type: Improved Facility **End Date:** 2006 4th Quarter
Location: Citywide **Project ID:** C300312

Urban Village: Rainier Beach **Neighborhood District:** In more than one district

This project augments efforts to add native trees to creekside public property. Many park properties lack young conifers, and existing deciduous trees are reaching the end of their lifespan. Trees play an important role along streams: roots help stabilize banks and other eroding areas, leaves shade and cool the water, berries and leaves are a food source for aquatic animals, and fallen trees add habitat diversity.

<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 Drainage and Wastewater Fund	58	60	60	60	50	50	50	0	388
TOTAL FUNDS	58	60	60	60	50	50	50	0	388
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

**Amounts in thousands of dollars*

SPU - DRAINAGE & WASTEWATER

Creekside Spot Erosion Improvements Program

Program: Drainage Improvements **Start Date:** 2000 1st Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: Citywide **Project ID:** C300311

Urban Village: Not in an urban village **Neighborhood District:** In more than one district

This project addresses minor areas of erosion adjacent to creeks. Erosion is a natural process, but many urban activities accelerate erosive rates. Localized erosion problems may be caused by landslides, poorly designed storm drain outfalls, or sharp bends in a stream. This program addresses some minor erosion sites that do not require a major restoration effort.

<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 Drainage and Wastewater Fund	61	50	50	50	0	0	0	0	211
TOTAL FUNDS	61	50	50	50	0	0	0	0	211
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

CSO Modeling and Assessment

Program: Combined Sewer Overflow **Start Date:** 1999 1st Quarter
Type: Rehabilitation or Restoration **End Date:** Ongoing
Location: Citywide **Project ID:** C399101

Urban Village: In more than one urban village **Neighborhood District:** In more than one district

This project establishes and calibrates models for six priority Combined Sewer Overflow (CSO) basin groups. Priority is based primarily on frequency of overflows, as measured by two years of monitoring data. The Department of Ecology has agreed that the City's 2001 CSO Plan Amendment shall cover these priority basin groups. The models are used during the development of the CSO Plan to evaluate alternative strategies for reducing CSOs. After 2001, models are established for the next group of priority basins, and calibrated using data from monitors installed in 2000. These models are also to be used for the next CSO Plan update in 2006.

<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 Drainage and Wastewater Fund	885	402	275	54	440	451	58	60	2,625
TOTAL FUNDS	885	402	275	54	440	451	58	60	2,625
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

CSO Monitoring-Installation

Program: Combined Sewer Overflow **Start Date:** 1999 1st Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: Citywide **Project ID:** C3AA108

Urban Village: In more than one urban village **Neighborhood District:** In more than one district

The City's Combined Sewer Overflow (CSO) National Pollutant Discharge Elimination System permit requires that monitoring devices be installed in all CSO outfalls. Since this installation was completed in 2000, funds are used to monitor special locations to assess problem overflows, and for in-system monitoring as required to support the development of reduction alternatives for the CSO 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 Drainage and Wastewater Fund	963	690	20	107	0	0	0	0	1,780
TOTAL FUNDS	963	690	20	107	0	0	0	0	1,780
<i>O&M Costs (Savings)</i>			315	315	315	315	315	315	1,890

CSO Plan Implementation

Program: Combined Sewer Overflow **Start Date:** Ongoing
Type: Improved Facility **End Date:** Ongoing
Location: Citywide **Project ID:** C305199

Urban Village: Not applicable **Neighborhood District:** In more than one district

This project funds Combined Sewer Overflow (CSO) projects to control overflows into Salmon Bay, the Ship Canal, Lake Washington and other water bodies. Projects are identified through the CSO 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 Drainage and Wastewater Fund	0	930	500	3,424	3,510	4,764	5,825	5,853	24,806
TOTAL FUNDS	0	930	500	3,424	3,510	4,764	5,825	5,853	24,806
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

CSO Plan Update

Program: Combined Sewer Overflow
Type: Improved Facility
Location:
 Citywide

Start Date: 1999 1st Quarter
End Date: Ongoing
Project ID: C3AA103

Urban Village: Not applicable

Neighborhood District: In more than one district

Combined Sewer Overflow (CSO) plans are required by the Department of Ecology every five years. The next plan is due in 2006. This project funds preparation of the plan, Environmental Impact Statements, and public participation plans.

<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 Drainage and Wastewater Fund	452	1,000	0	107	385	395	463	477	3,279
TOTAL FUNDS	452	1,000	0	107	385	395	463	477	3,279
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Delridge Basin Phase II Channel Improvements

Program: Drainage Improvements
Type: Improved Facility
Location:
 26th AV SW/SW Myrtle St

Start Date: 1993 2nd Quarter
End Date: 2002 4th Quarter
Project ID: C3AA319

Urban Village: Not in an urban village

Neighborhood District: Delridge

Neighborhood Plan: Delridge

This project includes improvements to the Longfellow Creek stream channel between SW Myrtle Street and SW Andover Street. These improvements increase the creek's capacity by widening the channel and stabilizing the stream banks. Culverts at street crossings are enlarged to remove flow restrictions and to allow fish passage.

<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 Drainage and Wastewater Fund	772	1,050	750	0	0	0	0	0	2,572
TOTAL FUNDS	772	1,050	750	0	0	0	0	0	2,572
<i>O&M Costs (Savings)</i>			0	0	15	15	15	15	60

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Drainage Design Services/Preliminary Engineering

Program: Drainage Improvements **Start Date:** Ongoing
Type: Improved Facility **End Date:** Ongoing
Location: Citywide **Project ID:** C300301

Urban Village: Not applicable **Neighborhood District:** In more than one district

This project provides funds for work done by City staff and consultants in negotiating scopes of work for design of individual projects. Once a scope is completed and a budget is established, the individual project's work order number is set up for all subsequent charges. This project provides a place to charge and track the costs associated with setting up a new 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 Drainage and Wastewater Fund	0	300	0	0	0	0	0	0	300
TOTAL FUNDS	0	300	0	0	0	0	0	0	300
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Drainage Spot Improvements

Program: Drainage Improvements **Start Date:** 1998 2nd Quarter
Type: Rehabilitation or Restoration **End Date:** Ongoing
Location: Citywide **Project ID:** C300303

Urban Village: In more than one urban village **Neighborhood District:** In more than one district

This project makes a number of spot improvements to drainage systems and creeks throughout the City. The project increases the capacity of the drainage systems, prevents flooding, and restores fish habitat. Typical improvements include installation of inlets and catch basins, construction of ditches and grassed swales, installation of culverts, plantings to reduce erosion, and the construction of check dams.

<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 Drainage and Wastewater Fund	2,873	830	460	500	880	902	925	950	8,320
TOTAL FUNDS	2,873	830	460	500	880	902	925	950	8,320
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0
Cash Flow		830	460	500	880	902	925	0	

**Amounts in thousands of dollars*

SPU - DRAINAGE & WASTEWATER

East Boston Terrace Project

Program: Drainage Improvements

Start Date: 2000 1st Quarter

Type: New Facility

End Date: 2003 4th Quarter

Location:

Project ID: C300320

1617 East Boston Terrace

Urban Village: Not applicable

Neighborhood District: East District

This project provides drainage system improvements at East Boston Terrace and removes City stormwater runoff from a slide-prone area. Currently, the stormwater drains down the hillside through an old privately-owned drainage line, a portion of which is a deteriorated old wood stave line. This project intercepts stormwater runoff and drains it to a storm drain constructed of concrete pipe in good condition; this new drain line is to be in the right-of-way where SPU has ready access for maintenance.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	31	108	300	200	0	0	0	0	639
TOTAL FUNDS	31	108	300	200	0	0	0	0	639
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Fairview Ave N Drainage Assessment

Program: Drainage Improvements

Start Date: 2001 1st Quarter

Type: Improved Facility

End Date: 2002 4th Quarter

Location:

Project ID: C300321

FAIRVIEW AV E and E GARFIELD ST

Urban Village: Eastlake

Neighborhood District: Lake Union

This project provides storm drain extensions on Fairview Avenue E from the E Garfield outfall to Fairview Avenue N and from the E Boston St. outfall to E Newton St. A storm drain extension reduces the number of outfalls and provides a drainage system that is easy to maintain, in what is currently a high maintenance area. The drainage improvements support two neighborhood requested projects, one of which has neighborhood matching funds and the second which has Seattle Transportation funding.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	65	195	0	0	0	0	0	260
TOTAL FUNDS	0	65	195	0	0	0	0	0	260
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Forced Side Sewer Repairs

Program: General Wastewater
Type: Rehabilitation or Restoration
Location:
 Citywide

Start Date: Ongoing
End Date: Ongoing
Project ID: C3AA201

Urban Village: Not in an urban village

Neighborhood District: In more than one district

This project funds potential repairs to septic systems that are used for sewage disposal. These systems can fail and effect public health adversely.

<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 Drainage and Wastewater Fund	203	100	150	161	165	169	173	179	1,300
TOTAL FUNDS	203	100	150	161	165	169	173	179	1,300
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Georgetown Drainage Basin Study

Program: Drainage Improvements
Type: Improved Facility
Location:
 Area of Georgetown

Start Date: 2002 2nd Quarter
End Date: 2002 4th Quarter
Project ID: C302NW1

Urban Village: Not applicable

Neighborhood District: Greater Duwamish

Neighborhood Plan: Georgetown

This project assesses drainage demands in the Georgetown neighborhood. Information previously developed by City and County Combined Sewer Overflow (CSO) studies and past drainage studies is used. These funds pay for a planning-level analysis of demands. This project is coordinated with the Norfolk Basin Plan, the City's new CSO Plan, and other new initiatives in the area. A future study addresses any problems found.

<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 Drainage and Wastewater Fund	0	0	71	0	0	0	0	0	71
TOTAL FUNDS	0	0	71	0	0	0	0	0	71
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Golden Gardens/NW 90th Landslide

Program: Drainage Improvements **Start Date:** 2002 1st Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: GOLDEN GARDENS DR NW and NW 87TH ST **Project ID:** C302351
Urban Village: Not in an urban village **Neighborhood District:** Ballard

This project installs groundwater surface controls and improves the storm drainage system to stabilize the hillside. SPU has a wastewater pump station and stormdrain lines in the area that could be at risk if a significant landslide occurs.

<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 Drainage and Wastewater Fund	0	0	100	200	0	0	0	0	300
TOTAL FUNDS	0	0	100	200	0	0	0	0	300
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Heavy Equipment Purchases - Drainage

Program: Drainage Improvements **Start Date:** Ongoing
Type: Rehabilitation or Restoration **End Date:** Ongoing
Location: n/a **Project ID:** C300399

This project replaces existing heavy equipment (such as vactors, loaders, and bulldozers) used by SPU field crews. This equipment has reached the end of its useful life.

<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 Drainage and Wastewater Fund	762	397	320	347	264	177	520	500	3,287
TOTAL FUNDS	762	397	320	347	264	177	520	500	3,287
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Heavy Equipment Purchases - Wastewater

Program: General Wastewater **Start Date:** Ongoing
Type: Rehabilitation or Restoration **End Date:** Ongoing
Location: n/a **Project ID:** C300499

This project replaces existing heavy equipment (such as vactors, loaders, and bulldozers) used by SPU field crews. This equipment has reached the end of its useful life.

<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 Drainage and Wastewater Fund	1,069	338	480	616	715	804	707	357	5,086
TOTAL FUNDS	1,069	338	480	616	715	804	707	357	5,086
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

In-Stream Gravel Management Program

Program: Drainage Improvements **Start Date:** 2000 2nd Quarter
Type: Improved Facility **End Date:** 2002 4th Quarter
Location: Citywide **Project ID:** C300317

This project explores the manual addition of gravel to the upper reaches of Seattle creeks. The project tracks the progression of gravel substrate in the creek ecosystem and determines if in-stream projects designed to “hold” gravels have been successful. The project may show that in highly urban creek watersheds, manual addition of gravels is a necessary component of creek management.

<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 Drainage and Wastewater Fund	0	50	25	0	0	0	0	0	75
TOTAL FUNDS	0	50	25	0	0	0	0	0	75
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Interlaken Blvd & 20th E/Retreat Center Landslide

Program: Drainage Improvements **Start Date:** 2002 1st Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: 20TH AV E and E INTERLAKEN BV **Project ID:** C302352

Urban Village: Not in an urban village

Neighborhood District: East District

This project funds preliminary engineering for drainage improvements, to stabilize this landslide-prone area and protect existing city utilities. The improvements are to be designed after a more detailed scope and budget are established.

<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 Drainage and Wastewater Fund	0	0	150	400	0	0	0	0	550
TOTAL FUNDS	0	0	150	400	0	0	0	0	550
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Jackson Park Detention Phase 2

Program: Drainage Improvements

Start Date: 1999 2nd Quarter

Type: New Facility

End Date: 2003 4th Quarter

Location:

Project ID: C399305

Jackson Park Golf Course

Urban Village: Not in an urban village

Neighborhood District: North

Neighborhood Plan: North District/Lake City Way

This project constructs three detention ponds in the Jackson Park golf course, including overflow structures for transferring flow between the creek and the ponds. The project reroutes 1,600 feet of Thornton Creek channel within the golf course to accommodate the proposed detention ponds as well as improve habitat for fish and wildlife. The project removes 500 feet of culvert within the golf course and replaces it with open channel.

<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 Drainage and Wastewater Fund	852	1,000	3,045	3,500	0	0	0	0	8,397
TOTAL FUNDS	852	1,000	3,045	3,500	0	0	0	0	8,397
<i>O&M Costs (Savings)</i>			0	0	0	25	25	25	75

Lake Dell/33 E Landslide Mitigation

Program: Drainage Improvements

Start Date: 2001 1st Quarter

Type: New Facility

End Date: 2003 1st Quarter

Location:

Project ID: C301352

LAKE DELL AV and 32ND AV

Urban Village: Not in an urban village

Neighborhood District: Central

This project reduces the likelihood and damage of future landslides by funding preliminary engineering for a drainage system to convey storm water down the hill to an appropriate discharge point. The system is to be designed after a more detailed scope and budget are established.

<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 Drainage and Wastewater Fund	0	75	400	25	0	0	0	0	500
TOTAL FUNDS	0	75	400	25	0	0	0	0	500
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Lake Washington/Lower Duwamish Habitat Protection

Program: Drainage Improvements **Start Date:** 2000 3rd Quarter
Type: Improved Facility **End Date:** Ongoing
Location: Lower Duwamish River **Project ID:** C300342

Urban Village: Not in an urban village **Neighborhood District:** Greater Duwamish

This project acquires and/or develops habitat or other salmon-beneficial projects in the Green/Duwamish River system. The projects or programs may be done in cooperation with the Port of Seattle, King County, the affected Tribes, or other agencies and organizations.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	250	600	644	660	902	925	950	4,931
TOTAL FUNDS	0	250	600	644	660	902	925	950	4,931
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Landslide-Prone Area Program

Program: Drainage Improvements **Start Date:** Ongoing
Type: Improved Facility **End Date:** Ongoing
Location: Citywide **Project ID:** C300302

Urban Village: In more than one urban village **Neighborhood District:** In more than one district

This is a program to control surface and subsurface drainage in landslide-prone areas around the City by constructing new facilities and rehabilitating or improving existing facilities. This program was endorsed by the City Council as part of the Landslide Policies in 1998.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	649	960	1,015	1,300	1,651	1,692	1,734	2,168	11,169
TOTAL FUNDS	649	960	1,015	1,300	1,651	1,692	1,734	2,168	11,169
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0
Cash Flow		960	1,015	1,300	1,651	1,692	1,734	0	

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Linden Avenue Swale

Program: Drainage Improvements

Start Date: 1999 1st Quarter

Type: Improved Facility

End Date: 2002 4th Quarter

Location:

Project ID: C3AA318

N. Park Ave to Linden Ave N. from 130th St. to N.127th St.

Urban Village: Bitter Lake Village

Neighborhood District: Northwest

Neighborhood Plan: Broadview-Bitter Lake-Haller Lake

This project addresses drainage and flooding problems in an area between N 130th Street and N 125th Street. Drainage from Bitter Lake currently flows through a ditch and culvert system from N 130th Street down North Park Avenue to N 128th Street and along N 128th Street to Linden Avenue N where it crosses the road to enter the City Light transmission corridor. The ditch and culvert system is replaced with approximately 924 linear feet of 24-inch pipe on the same alignment from N 130th Street, discharging into the existing ditch on the City Light property.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	151	400	50	0	0	0	0	0	601
TOTAL FUNDS	151	400	50	0	0	0	0	0	601
<i>O&M Costs (Savings)</i>			0	1	1	1	1	1	5

Local Basin Plan Implementation Program

Program: Drainage Improvements

Start Date: 2000 1st Quarter

Type: Improved Facility

End Date: 2007 4th Quarter

Location:

Project ID: C300325

Citywide

This project is a placeholder for projects developed to respond to community drainage problems, including those formally identified in Neighborhood Plans. This work is consistent with direction provided by the Drainage Policy Study adopted by the City Council in December 1999. It is the beginning of SPU's large-scale involvement in addressing local collector drainage systems, in addition to trunk systems. SPU is conducting a number of preliminary engineering analyses to develop detailed scopes of work with an appropriate schedule and budget for each project. Specific projects are then included in the Capital Improvement Program for subsequent years.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	16	270	753	2,160	3,000	4,000	4,000	5,000	19,199
TOTAL FUNDS	16	270	753	2,160	3,000	4,000	4,000	5,000	19,199
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Local Emerging Issues Program

Program: Drainage Improvements **Start Date:** 2000 1st Quarter
Type: Improved Facility **End Date:** Ongoing
Location: Citywide **Project ID:** C300326

This is a placeholder for projects which respond to emerging issues including water quality projects necessary to comply with the City's National Pollution Discharge Elimination System Permit and projects developed to reduce long-term maintenance costs of the drainage system. Work is consistent with direction provided by the Drainage Policy Study adopted by the City Council in December 1999. SPU is conducting a number of preliminary engineering analyses to develop detailed scopes of work with an appropriate schedule and budget for each project. Specific projects are then included in the Capital Improvement Program in subsequent years.

<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 Drainage and Wastewater Fund	0	72	0	300	2,852	3,000	3,000	3,000	12,224
TOTAL FUNDS	0	72	0	300	2,852	3,000	3,000	3,000	12,224
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Longfellow Creek - Graham/Willow Improvements

Program: Drainage Improvements **Start Date:** 1999 2nd Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: SW GRAHAM ST and DELRIDGE WY SW **Project ID:** C399309
Urban Village: Not in an urban village **Neighborhood District:** Delridge
Neighborhood Plan: Delridge

The stretch of Longfellow Creek between SW Graham and SW Willow Street has unstable banks and significant erosion. This project designs and constructs improvements to this reach of Longfellow Creek, including bank stabilization, native plants, and instream habitat improvements.

<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 Drainage and Wastewater Fund	174	0	0	0	0	0	0	0	174
TOTAL FUNDS	174	0	0	0	0	0	0	0	174
<i>O&M Costs (Savings)</i>			0	0	2	2	2	2	8

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Longfellow Creek - SW Brandon to Juneau

Program: Drainage Improvements

Start Date: 2001 1st Quarter

Type: Improved Facility

End Date: 2003 4th Quarter

Location:
2519 SW JUNEAU ST

Project ID: C302NW4

Urban Village: Not in an urban village

Neighborhood District: Delridge

Neighborhood Plan: Delridge

This project constructs habitat improvements on Longfellow Creek, including wetlands, water quality improvements, native plants, and/or interpretive elements.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	50	150	500	0	0	0	0	700
TOTAL FUNDS	0	50	150	500	0	0	0	0	700
<i>O&M Costs (Savings)</i>			0	3	3	3	3	3	15

Longfellow Creek - Yancy Street Monitoring

Program: Drainage Improvements

Start Date: 2002 1st Quarter

Type: Improved Facility

End Date: 2004 4th Quarter

Location:
SW YANCY ST

Project ID: C302NW5

Urban Village: Not in an urban village

Neighborhood District: Delridge

Neighborhood Plan: Delridge

This project makes necessary adjustments to the Yancy Street Creek Rehabilitation project based on ongoing monitoring in Longfellow Creek.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	0	75	81	83	0	0	0	239
TOTAL FUNDS	0	0	75	81	83	0	0	0	239
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Mapes Creek - Dam & Reforest Study

Program: Drainage Improvements **Start Date:** 2000 2nd Quarter
Type: Improved Facility **End Date:** 2002 4th Quarter
Location: 52ND AV SW **Project ID:** C300333

Urban Village: Not in an urban village **Neighborhood District:** Southeast

Mapes Creek flows through Kubota Gardens and passes through several natural areas owned by the City's Parks Department. The survival of existing trees is at risk because of steep ravines overgrown with ivy. At the downstream end of Mapes Creek, the creek passes under a failing retaining wall and enters a pipe. This project ensures that the creek can enter the existing culvert, removes ivy and blackberry bushes, and replaces them with native vegetation.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	41	60	100	0	0	0	0	0	201
TOTAL FUNDS	41	60	100	0	0	0	0	0	201
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Marine View Drive Landslide Mitigation

Program: Drainage Improvements **Start Date:** 1999 3rd Quarter
Type: Improved Facility **End Date:** 2002 4th Quarter
Location: MARINE VIEW DR SW and SW 106TH ST **Project ID:** C399321

Urban Village: Not in an urban village **Neighborhood District:** Southwest

MARINE VIEW DR SW and SW 106TH ST

Urban Village: Not in an urban village **Neighborhood District:** Southwest

This project designs and constructs a down-slope drainage system to connect property on a bluff along Marine View Drive. The project is designed to reduce erosion caused by runoff discharging onto the steep hillside and mitigate landslide hazards.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	96	249	423	0	0	0	0	0	768
TOTAL FUNDS	96	249	423	0	0	0	0	0	768
<i>O&M Costs (Savings)</i>			0	1	1	1	1	1	5

**Amounts in thousands of dollars*

SPU - DRAINAGE & WASTEWATER

Marine View Drive Landslide Mitigation-South

Program: Drainage Improvements **Start Date:** 2001 2nd Quarter
Type: Improved Facility **End Date:** 2004 4th Quarter
Location: MARINE VIEW DR SW **Project ID:** C301358

Urban Village: Not in an urban village **Neighborhood District:** Southwest
 MARINE VIEW DR SW and SW 106TH ST

Urban Village: Not in an urban village **Neighborhood District:** Southwest

A significant landslide occurred down-slope of the project area in 1997, after which SPU constructed a major catchment wall. This project helps protect the wall by mitigating the potential damage from future landslides. Damage from future landslides is reduced by constructing or improving the drainage system to convey the stormwater down the hill to an appropriate discharge point.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	214	200	750	336	0	0	0	1,500
TOTAL FUNDS	0	214	200	750	336	0	0	0	1,500
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Meter Replacement - Direct Service

Program: General Wastewater **Start Date:** Ongoing
Type: Rehabilitation or Restoration **End Date:** Ongoing
Location: Citywide **Project ID:** C520000

Urban Village: In more than one urban village **Neighborhood District:** In more than one district

This project replaces customer meters that are not performing within the American Water Works Association's standard of accuracy due to obsolescence or incorrect application. It is currently more cost-effective to replace two-inch and smaller meters than it is to repair them. Three-inch and larger meters are to be repaired, if possible.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	601	699	1,344	1,443	1,690	1,733	1,776	1,829	11,115
TOTAL FUNDS	601	699	1,344	1,443	1,690	1,733	1,776	1,829	11,115
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Minor Facility Upgrades - Rehabilitation

Program: Sewer Rehabilitation	Start Date:	Ongoing
Type: Rehabilitation or Restoration	End Date:	Ongoing
Location: Citywide	Project ID:	C3AA402
Urban Village: Not applicable	Neighborhood District:	In more than one district

This project rehabilitates maintenance holes, catch basins, inlets, and other minor wastewater systems in conjunction with street resurfacing projects.

<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 Drainage and Wastewater Fund	438	100	100	113	116	169	173	179	1,388
TOTAL FUNDS	438	100	100	113	116	169	173	179	1,388
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

NOAA Sediment

Program: Habitat and Sediments	Start Date:	2001 1st Quarter
Type: Improved Facility	End Date:	2002 1st Quarter
Location: Elliott Bay waterfront	Project ID:	C3AA502
Urban Village: Commercial Core	Neighborhood District:	Downtown

This project studies the Elliott Bay central waterfront area to determine whether sediments can be remediated in spot locations without recontamination from adjoining contaminated sediments. Although fully appropriated in previous years, project spending continues through the completion of the 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 Drainage and Wastewater Fund	1,424	0	0	0	0	0	0	0	1,424
TOTAL FUNDS	1,424	0	0	0	0	0	0	0	1,424
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

**Amounts in thousands of dollars*

SPU - DRAINAGE & WASTEWATER

NW 90th Street & 12th Ave NW Drainage

Program: Drainage Improvements **Start Date:** 2001 1st Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: NW 90th ST and 12TH AV NW **Project ID:** C301314
Urban Village: Not in an urban village **Neighborhood District:** Ballard

This project develops a drainage infrastructure (such as catch basins and pipes) to move water to a trunk line running along 7th Ave NW to reduce flooding in the street right-of-way. This project includes street regrading to facilitate conveyance of stormwater. This is a local neighborhood drainage improvement 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 Drainage and Wastewater Fund	0	150	1,185	50	0	0	0	0	1,385
TOTAL FUNDS	0	150	1,185	50	0	0	0	0	1,385
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Parks - Gray to Green Projects

Program: Drainage Improvements **Start Date:** 2001 4th Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: Citywide **Project ID:** C300353

This project is a placeholder for SPU commitments to the City of Seattle Department of Parks and Recreation for projects that remove asphalt paving from playfields and replace it with grass or landscaping, underlain with a drainage system that enhances infiltration. This reduces the stormwater runoff that SPU's drainage systems must handle and also recharges groundwater to enhance summer creek flows. Specific project sites are identified by Parks and approved by SPU throughout the year.

<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 Drainage and Wastewater Fund	0	50	500	500	0	0	0	0	1,050
TOTAL FUNDS	0	50	500	500	0	0	0	0	1,050
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Pipers - Metro Culverts Fish Passage Assessment

Program: Drainage Improvements

Start Date: 2001 1st Quarter

Type: Improved Facility

End Date: 2002 4th Quarter

Location:
12th Av NW & CARKEEK DR S

Project ID: C301334

Urban Village: Not in an urban village

Neighborhood District: Northwest

This project identifies options for fish passage for the chum salmon which return to spawn in Pipers Creek. Much of the spawning habitat is inaccessible to fish, because a culvert near the Metro Treatment plant blocks passage. Previous studies found daylighting options to be cost-prohibitive. This study looks at modifying the existing culverts. If suitable options are identified, future projects include design and construction.

<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 Drainage and Wastewater Fund	0	30	100	0	0	0	0	0	130
TOTAL FUNDS	0	30	100	0	0	0	0	0	130
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Pipers Creek Detention

Program: Drainage Improvements

Start Date: 2000 1st Quarter

Type: Improved Facility

End Date: 2004 4th Quarter

Location:
NW CARKEEK PARK RD

Project ID: C304NW1

Urban Village: Not applicable

Neighborhood District: Northwest

Neighborhood Plan: Broadview-Bitter Lake-Haller Lake

The Pipers Creek drainage system experiences flooding, erosion, and sedimentation problems during significant storm events. This project detains stormwater before it reaches the creek. The existing pond is loaded with sediment with little detention capacity in its current condition and requires substantial improvements before it can serve as a detention facility.

<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 Drainage and Wastewater Fund	9	50	150	680	0	0	0	0	889
TOTAL FUNDS	9	50	150	680	0	0	0	0	889
<i>O&M Costs (Savings)</i>			0	0	0	15	15	15	45

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Pipers Creek Restoration, Monitor and Adjust

Program: Drainage Improvements **Start Date:** 2000 1st Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: **Project ID:** C300334
 NW CARKEEK PARK RD
Urban Village: Not applicable **Neighborhood District:** Northwest
Neighborhood Plan: Broadview-Bitter Lake-Haller Lake

This project provides additional adjustments or repair work on previously constructed stream structures at Pipers and Venema Creeks. During Phases I and II of the Pipers Creek Erosion and Sedimentation Project, numerous in-stream structures were constructed. The project sought to control erosion and sedimentation in the stream channel, enhance habitat for resident and anadromous salmonids for spawning and rearing, and maintain the stream's ability to convey storm flows.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	16	50	50	54	0	0	0	0	170
TOTAL FUNDS	16	50	50	54	0	0	0	0	170
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Potential Sediment Remediation Projects

Program: Habitat and Sediments **Start Date:** 2000 3rd Quarter
Type: Improved Facility **End Date:** 2007 4th Quarter
Location: **Project ID:** C300501
 SPOKANE ST - W SEA BR EB RP and W SEATTLE BR WB to W SEATTLE BR EB

This project funds a two- to three-year evaluation of the Lower Duwamish River to determine the extent and degree of contamination and the risk it poses to human health and the ecology. The primary goal of the first phase of this work is to summarize existing information concerning the nature and extent of contamination, and to identify priority sites for early action. This work is a partnership with Seattle City Light, the Port of Seattle, King County, and Boeing. Work is to be done under a formal Administrative Order on Consent (AOC) with the US Environmental Protection Agency, and the Washington Department of Ecology. This study serves as a Remedial Investigation and Feasibility Study for the Lower Duwamish.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	240	320	717	735	754	772	772	4,310
TOTAL FUNDS	0	240	320	717	735	754	772	772	4,310
<i>O&M Costs (Savings)</i>			0	52	52	52	52	0	208
Cash Flow		240	320	717	735	754	772	0	

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Property Acquisition

Program: Drainage Improvements
Type: New Facility
Location:
 Citywide

Start Date: Ongoing
End Date: Ongoing
Project ID: C3AA302

This project funds acquisition of property to implement the various projects identified in the 2002-2007 Drainage Capital Improvement Program. Using criteria established by SPU, properties are purchased as they become available or as specific project sites are identified.

<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 Drainage and Wastewater Fund	0	781	400	500	500	500	500	500	3,681
TOTAL FUNDS	0	781	400	500	500	500	500	500	3,681
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Public Toilet Program

Program: General Wastewater
Type: New Facility
Location:
 Pioneer Square and Pike Place Market

Start Date: 1999 3rd Quarter
End Date: 2001 4th Quarter
Project ID: C399202

Urban Village: Commercial Core

Neighborhood District: In more than one district

This project installs freestanding public restrooms in commercial areas of Seattle. These facilities include the capability to automatically wash down the interior of the restroom after each use.

<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 Drainage and Wastewater Fund	124	390	0	0	0	0	0	0	514
TOTAL FUNDS	124	390	0	0	0	0	0	0	514
<i>O&M Costs (Savings)</i>			350	350	350	350	350	350	2,100

Pump Station Rehabilitation

Program: Sewer Rehabilitation
Type: Rehabilitation or Restoration
Location:
 BINMIC (BallardInterbayMftg.&Ind.Ctr), Eastlake

Start Date: Ongoing
End Date: Ongoing
Project ID: C3AA406

Urban Village: Not applicable

Neighborhood District: In more than one district

This is an annual capital program to provide for wastewater pump station repairs and rehabilitation including design and installation of emergency generators, material and labor costs for equipment replacement (pumps and valves), and equipment for the remote monitoring system (SCADA).

<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 Drainage and Wastewater Fund	784	1,089	1,074	1,074	1,101	1,410	1,445	1,489	9,466
TOTAL FUNDS	784	1,089	1,074	1,074	1,101	1,410	1,445	1,489	9,466
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Rainier Beach/S Perry Landslide

Program: Drainage Improvements

Start Date: 2002 1st Quarter

Type: Improved Facility

End Date: 2003 4th Quarter

Location:

Project ID: C302353

S PERRY ST and WATERS AV S

Urban Village: Not in an urban village

Neighborhood District: Southeast

This project analyzes the drainage problems in a landslide-prone area and recommends solutions. The project funds preliminary engineering for improvements that are to be designed after a more detailed scope and budget are established.

<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 Drainage and Wastewater Fund	0	0	50	200	0	0	0	0	250
TOTAL FUNDS	0	0	50	200	0	0	0	0	250
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

S Brandon Street/27th Avenue S - Sewer Rehabilitation

Program: Sewer Rehabilitation

Start Date: 2001 1st Quarter

Type: Rehabilitation or Restoration

End Date: 2002 4th Quarter

Location:

Project ID: C302408

S BRANDON ST/27TH AV S

Urban Village: Not in an urban village

Neighborhood District: Southeast

This project replaces 60 linear feet of eight-inch concrete sanitary sewer in the S Brandon Street right-of-way with eight-inch ductile iron pipe.

<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 Drainage and Wastewater Fund	0	134	0	0	0	0	0	0	134
TOTAL FUNDS	0	134	0	0	0	0	0	0	134
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

S Morgan Street/MLK Jr. Way S - Sewer Rehabilitation

Program: Sewer Rehabilitation	Start Date: 2001 1st Quarter
Type: Rehabilitation or Restoration	End Date: 2002 4th Quarter
Location: S MORGAN ST	Project ID: C301401
Urban Village: MLK Jr. @ Holly	Neighborhood District: Southeast

This project replaces a deteriorated section of clay sanitary sewer located on S Morgan Street west of MLK Jr. Way with eight-inch ductile iron pipe. The depth of this line varies from 12 to 14 feet, and has eight active connections to be reconnected.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	220	0	0	0	0	0	0	220
TOTAL FUNDS	0	220	0	0	0	0	0	0	220
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Salmon Bay Drainage Improvements

Program: Drainage Improvements	Start Date: 2001 1st Quarter
Type: Improved Facility	End Date: 2003 4th Quarter
Location: NW 54TH ST	Project ID: C300327
Urban Village: Ballard	Neighborhood District: Ballard
Neighborhood Plan: BINMIC (Ballard Interbay Northend)	

This project installs a piped storm drain system utilizing an existing outfall to Salmon Bay and regrades the area to drain to a series of inlets within the right-of-way. The project is located south of NW Market Street, and between 24th and 28th Avenue NW in an industrially zoned area. The area is Burlington Northern Railroad right-of-way and the existing railroad bed is still active under a franchise agreement. The corridor serves as the primary method of access for the waterfront properties and a secondary access for the properties fronting NW Market. Water collects in low areas and drains onto and ponds upon the waterfront properties immediately adjacent and below this right-of way.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	50	150	700	0	0	0	0	900
TOTAL FUNDS	0	50	150	700	0	0	0	0	900
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

SEA Street #2 Drainage

Program: Drainage Improvements
Type: Improved Facility
Location:
 n/a

Start Date: 2001 1st Quarter
End Date: 2003 4th Quarter
Project ID: C300329

This project addresses stormwater management by using innovative approaches in the residential right-of-way. Swales, landscaping, and reduced impervious surfaces are utilized to create a "green" street that achieves water quality and quantity management objectives while providing public amenities such as traffic calming, pedestrian pathways, and aesthetic improvements. The use of pervious pavements is a feature of SEA Street # 2 that was not included in SEA Street #1.

<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 Drainage and Wastewater Fund	0	50	700	100	0	0	0	0	850
TOTAL FUNDS	0	50	700	100	0	0	0	0	850
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

SeaTran - Drainage

Program: Drainage Improvements
Type: Rehabilitation or Restoration
Location:
 Citywide

Start Date: Ongoing
End Date: Ongoing
Project ID: C301388

Based on a 1999 interdepartmental agreement and subsequent negotiations, SPU is jointly funding drainage code compliance on certain Seattle Transportation capital improvement projects. Per the negotiations, the amount of funding is limited to 4% of the Drainage and Wastewater utility CIP in each year.

<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 Drainage and Wastewater Fund	0	860	1,185	1,113	1,146	1,180	1,216	1,252	7,952
TOTAL FUNDS	0	860	1,185	1,113	1,146	1,180	1,216	1,252	7,952
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

SeaTran - Wastewater

Program: General Wastewater **Start Date:** Ongoing
Type: Rehabilitation or Restoration **End Date:** Ongoing
Location: **Project ID:** C301488
 City wide

Based on a 1999 interdepartmental agreement and subsequent negotiations, SPU is jointly funding drainage code compliance on certain Seattle Transportation capital improvement projects. Per the negotiations, the amount of funding is limited to 4% of the Drainage and Wastewater utility CIP in each year.

<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 Drainage and Wastewater Fund	0	831	919	973	781	946	606	995	6,051
TOTAL FUNDS	0	831	919	973	781	946	606	995	6,051
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

SeaTran Tree Pit Expansion Assessment

Program: Drainage Improvements **Start Date:** 2000 1st Quarter
Type: New Facility **End Date:** 2002 4th Quarter
Location: **Project ID:** C300318
 Citywide

Urban Village: Not in an urban village

Neighborhood District: In more than one district

SPU is partnering with Seattle Transportation to increase infiltration in the watersheds through tree pit expansions and soil amendments. This project improves drainage by increasing perviousness of the tree pit areas.

<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 Drainage and Wastewater Fund	19	30	30	0	0	0	0	0	79
TOTAL FUNDS	19	30	30	0	0	0	0	0	79
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Seola Beach Drive Culvert

Program: Drainage Improvements **Start Date:** 2000 1st Quarter
Type: Rehabilitation or Restoration **End Date:** 2002 4th Quarter
Location: **Project ID:** C399327
 Seola Beach Drive SW/SW 110th St

Urban Village: Not in an urban village

Neighborhood District: Southwest

This project repairs or replaces a failing culvert along Seola Beach Drive SW, south of SW 106th Street.

<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 Drainage and Wastewater Fund	93	412	0	0	0	0	0	0	505
TOTAL FUNDS	93	412	0	0	0	0	0	0	505
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Sewage System Modeling

Program: General Wastewater **Start Date:** 1998 1st Quarter
Type: Rehabilitation or Restoration **End Date:** Ongoing
Location: Citywide **Project ID:** C3AA206
Urban Village: Not applicable **Neighborhood District:** In more than one district

This project facilitates development of computer models for the City's sewage system and coordinates system modeling by both in-house staff and consultants.

<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 Drainage and Wastewater Fund	493	829	100	1,162	1,192	1,221	1,253	119	6,369
TOTAL FUNDS	493	829	100	1,162	1,192	1,221	1,253	119	6,369
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Sewer Backup Prevention Program

Program: General Wastewater **Start Date:** 2001 4th Quarter
Type: Rehabilitation or Restoration **End Date:** Ongoing
Location: Citywide **Project ID:** C302201
Urban Village: Not in an urban village **Neighborhood District:** In more than one district

This project develops a sewer backup prevention program in conjunction with system-wide long-term planning efforts.

<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 Drainage and Wastewater Fund	0	100	100	32	33	34	35	36	370
TOTAL FUNDS	0	100	100	32	33	34	35	36	370
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Sewer Emergency Repairs

Program: Sewer Rehabilitation **Start Date:** Ongoing
Type: Rehabilitation or Restoration **End Date:** Ongoing
Location: Citywide **Project ID:** C3AA404
Urban Village: Not applicable **Neighborhood District:** In more than one district

This project makes repairs on an emergency basis to sewer lines that collapse, cause surface problems, or otherwise endanger the health or welfare of the public.

<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 Drainage and Wastewater Fund	1,050	300	300	268	275	282	289	298	3,062
TOTAL FUNDS	1,050	300	300	268	275	282	289	298	3,062
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Sewer Full Line Replacements

Program: Sewer Rehabilitation	Start Date:	Ongoing
Type: Rehabilitation or Restoration	End Date:	Ongoing
Location: Citywide	Project ID:	C300488
Urban Village: Not applicable	Neighborhood District:	In more than one district

This project replaces and repairs sewer lines. SPU Drainage and Wastewater's continuous closed circuit television (CCTV) inspections identifies defects in sewer mainlines. Each mainline defect is catalogued in the Utility's database and assigned a priority number which designates the urgency of repair under this 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 Drainage and Wastewater Fund	0	0	10,472	6,304	5,175	7,368	7,265	8,823	45,407
TOTAL FUNDS	0	0	10,472	6,304	5,175	7,368	7,265	8,823	45,407
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0
Cash Flow		0	10,472	6,304	5,175	7,368	7,265	5,115	

Sewer Improvements Driven by Other Agencies

Program: General Wastewater	Start Date:	2003 1st Quarter
Type: Rehabilitation or Restoration	End Date:	Ongoing
Location: Various	Project ID:	C34NW05

This project makes wastewater system changes as required by other agencies' projects including the Seattle Housing Authority (Holly Park Phase 3), King County, and Sound Transit.

<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 Drainage and Wastewater Fund	0	0	0	549	840	1,036	1,140	1,174	4,739
TOTAL FUNDS	0	0	0	549	840	1,036	1,140	1,174	4,739
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0
Cash Flow		0	0	549	840	1,036	1,140	1,276	

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

South Lake Union Combined Sewer Overflow Phase II

Program: Combined Sewer Overflow **Start Date:** 1995 1st Quarter
Type: New Facility **End Date:** 2003 4th Quarter
Location: Valley ST/Western AV N **Project ID:** C3AA106
Urban Village: South Lake Union **Neighborhood District:** Lake Union

This project connects the City's new Combined Sewer Overflow project (Phase I), an upsized transport system along the east side of Lake Union, to King County's projects (Phases III and IV), which are storage, conveyance, and primary treatment projects.

<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 Drainage and Wastewater Fund	628	1,503	420	1,510	0	0	0	0	4,061
TOTAL FUNDS	628	1,503	420	1,510	0	0	0	0	4,061
<i>O&M Costs (Savings)</i>			0	0	78	78	80	80	316

South Lake Union CSO - King County Payments

Program: Combined Sewer Overflow **Start Date:** 1996 4th Quarter
Type: New Facility **End Date:** 2004 4th Quarter
Location: Denny WY/Alaskan WY **Project ID:** C3AA104
Urban Village: South Lake Union **Neighborhood District:** Lake Union

This is a joint City of Seattle/King County project to provide combined sewer overflow control near Denny Way and Lake Union. The project is managed by King County. Seattle's share of the project costs is 17 percent.

<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 Drainage and Wastewater Fund	4,974	3,400	3,850	3,368	471	0	0	0	16,063
TOTAL FUNDS	4,974	3,400	3,850	3,368	471	0	0	0	16,063
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

South Norfolk Basin Plan

Program: Drainage Improvements
Type: Improved Facility
Location:
 S Norfolk Basin

Start Date: 2000 3rd Quarter
End Date: 2002 4th Quarter
Project ID: C300306

Urban Village: Not in an urban village

Neighborhood District: Greater Duwamish

This project develops a long-range plan to solve drainage problems in the South Norfolk Drainage Basin. This watershed is located on the southwest portion of Beacon Hill. It drains an area roughly from Military Road on the north to the south city limit at the Boeing Access Road and from Beacon Avenue South to Interstate 5 as well as the area south of Boeing Field to the Duwamish River. Runoff from this basin is conveyed under I-5 at South Norfolk Street and discharges into the Duwamish through King County's 84-inch combined sewer overflow outfall and the Washington State Department of Transportation's 60-inch freeway outfall. The plan includes data collection, computer modeling, identification of problem areas, analysis of solution alternatives, and cost estimates for recommended projects.

<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 Drainage and Wastewater Fund	0	235	0	0	0	0	0	0	235
TOTAL FUNDS	0	235	0	0	0	0	0	0	235
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0
Cash Flow		0	0	0	0	0	0	0	

South Park Drainage Phase 2

Program: Drainage Improvements
Type: New Facility
Location:
 SW HOLLY ST/SW Roxbury St

Start Date: 1999 2nd Quarter
End Date: 2002 4th Quarter
Project ID: C399317

Urban Village: South Park

Neighborhood District: Southwest

Neighborhood Plan: South Park

This project develops a basin plan for a storm drain system to serve an area in the South Park neighborhood between SR-99 and the Duwamish River, and between 2nd Avenue S and 7th Avenue S. This area floods partly because of water backing up through the existing drainage system, and partly because of stormwater runoff in the immediate vicinity. The existing culvert system is inadequate because of very flat grades in the area and the very low elevation of the entire neighborhood with respect to the Duwamish River. The project identifies one or more projects to address flooding in the area, and prepares scopes, schedules and budget estimates for these projects.

<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 Drainage and Wastewater Fund	117	300	215	0	0	0	0	0	632
TOTAL FUNDS	117	300	215	0	0	0	0	0	632
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

**Amounts in thousands of dollars*

SPU - DRAINAGE & WASTEWATER

Spot Sewer Pipe Repairs

Program: Sewer Rehabilitation **Start Date:** Ongoing
Type: Rehabilitation or Restoration **End Date:** Ongoing
Location: Citywide **Project ID:** C300401
Urban Village: Not applicable **Neighborhood District:** In more than one district

This program repairs and replaces broken, crooked, and misaligned sewer pipes throughout the City.

<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 Drainage and Wastewater Fund	1,181	2,338	1,310	880	660	790	809	834	8,802
TOTAL FUNDS	1,181	2,338	1,310	880	660	790	809	834	8,802
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Stormwater Plan

Program: Drainage Improvements **Start Date:** 2000 1st Quarter
Type: Rehabilitation or Restoration **End Date:** 2002 4th Quarter
Location: Citywide **Project ID:** C300307

This project represents Phase II of the Comprehensive Basin Level Drainage Needs Assessment Project. The first phase of the project developed an approach for integrating water quality, fisheries, and local drainage concerns into the current basin planning approach. This phase applies the methodology to a test basin (or basins as needed) and inventories the demands of other basins/planning areas throughout the city.

<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 Drainage and Wastewater Fund	35	254	50	0	0	0	0	0	339
TOTAL FUNDS	35	254	50	0	0	0	0	0	339
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

SW College St & 52 Ave SW Landslide Mitigation

Program: Drainage Improvements **Start Date:** 2001 1st Quarter
Type: Improved Facility **End Date:** 2002 2nd Quarter
Location: SW COLLEGE ST and 52ND AV SW **Project ID:** C300345
Urban Village: Not in an urban village **Neighborhood District:** Southwest

This project installs equipment to monitor the hillside for possible ground movement, which may negatively impact wastewater and storm drain lines in the area. The equipment enables SPU operations crews to conduct an annual television inspection of the lines, to look for failures that may be caused by shifting hillsides.

<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 Drainage and Wastewater Fund	0	250	50	0	0	0	0	0	300
TOTAL FUNDS	0	250	50	0	0	0	0	0	300
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

SW Jacobsen & Alaska Ave SW Landslide Mitigation

Program: Drainage Improvements	Start Date: 2001 1st Quarter
Type: New Facility	End Date: 2003 2nd Quarter
Location: SW JACOBSEN RD and SW HUDSON ST	Project ID: C301353
Urban Village: Not in an urban village	Neighborhood District: Southwest

This project funds preliminary engineering for a drainage system in a landslide-prone area to convey stormwater down the hill to an appropriate discharge point. The project reduces the likelihood and damage of future landslides. The system is to be designed after a more detailed scope and budget are established.

<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 Drainage and Wastewater Fund	0	50	50	400	0	0	0	0	500
TOTAL FUNDS	0	50	50	400	0	0	0	0	500
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

SW Juneau Storm Drain

Program: Drainage Improvements	Start Date: 2001 4th Quarter
Type: New Facility	End Date: 2002 4th Quarter
Location: SW JUNEAU ST and 30TH AV SW to 34TH AV SW	Project ID: C302NW2
Urban Village: Not applicable	Neighborhood District: Delridge
Neighborhood Plan: Delridge	

This project provides a completed stormwater drainage system in the area of 30th Avenue SW to 34th Avenue SW from Juneau Street to Brandon Street. This is a slide hazard area and this project provides drainage for stormwater from the hillside to reduce infiltration, decrease groundwater, and increase slope stability of the hillside. Stormwater is drained quickly from the hillside and detained at a level area prior to release into Longfellow Creek, in order to limit peak stormwater flows to the creek.

<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 Drainage and Wastewater Fund	0	195	1,000	0	0	0	0	0	1,195
TOTAL FUNDS	0	195	1,000	0	0	0	0	0	1,195
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

SW Myrtle St & Delridge Way SW Drainage Assessment

Program: Drainage Improvements **Start Date:** 2000 4th Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: SW MYRTLE ST and DELRIDGE WY SW **Project ID:** C300331
Urban Village: Not in an urban village **Neighborhood District:** Delridge
Neighborhood Plan: Delridge

This project eliminates local flooding conditions and drainage system problems in this area by designing and implementing a stormwater drainage system upgrade. The project responds to a request in the Delridge Neighborhood Plan. In the area of Delridge Way SW, near the intersections with SW Orchard Street and SW Myrtle Streets the existing system has excessive surface runoff flowing from SW Orchard Street inlets. The inlets at SW Delridge Way and SW Myrtle Street back up, leading to flooding problems in the area.

<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 Drainage and Wastewater Fund	0	17	5	265	0	0	0	0	287
TOTAL FUNDS	0	17	5	265	0	0	0	0	287
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

SW Sylvan Way & 24th Ave SW PSD

Program: Drainage Improvements **Start Date:** 2001 1st Quarter
Type: New Facility **End Date:** 2003 4th Quarter
Location: SW Sylvan Way **Project ID:** C300332
Urban Village: Not in an urban village **Neighborhood District:** Delridge
Neighborhood Plan: Delridge

This project provides a formal drainage system along Sylvan Way SW, from SW Holly to Longfellow Creek. The system reduces erosion problems and increases the stability of the hillside. A preliminary engineering study provides design recommendations, cost estimates, and schedules for the installation of pipe, inlets, and catch basins. At this point, there is no development within this portion of the City, but development is expected.

<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 Drainage and Wastewater Fund	0	30	200	1,800	0	0	0	0	2,030
TOTAL FUNDS	0	30	200	1,800	0	0	0	0	2,030
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Taylor Creek - Phase 3 Restoration

Program: Drainage Improvements

Start Date: 2000 1st Quarter

Type: Improved Facility

End Date: 2003 4th Quarter

Location:

Project ID: C300313

LAKE RIDGE DR S

Urban Village: Rainier Beach

Neighborhood District: Southeast

This project addresses upstream habitat restoration in Taylor Creek. Work includes erosion control projects, riparian planting, instream improvements, and modification of an existing culvert.

<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 Drainage and Wastewater Fund	26	30	100	107	0	0	0	0	263
TOTAL FUNDS	26	30	100	107	0	0	0	0	263
<i>O&M Costs (Savings)</i>			0	0	2	2	2	2	8

Taylor Creek Culverts Phase 2

Program: Drainage Improvements

Start Date: 1998 4th Quarter

Type: New Facility

End Date: 2004 4th Quarter

Location:

Project ID: C399315

Taylor Creek/Rainier Ave S

Urban Village: Not in an urban village

Neighborhood District: Greater Duwamish

This project designs and constructs fish passage improvements at the culvert that conveys Taylor Creek under Rainier Avenue South.

<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 Drainage and Wastewater Fund	268	153	130	400	900	0	0	0	1,851
TOTAL FUNDS	268	153	130	400	900	0	0	0	1,851
<i>O&M Costs (Savings)</i>			0	0	5	5	5	5	20

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Thornton - 1511 NE 130th Culvert Headwall

Program: Drainage Improvements **Start Date:** 2001 2nd Quarter
Type: Improved Facility **End Date:** 2002 4th Quarter
Location: 1511 NE 130TH PL **Project ID:** C301337

Urban Village: Not in an urban village **Neighborhood District:** North
Neighborhood Plan: North District/Lake City Way

This project modifies a failing retaining wall built by the City in the early 1970s. Thornton Creek is undercutting the wall, causing a sinkhole on private property and potentially jeopardizing a nearby residence. The proposed design extends the wall's concrete footings by several feet.

<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 Drainage and Wastewater Fund	0	10	100	0	0	0	0	0	110
TOTAL FUNDS	0	10	100	0	0	0	0	0	110
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Thornton - Homewood Wetland/Stream Improvements

Program: Drainage Improvements **Start Date:** 2001 2nd Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: LAKE CITY WY NE and NE 120TH ST **Project ID:** C301338

Urban Village: Lake City **Neighborhood District:** North

Urban streams typically lack habitat diversity in terms of wetlands, floodplains, vegetation and instream structure. This project addresses these habitat issues in Homewood Park, a City-owned natural area along Thornton Creek.

<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 Drainage and Wastewater Fund	0	50	10	150	0	0	0	0	210
TOTAL FUNDS	0	50	10	150	0	0	0	0	210
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Thornton - Lake City Way & NE 100th St Culvert

Program: Drainage Improvements **Start Date:** 2001 1st Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: **Project ID:** C301331

LAKE CITY WY NE and NE 100TH ST

Urban Village: Not in an urban village

Neighborhood District: North

This project supports community-based stewardship projects designed to restore riparian corridors and wetlands located along public land.

<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 Drainage and Wastewater Fund	0	200	25	600	0	0	0	0	825
TOTAL FUNDS	0	200	25	600	0	0	0	0	825
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Thornton - N Branch Fish Barriers

Program: Drainage Improvements **Start Date:** 2001 1st Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: **Project ID:** C301NW5

25TH AV NE and NE 123RD ST to NE 125TH ST

Urban Village: Not in an urban village

Neighborhood District: North

Neighborhood Plan: North District/Lake City Way

The culvert on 25th Avenue NE blocks passage for migratory fish. This project replaces the existing culvert and/or downstream conditions to enable fish passage. Salmon are then able to access potential spawning and rearing areas in Thornton Creek Park 1 and sections of Jackson Park Golf Course.

<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 Drainage and Wastewater Fund	0	100	100	360	0	0	0	0	560
TOTAL FUNDS	0	100	100	360	0	0	0	0	560
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Thornton - Park 6 Instream Improvements

Program: Drainage Improvements **Start Date:** 2001 2nd Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: 5TH AV NE and NE 104TH ST **Project ID:** C301333
Urban Village: Not in an urban village **Neighborhood District:** North

This project addresses erosion and habitat problems at sections of Thornton Creek along Park 6. Erosion causes sediment to wash downstream and impact habitat, and can undermine road integrity. Urban streams typically lack habitat diversity in terms of wetlands, floodplains, vegetation, and instream structure. This project addresses these issues in Thornton Creek Park 6, a City-owned natural area along Thornton Creek near Northgate Mall. This project includes a strong stewardship component. Local citizens and various non-profit groups are to provide design advice and implement the bulk of the project.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	50	50	50	0	0	0	0	150
TOTAL FUNDS	0	50	50	50	0	0	0	0	150
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Thornton - Restoration Downstream of Lake City Way

Program: Drainage Improvements **Start Date:** 2001 4th Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: RAVENNA AV NE **Project ID:** C301339
Urban Village: Not in an urban village **Neighborhood District:** North

Urban streams typically lack habitat diversity in terms of wetlands, floodplains, vegetation, and instream structure. This project addresses these habitat issues in Ravenna-Bleindheim, a City-owned natural area along Thornton Creek located downstream of Lake City Way.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	0	20	50	0	0	0	0	0	70
TOTAL FUNDS	0	20	50	0	0	0	0	0	70
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Thornton Creek - 35th Avenue NE/NE 125th

Program: Drainage Improvements **Start Date:** 1999 3rd Quarter
Type: Rehabilitation or Restoration **End Date:** 2002 2nd Quarter
Location: **Project ID:** C399322
 35th Ave N. E.

Urban Village: Lake City **Neighborhood District:** North
Neighborhood Plan: North District/Lake City Way

The project replaces a culvert under NE 35th Avenue, one block south of NE 125th Street, and east of a newly constructed stormwater detention pond.

<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 Drainage and Wastewater Fund	133	1,100	100	0	0	0	0	0	1,333
TOTAL FUNDS	133	1,100	100	0	0	0	0	0	1,333
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Thornton Creek - Fish Passage at 95th

Program: Drainage Improvements **Start Date:** 2001 1st Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: **Project ID:** C301NW6
 NE 95TH ST and SAND POINT WY NE

Urban Village: Not applicable **Neighborhood District:** North
Neighborhood Plan: North District/Lake City Way

Chinook salmon have been found along the lower reaches of Thornton Creek. This project improves fish habitat in this area by adding diversity and native plants, and possibly creating a backwater channel.

<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 Drainage and Wastewater Fund	0	50	15	300	0	0	0	0	365
TOTAL FUNDS	0	50	15	300	0	0	0	0	365
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Thornton Creek Basin Hydraulic Study

Program: Drainage Improvements **Start Date:** 2000 1st Quarter
Type: Improved Facility **End Date:** 2002 4th Quarter
Location: LAKE CITY WY NE and NE 80TH ST to NE 145TH ST **Project ID:** C3AA330
Urban Village: Not applicable **Neighborhood District:** North
Neighborhood Plan: North District/Lake City Way

This project conducts a hydrologic and hydraulic study of stormwater flows in the Thornton Creek Drainage Basin. Thornton Creek discharges into Lake Washington at Matthews Beach near NE 90th Street. The study includes data collection, computer modeling, identification of problem areas, analysis of solution alternatives, development of cost estimates, and preparation of a programmatic Environmental Impact Statement. The study does not identify specific projects but instead analyzes system-wide approaches, including various levels of detention and storm drains. Follow-up work by SPU identifies projects and develops a long-range basin 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 Drainage and Wastewater Fund	0	500	0	0	0	0	0	0	500
TOTAL FUNDS	0	500	0	0	0	0	0	0	500
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Thornton Creek Lake City Detention Ph 4

Program: Drainage Improvements **Start Date:** 2001 1st Quarter
Type: New Facility **End Date:** 2003 4th Quarter
Location: 35TH AV NE and NE 110TH ST **Project ID:** C301301
Urban Village: Not in an urban village **Neighborhood District:** North
Neighborhood Plan: North District/Lake City Way

This project constructs a facility at the junction of the two main branches of Thornton Creek to remove floating trash and collect sediment carried by the creek. The facility allows easy access for removal and handling of sediment to reduce maintenance costs, and facilitates removal of floating debris before it reaches the Meadowbrook Pond site just downstream. The project prevents litter and sediment from reaching the pond so that it can better perform its detention, habitat, and water quality functions, and have improved aesthetic appeal as a public access site.

<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 Drainage and Wastewater Fund	0	50	150	600	0	0	0	0	800
TOTAL FUNDS	0	50	150	600	0	0	0	0	800
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Thornton Creek Outfall

Program: Drainage Improvements
Type: Rehabilitation or Restoration
Location:
 NE 105TH ST

Start Date: 1998 1st Quarter
End Date: 2003 4th Quarter
Project ID: C3AA329

Urban Village: Not in an urban village

Neighborhood District: North

Neighborhood Plan: North District/Lake City Way

This project rehabilitates the existing partially-collapsed outfall from Meadowbrook Pond into Lake Washington.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	146	125	100	147	0	0	0	0	518
TOTAL FUNDS	146	125	100	147	0	0	0	0	518
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Thornton Creek Watershed Action Plan Implementation

Program: Drainage Improvements
Type: Improved Facility
Location:
 LAKE CITY WY NE

Start Date: 1999 1st Quarter
End Date: 2002 4th Quarter
Project ID: C3AA304

Urban Village: Not applicable

Neighborhood District: North

This project creates a Watershed Action Plan in accordance with State of Washington Codes. A background report and action plan are produced. The action plan lists numerous strategies designed to control stormwater, reduce non-point pollution, improve habitat, and encourage stewardship. Action plans receive public and agency review and eventual approval from the Department of Ecology and City Council. The final step is the implementation of several projects identified in the Action Plan.

Fund Source	LTD	2001	2002	2003	2004	2005	2006	2007	Total
SPU Drainage and Wastewater Fund	543	40	160	0	0	0	0	0	743
TOTAL FUNDS	543	40	160	0	0	0	0	0	743
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Trunk Drainage Implementation

Program: Drainage Improvements **Start Date:** Ongoing
Type: Improved Facility **End Date:** Ongoing
Location: Various Locations **Project ID:** C300330
Urban Village: Not applicable **Neighborhood District:** In more than one district

This project is a placeholder to reserve funding for future trunk drainage projects throughout the City. Projects are specified via recommendations forwarded from pending basin studies. Following the completion of basin studies and public involvement, SPU initiates preliminary engineering studies to develop detailed scopes of work with schedules and budgets for projects to solve flooding, erosion, water quality, and habitat issues within the various watersheds. Potential projects include storm drains, detention facilities, and creek channel improvements. Appropriate sites are selected and purchased by the projects as necessary.

<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 Drainage and Wastewater Fund	0	5,362	1,591	3,398	11,995	13,868	14,193	13,950	64,357
TOTAL FUNDS	0	5,362	1,591	3,398	11,995	13,868	14,193	13,950	64,357
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Vector Dump Station - Catch Basin Solids Decant

Program: Drainage Improvements **Start Date:** 1999 2nd Quarter
Type: Improved Facility **End Date:** 2003 4th Quarter
Location: 24TH ST NW **Project ID:** C399328
Urban Village: Not in an urban village **Neighborhood District:** Lake Union

This project manages vector waste from stormwater facilities. Efficient and appropriate management of vector waste reduces operations and maintenance costs and helps protect water quality. The project includes investigation of various alternatives, a cost-benefit analysis, and selection of a preferred alternative for implementation.

<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 Drainage and Wastewater Fund	0	30	250	250	0	0	0	0	530
TOTAL FUNDS	0	30	250	250	0	0	0	0	530
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

Wastewater Rehabilitation Project Evaluation

Program: Sewer Rehabilitation	Start Date:	Ongoing
Type: Rehabilitation or Restoration	End Date:	Ongoing
Location: Citywide	Project ID:	C3AA401

Urban Village: In more than one urban village **Neighborhood District:** In more than one district

This project evaluates future wastewater rehabilitation projects by investigating existing records, reports, and plans; obtaining field data from TV inspection and gauging of flows; developing alternatives and cost estimates; and making recommendations.

<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 Drainage and Wastewater Fund	617	75	200	86	88	90	93	95	1,344
TOTAL FUNDS	617	75	200	86	88	90	93	95	1,344
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

Waterway 18 N/N Lake Storm Drain Replacement

Program: Drainage Improvements	Start Date:	1995 2nd Quarter
Type: Improved Facility	End Date:	2002 4th Quarter
Location: 2201 N NORTHLAKE WY	Project ID:	C3AA321

Urban Village: Not in an urban village **Neighborhood District:** North

Neighborhood Plan: Wallingford

This project replaces the existing temporary eight-inch diameter outfall pipe with a 24-inch diameter outfall pipe which discharges stormwater to Lake Union via Waterway No. 18. This provides adequate flow in the storm drain and stops the maintenance hole lid located in N Pacific Street at Waterway No. 18 from popping off during heavy rain storms (a public safety hazard).

<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 Drainage and Wastewater Fund	120	6	140	0	0	0	0	0	266
TOTAL FUNDS	120	6	140	0	0	0	0	0	266
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

**Amounts in thousands of dollars*

SPU - DRAINAGE & WASTEWATER

West Seattle Golf - Fish Passage

Program: Drainage Improvements

Start Date: 1999 1st Quarter

Type: New Facility

End Date: 2004 4th Quarter

Location:
SW GENESEE ST

Project ID: C399307

Urban Village: Not in an urban village

Neighborhood District: Delridge

This project constructs fish passage and habitat improvements along Longfellow Creek through the West Seattle Golf Course. Improvements include replacing culverts and construction of a fish ladder at a rockery dam that spans the creek.

<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 Drainage and Wastewater Fund	301	43	200	300	1,500	0	0	0	2,344
TOTAL FUNDS	301	43	200	300	1,500	0	0	0	2,344
<i>O&M Costs (Savings)</i>			0	5	5	5	5	5	25

Westlake Drainage

Program: Drainage Improvements

Start Date: 1995 2nd Quarter

Type: Improved Facility

End Date: 2003 4th Quarter

Location:
WESTLAKE AV N/ Blaine

Project ID: C3AA328

Urban Village: South Lake Union

Neighborhood District: Lake Union

Neighborhood Plan: BINMIC (Ballard Interbay Northend)

This project complies with an initial investigation that recommended installing a complete drainage system along Westlake Avenue N from north of Blaine Street to Aurora Avenue N, and rehabilitating the existing drainage system from south of Blaine Street to Galer Street. In coordination with construction of the pedestrian/bicycle path, the drainage project also improves surface drainage pickup in adjacent parking areas.

<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 Drainage and Wastewater Fund	781	305	4,000	200	0	0	0	0	5,286
TOTAL FUNDS	781	305	4,000	200	0	0	0	0	5,286
<i>O&M Costs (Savings)</i>			0	15	15	15	15	15	75

*Amounts in thousands of dollars

SPU - DRAINAGE & WASTEWATER

WPA Drains Study & Repair Program

Program: Drainage Improvements **Start Date:** 2000 3rd Quarter
Type: Rehabilitation or Restoration **End Date:** Ongoing
Location: Various locations **Project ID:** C300338

Urban Village: In more than one urban village

Neighborhood District: In more than one district

As a result of extensive landslide damage during the winter of 1933-34, the Works Progress Administration sponsored the construction of landslide mitigation projects at 29 sites around the city between 1935-41. This program prioritizes and makes necessary repairs on the drains. This project was one of the recommended activities from the Landslide Policy Paper adopted by the City Council in 1998.

<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 Drainage and Wastewater Fund	5	150	250	250	250	250	250	250	1,655
TOTAL FUNDS	5	150	250	250	250	250	250	250	1,655
<i>O&M Costs (Savings)</i>			0	0	0	0	0	0	0

**Amounts in thousands of dollars*