

**SPU -  
DRAINAGE AND  
WASTEWATER**

# Seattle Public Utilities Drainage and Wastewater Division Major 2004 Projects\*

Linden Ave N / N 143rd St Drainage Enhancement Thornton / Jackson Park Detention Phase 2

3rd Ave NW / NW 107th St Natural Ditch System

35th Ave W / Elmore Trestle Replacement

CSO Facility #27

E Boston Tr Drainage Project

CSO Facility #21

CSO Facility #19

Westlake Ave Storm Drain Rehab

- Wastewater Project
- ◆ Drainage Project

Spokane St Bridge Salmon Habitat

CSO Facility #11

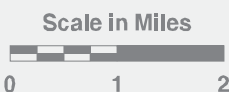
CSO Facility #111D

CSO Facility #10

Atlas Pl / SW Juneau Landslide Mitigation

SW Juneau St Storm Drain Project

\* Represents 15 Highly Visible Projects



## 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
- 43 combined sewer overflow control detention tanks/pipes.

Seattle Public Utilities' Capital Improvement Program (CIP) is the vehicle for maintaining, upgrading, and expanding this infrastructure, as well as constructing projects that protect, conserve, and enhance our region's environmental resources. The overriding goal of the CIP is to ensure that facilities are properly constructed and maintained, and regulatory requirements are met. Projects in the CIP are also guided by various federal regulations, City policies, and long-term plan documents. Many Drainage and Wastewater CIP projects are outlined in the Combined Sewer Overflow Reduction Plan and the Comprehensive Drainage Plan.

Historically, the Drainage and Wastewater (DWF) CIP has been funded by revenue bonds. However, new DWF financial policies adopted in 2003 gradually increase cash contributions from the Utility to the CIP to 25% of total CIP costs, by 2007. Overhead costs for the CIP are budgeted in the Seattle Public Utilities operating fund and then repaid as CIP project expenditures are incurred.

## Highlights

- **Combined Sewer Overflow (CSO) Program:** Approximately \$35 million is included in the 2004-2009 Adopted CIP for the Combined Sewer Overflow Program. In many parts of Seattle, sewage and stormwater flow together in pipes - a Combined Sewer System. Heavy rains may cause these pipes to fill, inducing overflows through outfalls (CSOs) into Lake Union, Lake Washington, or Puget Sound. Projects in the 2004-2009 Adopted CIP respond to federal regulations requiring that the City monitor and reduce CSOs. The Denny Way/Lake Union project, coordinated and jointly funded by the City and King County, is scheduled to be completed in 2004, while projects to add more storage citywide extend throughout the six-year CIP period.
- **Flood Control and Local Drainage:** The City's Comprehensive Drainage Plan, originally written in 1988, is being updated to address flooding and water quality needs in a systematic manner citywide, and to establish a long-term schedule of both capital improvements and operating programs. This work is also intended to comply with the requirements of the pending renewal of Seattle's Federal Stormwater Permit.
- **Habitat and Sediments:** The City of Seattle is named as a potentially responsible party (PRP) for the Duwamish River Superfund Site because of alleged contamination of sediments in the river from CSO and storm drain discharges. The City continues to work with Department of Ecology, King County, and other PRPs on an assessment of contaminants and sources. Funding for this work is included in the "Sediment Remediation Studies" project, which also includes funding for other preliminary studies and analysis for cleanup of other contaminated sites in which the City is a participant.
- **Sewer System Rehabilitation Program:** The Department is continuing a major program to repair and replace failed sewers and rehabilitate sewage pump stations. Approximately \$63.5 million is to be spent on this program in 2004-2009.

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- **Capital Planning:** Several capital planning projects in the 2004-2009 Adopted Drainage and Wastewater CIP provide funding for preliminary engineering work. Funding is used to develop scopes, budgets and schedules for new projects to be included in the 2005-2010 Proposed CIP or subsequent CIP proposals. For projects that cannot wait until the next funding cycle, SPU uses these funds to prepare documentation to seek Council approval for project design and construction to begin mid-year 2004. New projects that are developed from these funds are reviewed and approved by SPU's capital planning committee.

### Project Selection Process

The Department used the existing CIP management organizational structure to develop the 2004-2009 Adopted Drainage and Wastewater CIP program. The process included the following steps:

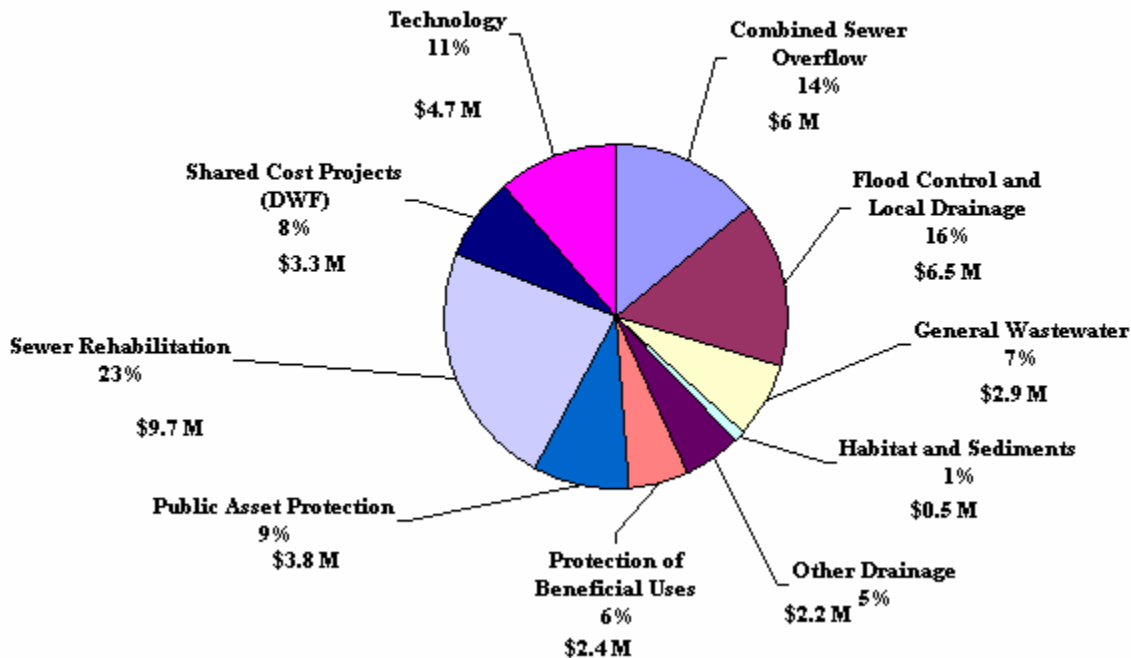
**Project Identification, Project Prioritization, and Project Budget and Scheduling:** In early 2003, all projects in the Drainage and Wastewater CIP were reviewed for consistency with the pending Comprehensive Drainage Plan Update, using criteria developed by the Integrated Cost and Scheduling (ICS) team. The ICS team consists of program managers from the Resource Planning Division, design and project management support staff from the Drainage, Wastewater, and Solid Waste Engineering Division, finance staff from the Budget Division, and neighborhood liaison staff from Community Services. A small number of new projects were developed to address emerging issues that are consistent with the direction of the drainage plan.

Project managers updated the schedules and cash flow projections for all existing Drainage and Wastewater CIP projects. The two ICS teams, one for drainage and one for wastewater, reviewed the compiled project lists, made adjustments based on available funding, and developed the 2004-2009 Proposed CIP. The Drainage and Wastewater CIP Subcommittee and the Asset Management Review Committee then reviewed the program in May. Finally, the information was assembled for submittal to the Department of Finance.

### Program Category Summaries

The Drainage and Wastewater CIP totals \$42 million in 2004 (including Technology projects funded by the Drainage and Wastewater Fund, displayed in a separate section in this CIP). It is composed of 10 program categories, summarized below. A detailed listing of all programs for the Drainage and Wastewater CIP follows this overview. The chart on the following page shows how Seattle Public Utilities' adopted Drainage and Wastewater CIP allocates funding to these program categories in 2004:

Drainage & Wastewater 2004 Adopted CIP by Program Category



**Combined Sewer Overflow (CSO):** This program contains projects to plan, design, construct, and monitor facilities to control overflows from the combined and partially separated sewer system areas. Of the 105 identified CSO points, control technologies have been applied to 99. Monitoring the effectiveness of these controls has initiated additional work at a number of locations, as noted in the adopted CSO Plan amendment. The adopted CSO Plan amendment also discusses the plan for control of those CSO locations at which work has not yet started.

**Flood Control and Local Drainage:** This program makes improvements to the City’s drainage system to address flooding and provide neighborhood drainage systems. The program continues SPU’s expanded role in addressing flooding and installing Natural Drainage System projects to reduce runoff and improve water quality in areas without full street improvements. The program provides funds for the completion of major drainage projects in 2004, including the Jackson Park Detention Phase II project and the 3<sup>rd</sup> Ave NW/NW 107<sup>th</sup> St Natural Drainage System Project. The program also funds projects identified in the City’s neighborhood plans, such as flood control projects in the Thornton Creek and Densmore Drainage Basins.

**General Wastewater:** This program funds significant improvements or major changes to the wastewater system and studies to comply with federal regulations or to assess the need for system improvements.

**Habitat and Sediments:** This program restores or rehabilitates natural resources in or along Seattle’s waterways. The program includes projects to address a portion of the City’s response to the Endangered Species Act listing of Chinook salmon. It also includes funds for sediment and habitat projects the City is completing as an agent for the Elliott Bay/Duwamish Restoration Program Panel.

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**Other Drainage:** This program makes improvements to the City’s drainage system through partnerships with other agencies. The program also includes funding for other capital costs, such as heavy equipment, and for projects that improve the efficiency of the overall drainage program. In 2004, the program continues to provide funds for drainage and sewer designers to work on Seattle Department of Transportation (SDOT) design functions.

**Protection of Beneficial Uses:** This program makes improvements to the city’s drainage system to reduce the harmful effects of stormwater runoff on creeks and receiving water bodies by improving water quality and protecting or enhancing habitat. The program includes projects to improve water quality, protect creeks, meet regulatory requirements and use best available science to meet community expectations for habitat.

**Public Asset Protection:** This program makes improvements to the City’s drainage system to reduce the risk to city infrastructure (such as roads and utilities) from landslides and to control stormwater runoff on steep hillsides so that stormwater does not contribute to landslides. The program includes funds for projects such as the Marine View Drive – 47<sup>th</sup> Ave SW Landslide Mitigation project.

**Sewer Rehabilitation:** This program repairs the City’s collection system of sewer pipes and pump stations. The Department establishes priorities for the program primarily based on the results of closed circuit television (CCTV) inspections and an asset management criticality analysis. The program funds replacement of sewer line segments, point repairs, full and partial lining of pipes, and complete and partial rehabilitation of sewer pump stations, as well as costs for emergency repairs.

**Shared Costs Projects:** This new program in the 2004-2009 Adopted CIP includes capital improvement projects that receive funding from multiple SPU funds. In 2004, the program includes \$2.5 million for existing projects, including Alaskan Way Viaduct & Seawall, Seattle Monorail Project, and Sound Transit Light Rail. These projects have been moved into this program from other drainage and wastewater capital programs.

**Technology:** This program makes use of recent technological 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.

### Anticipated Operating Expenses Associated with Capital Facilities Projects

For most projects in the Drainage and Wastewater CIP, there are no new 2004 operations and maintenance costs, or they have not been calculated (N/C). In these cases, the cost impacts of the project are either insignificant or are offset by cost savings realized by other projects. Construction of new CSO facilities in 2005-2008 might require additional maintenance staff, once these facilities are complete.

### City Council Changes to the CIP

In the 2004 budget process, the Council and Executive agreed to eliminate funding for a series of proposed “placeholder” projects and a sediment remediation project, and redirect the funding to other specific purposes including preliminary engineering work in various programs, sediment remediation studies, and some other newly identified projects. Specifically, the Duwamish Sediment Remediation Project was eliminated from the CIP, as were placeholder projects for Combined Sewer Overflow, Flood Control and Local Drainage, Habitat and Sediments, Landslide Prone Area Program, Other Drainage, Protection of Beneficial Uses, and Sewer Rehabilitation. The placeholder for General Wastewater was renamed Small Sewer Improvements. The following new projects were added to the CIP: Sediment Remediation Studies, Diagonal Storm Drain Sediment Remediation, Capital Planning for Flood Control, Capital Planning for Beneficial Uses, Capital Planning for Public Asset Protection, Small Landslides Projects, and Golden Gardens/View Ave Landslide. For 2004, additional funding was provided for Drainage Spot Improvements and for South Lake Union CSO - King County Payments.

The Council also reduced 2004 funding for the Seattle Monorail Project – Drainage and Seattle Monorail Project – Wastewater projects respectively, to match the spending level anticipated in agreements between the City and the Seattle Monorail Project.

The Council also adopted provisos that restrict SPU in spending Drainage and Wastewater funds appropriated in 2004 on certain CIP projects, as follows:

- No more than \$35,000 of the money appropriated for 2004 for Seattle Public Utilities' Flood Control and Local Drainage BCL can be spent to pay for the N. 137th St. and Meridian Ave. N Storm Drain project (Project ID = C302315), until authorized by future ordinance.
- None of the money appropriated for 2004 for Seattle Public Utilities' Flood Control and Local Drainage BCL can be spent to pay for the Natural Drainage System Improvements project (Project ID = C333206), until authorized by future ordinance.
- No more than \$235,000 of the money appropriated for 2004 for Seattle Public Utilities' Flood Control and Local Drainage BCL can be spent to pay for the Pinehurst Natural Drainage System project (Project ID = C333202), until authorized by future ordinance.
- None of the money appropriated for 2004 for Seattle Public Utilities' Protection of Beneficial Uses BCL can be spent to pay for the Thornton Creek Pond project (Project ID = C302331), until authorized by future ordinance.
- No more than \$300,000 of the money appropriated for 2004 for Seattle Public Utilities' Flood Control and Local Drainage BCL can be spent to pay for the 7th Ave S and Duwamish River Drainage project (Project ID = C302318), until authorized by future ordinance.
- No more than \$200,000 of the money appropriated for 2004 for Seattle Public Utilities' Flood Control and Local Drainage BCL can be spent to pay for the Thornton Creek Basin Plan project (Project ID = C343203), until authorized by future ordinance.
- No more than \$1,500,000 of the funds appropriated for 2004 for Seattle Public Utilities' Habitat and Sediments BCL can be spent on the Sediment Remediation Studies project (Project ID = TBD) until authorized by future ordinance.
- Of the money appropriated for 2004 for Seattle Public Utilities' Public Asset Protection BCL that is allocated in the CIP for, or is used for, Small Landslides Projects (Project ID = TBD) no more than \$150,000 of such money can be spent to pay for any individual project.

In addition, the Council adopted two provisos that restrict SPU in spending funds appropriated in 2004 (including Drainage and Wastewater funds) on certain Technology CIP projects, as follows:

- No more than \$50,000 appropriated for 2004 for Seattle Public Utilities' Capital Improvement Program can be spent to pay for the CCSS: SPU Additions project (Project ID = CNW1269) until authorized by a future ordinance.
- No more than \$300,000 appropriated for 2004 for Seattle Public Utilities' Capital Improvement Program can be spent to pay for the BANNER Upgrade project (Project ID = C503002) until authorized by a future ordinance.

# SPU - Drainage & Wastewater

## Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
<b>Combined Sewer Overflow</b>										
Ballard Combined Sewer Overflow Storage	C303101	0	50	50	500	500	1,000	1,500	0	<b>3,600</b>
Combined Sewer Overflow Control Facility Retrofit	C302102	323	990	691	0	0	0	0	0	<b>2,004</b>
CSO Modeling and Assessment	C399101	1,562	54	340	451	58	100	50	0	<b>2,615</b>
CSO Monitoring Installation	C3AA108	1,603	194	33	0	0	0	0	0	<b>1,830</b>
CSO Plan Implementation	C302101	141	394	500	144	1,605	2,090	2,390	2,700	<b>9,964</b>
CSO Plan Update	C3AA103	1,299	107	100	395	463	100	100	100	<b>2,664</b>
Fremont-Wallingford Combined Sewer Overflow (CSO)	C303102	0	50	50	500	800	1,360	1,540	0	<b>4,300</b>
S Genesee Combined Sewer Overflow Storage	C303103	0	100	200	700	800	500	500	0	<b>2,800</b>
S Henderson Combined Sewer Overflow Storage & Conveyance	C33NW105	0	0	200	400	400	800	500	0	<b>2,300</b>
South Lake Union Combined Sewer Overflow - King Co. Payments	C3AA104	11,813	3,000	1,700	200	0	0	0	0	<b>16,713</b>
South Lake Union Combined Sewer Overflow Phase II	C3AA106	1,239	2,357	1,950	0	0	0	0	0	<b>5,546</b>
Windermere Combined Sewer Overflow Storage	C302103	151	375	58	1,807	92	0	0	0	<b>2,483</b>
<b>Combined Sewer Overflow Total</b>		<b>18,131</b>	<b>7,671</b>	<b>5,872</b>	<b>5,097</b>	<b>4,718</b>	<b>5,950</b>	<b>6,580</b>	<b>2,800</b>	<b>56,819</b>

\*Amounts in thousands of dollars



**Project Summary**

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<b>Flood Control and Local Drainage</b>										
12552 22nd Ave. NE Storm Drainage Improvements	C301323	73	137	168	0	0	0	0	0	<b>378</b>
20th Ave. NE Local Drainage	C301317	33	170	125	0	0	0	0	0	<b>328</b>
39th Ave. NE & NE 105th St. Drainage	C301315	709	400	0	0	0	0	0	0	<b>1,109</b>
3rd Ave. NW & N 110th Natural System	C301320	993	36	0	0	0	0	0	0	<b>1,029</b>
3rd Ave. NW & NW 107 St. Natural System	C300329	429	2,482	1,500	0	0	0	0	0	<b>4,411</b>
7th Ave. S & Duwamish River Drainage	C302318	5	50	300	200	500	2,726	2,000	0	<b>5,781</b>
Capital Planning for Flood Control	C343201	0	0	207	864	2,578	4,852	9,663	12,934	<b>31,098</b>
Comprehensive Ditch and Culvert Inventory	C3AA307	1,001	180	0	0	0	0	0	0	<b>1,181</b>
Comprehensive Drainage Plan Update	C302301	552	1,754	200	0	0	0	0	0	<b>2,506</b>
Drainage Spot Improvements	C333201	994	151	400	150	150	150	150	150	<b>2,295</b>
Fairview Ave. N Drainage Assessment	C300321	105	224	10	0	0	0	0	0	<b>339</b>
Georgetown Drainage Basin Study	C302311	92	50	0	0	0	0	0	0	<b>142</b>
Harbor Island - Storm Drain Repair	C333204	0	66	10	437	0	0	0	0	<b>513</b>
High Point Drainage System	C301303	184	525	875	0	0	0	0	0	<b>1,584</b>
Jackson Park Detention Phase II	C399305	8,592	1,771	251	0	0	0	0	0	<b>10,614</b>
Linden Ave. N & N 143rd Drainage Enhancement	C301321	87	406	300	0	0	0	0	0	<b>793</b>
Linden Ave. Swale	C3AA318	169	0	0	400	0	0	0	0	<b>569</b>
Mapes Creek Natural System	C302319	6	100	90	0	0	0	0	0	<b>196</b>
MLK Way/Norfolk St. Sub-basin Storm Improvements	C333205	0	319	250	300	1,000	1,800	0	0	<b>3,669</b>

*\*Amounts in thousands of dollars*

# SPU - Drainage & Wastewater

## Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
<b>Flood Control and Local Drainage</b>										
N 125th St and Aurora Ave. N Storm Drain	C302313	2	25	852	0	0	0	0	0	879
N 135th St. & Stone Ave. N Detention	C302316	10	10	10	40	200	500	2,850	0	3,620
N 137th St. and Meridian Ave. N Storm Drain	C302315	5	25	10	885	1,000	515	0	0	2,440
N 137th St. and Stone Ave. N Conveyance	C302314	2	10	63	572	0	0	0	0	647
Natural Drainage System Improvements	C333206	0	92	0	650	650	650	620	600	3,262
Natural System Study	C33NW319	0	150	0	0	0	0	0	0	150
Norfolk St. & Boeing Access Road Storm Improvements	C32NW304	0	0	25	0	0	0	0	0	25
Northlake Way Drainage	C343202	0	0	100	0	0	0	0	0	100
NW 90th St. & 12th Ave. NW Drainage	C301314	783	806	0	0	0	0	0	0	1,589
Outfall Inspection - Drainage	C302304	117	210	210	210	210	210	0	0	1,167
Pinehurst Natural Drainage System	C333202	0	92	235	0	0	0	0	0	327
Piper's Creek - Detention	C399326	117	160	100	50	900	50	0	0	1,377
Salmon Bay Drainage Improvements	C300327	145	0	10	112	0	0	0	0	267
SW Juneau Storm Drain	C301311	1,529	584	0	0	0	0	0	0	2,113
Thornton Creek Basin Plan	C343203	0	0	200	0	0	0	0	0	200
Westlake Drainage	C3AA328	4,458	1,318	0	0	0	0	0	0	5,776
<b>Flood Control and Local Drainage Total</b>		<b>21,192</b>	<b>12,303</b>	<b>6,501</b>	<b>4,870</b>	<b>7,188</b>	<b>11,453</b>	<b>15,283</b>	<b>13,684</b>	<b>92,474</b>

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
<b>General Wastewater</b>										
DWW Operations Planning Tool	C303203	0	38	63	0	0	0	0	0	101
Force Main/Pump Stations Plan and Improvements	C302204	5	600	380	200	200	100	200	200	1,885
Forced Side Sewer Repairs	C3AA201	213	10	10	10	10	10	10	10	283
Heavy Equipment Purchases - Wastewater	C300499	1,726	1,330	300	260	130	133	370	370	4,619
Outfall Inspection - Wastewater	C302202	100	140	140	140	140	140	0	0	800
Sanitary Sewer Overflow Capacity Study/Implementation	C302205	8	687	400	300	300	0	0	0	1,695
SDOT 4% Program - Wastewater	C32T101	1,677	803	785	846	506	695	946	950	7,208
Sewage System Modeling	C3AA206	545	107	110	113	116	100	100	100	1,291
Small Sewer Improvements	C303299	0	322	161	338	347	0	0	159	1,327
South Lake Washington Sewer Main Assessment	C303201	0	100	500	300	0	0	0	0	900
Water Reuse - Wastewater	C301203	252	280	20	0	0	0	0	0	552
<b>General Wastewater Total</b>		<b>4,526</b>	<b>4,417</b>	<b>2,869</b>	<b>2,507</b>	<b>1,749</b>	<b>1,178</b>	<b>1,626</b>	<b>1,789</b>	<b>20,661</b>
<b>Habitat and Sediments</b>										
Diagonal Storm Drain Sediment Remediation	C301384	0	0	350	0	0	0	0	0	350
Sediment Remediation Studies	DWFNew1	0	0	1,340	869	1,354	1,272	400	400	5,635
<b>Habitat and Sediments Total</b>		<b>0</b>	<b>0</b>	<b>1,690</b>	<b>869</b>	<b>1,354</b>	<b>1,272</b>	<b>400</b>	<b>400</b>	<b>5,985</b>

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### Project Summary

<b>Program/Project</b>	<b>Project ID</b>	<b>LTD</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Total</b>
<b>Other Drainage</b>										
Ballard Town Center Assessment	C33NW305	0	75	0	0	0	0	0	0	<b>75</b>
GIS System Enhancements	C343502	0	0	114	0	0	0	0	0	<b>114</b>
Heavy Equipment Purchases - Drainage	C300399	1,345	300	880	177	520	350	350	350	<b>4,272</b>
Mobility Improvement	C33NW383	0	300	300	0	0	0	0	0	<b>600</b>
SDOT 4% Program - Drainage	C33T101	423	782	630	610	677	792	819	819	<b>5,552</b>
SR 519 - Drainage Review	C33NW332	0	50	20	0	0	0	0	0	<b>70</b>
Water Reuse - Stormwater	C301302	290	192	20	0	0	0	0	0	<b>502</b>
<b>Other Drainage Total</b>		<b>2,058</b>	<b>1,699</b>	<b>1,964</b>	<b>787</b>	<b>1,197</b>	<b>1,142</b>	<b>1,169</b>	<b>1,169</b>	<b>11,185</b>

*\*Amounts in thousands of dollars*

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<b>Protection of Beneficial Uses</b>										
1st Ave. S Salmon Habitat	C333303	0	63	0	220	511	0	0	0	<b>794</b>
Beer Sheva Habitat Improvement	C301319	91	0	0	0	0	0	0	0	<b>91</b>
Bitter Lake/N 137th Stormwater	C301322	10	0	0	0	0	0	0	0	<b>10</b>
BMP Program Implementation	C300316	155	0	0	0	0	0	0	1,000	<b>1,155</b>
Capital Planning for Beneficial Uses	C343301	0	0	141	0	0	0	0	0	<b>141</b>
Creeks CIP Monitoring & Repair Program	C300309	488	184	141	250	250	250	250	250	<b>2,063</b>
Creeks Emerging Issues Program	C305NW1	0	0	98	0	0	0	0	0	<b>98</b>
Creekside Erosion Control	C300311	97	30	48	0	0	0	0	0	<b>175</b>
Delridge Basin Phase II Channel Improvements	C3AA319	3,881	339	0	0	0	0	0	0	<b>4,220</b>
Densmore Basin Water Quality Investigation	C333302	0	282	0	0	0	0	0	0	<b>282</b>
Fauntleroy Creek Sediment Control	C333301	0	40	30	0	0	0	0	0	<b>70</b>
Fecal TMDL Feasibility Pilot Project	C343302	0	0	100	0	0	0	0	0	<b>100</b>
Georgetown Pump Station Salmon Habitat	C333304	0	59	5	700	700	0	0	0	<b>1,464</b>
Lake Washington/Lower Duwamish Habitat Protection	C301385	47	0	0	902	925	950	950	950	<b>4,724</b>
Longfellow Creek - SW Brandon to Juneau	C301336	34	0	0	0	0	0	0	0	<b>34</b>
Longfellow Creek - Yancy St. Phase 3	C302332	302	566	175	0	0	0	0	0	<b>1,043</b>
Monitoring System Upgrade	C343303	0	0	230	0	0	0	0	0	<b>230</b>
Norfolk Drainage Basin Water Quality Improvements	C302302	26	158	45	1,100	0	0	0	0	<b>1,329</b>
Property Acquisition	C3AA302	2,192	0	0	0	0	0	0	0	<b>2,192</b>
Schmitz Creek Sediment Control	C33NW326	0	0	0	30	0	0	0	0	<b>30</b>

*\*Amounts in thousands of dollars*

# SPU - Drainage & Wastewater

## Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
<b>Protection of Beneficial Uses</b>										
South Park Water Quality Study	C343304	0	0	150	0	0	0	0	0	<b>150</b>
Spokane St. Bridge Salmon Habitat	C333305	0	116	0	0	0	0	0	0	<b>116</b>
Taylor Creek - Phase 3 Restoration	C300313	131	16	0	0	0	0	0	0	<b>147</b>
Taylor Creek Culverts Phase 2	C399315	334	144	200	1,090	0	0	0	0	<b>1,768</b>
Thornton - Lake City Way & NE 100th St. Culvert	C301331	724	60	0	0	0	0	0	0	<b>784</b>
Thornton - Park 6 Instream Improvements	C301333	86	51	50	50	0	0	0	0	<b>237</b>
Thornton Creek - Lake City Detention Ph IV	C301301	790	150	250	600	0	0	0	0	<b>1,790</b>
Thornton Creek - Ravenna Ave. NE Habitat Restoration	C333306	0	29	105	0	0	0	0	0	<b>134</b>
Thornton Creek Pond	C302331	0	0	0	0	0	0	0	0	<b>0</b>
West Seattle Golf Course - Detention	C399307	444	127	30	50	1,500	0	0	0	<b>2,151</b>
<b>Protection of Beneficial Uses Total</b>		<b>9,832</b>	<b>2,414</b>	<b>1,798</b>	<b>4,992</b>	<b>3,886</b>	<b>1,200</b>	<b>1,200</b>	<b>2,200</b>	<b>27,522</b>

*\*Amounts in thousands of dollars*

# SPU - Drainage & Wastewater

## Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
<b>Public Asset Protection</b>										
Atlas Pl. SW & SW Juneau Landslide Mitigation	C300344	389	109	150	240	0	0	0	0	<b>888</b>
Burke Gilman/NE 144th Landslide Mitigation	C301355	161	2	250	650	650	1,000	0	0	<b>2,713</b>
Capital Planning for Public Asset Protection	C333401	0	0	175	500	500	900	500	1,000	<b>3,575</b>
E Boston Terrace Project	C300320	465	795	230	0	0	0	0	0	<b>1,490</b>
Golden Gardens/View Ave. Landslide	DWFNew3	0	0	72	0	0	0	0	0	<b>72</b>
Lake Dell/33 E Landslide Mitigation	C301352	54	20	20	300	0	0	0	0	<b>394</b>
Marine View Drive - 47th SW Landslide	C302352	108	610	878	0	0	0	0	0	<b>1,596</b>
Marine View Drive Landslide Mitigation - North	C399321	527	1	0	0	0	0	0	0	<b>528</b>
Perkins Lane W/W Ruffner St. Drainage Improvement	C301354	175	80	350	960	100	0	0	0	<b>1,665</b>
Rainier Ave. S/S Carver - Landslide	C305NW3	0	0	0	80	180	490	550	0	<b>1,300</b>
Small Landslides Projects	DWFNew2	0	0	585	0	0	0	0	0	<b>585</b>
SW Jacobsen & Alaska Ave. SW Landslide Mitigation	C301353	88	138	439	0	0	0	0	0	<b>665</b>
SW Prescott/Admiral Way Landslide Mitigation	C302353	37	100	361	250	200	0	0	0	<b>948</b>
WPA Drains Study & Repair Program	C300338	327	151	250	100	100	100	100	100	<b>1,228</b>
<b>Public Asset Protection Total</b>		<b>2,331</b>	<b>2,006</b>	<b>3,760</b>	<b>3,080</b>	<b>1,730</b>	<b>2,490</b>	<b>1,150</b>	<b>1,100</b>	<b>17,647</b>

*\*Amounts in thousands of dollars*

# SPU - Drainage & Wastewater

## Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
<b>Sewer Rehabilitation</b>										
"No Dig" Pipe and Maintenance Hole Rehabilitation	C3AA403	9,221	1,064	1,500	1,543	1,552	1,605	1,991	2,000	<b>20,476</b>
3511 S Dearborn St. - Sewer Rehabilitation	C301412	98	22	0	0	0	0	0	0	<b>120</b>
Point Sewer Pipe Repairs	C303401	7,367	2,770	4,084	3,624	3,644	3,768	3,881	4,000	<b>33,138</b>
Pump Station Rehabilitation	C3AA406	2,244	1,318	1,333	1,746	1,755	1,808	1,994	2,000	<b>14,198</b>
Sewer Emergency Repairs	C3AA404	2,018	413	400	450	450	450	461	494	<b>5,136</b>
Sewer Full Line Replacements	C300488	11,889	4,309	1,887	1,744	1,855	2,000	4,010	2,500	<b>30,194</b>
Wastewater Rehabilitation Project Evaluation	C3AA401	855	86	88	91	94	94	97	100	<b>1,505</b>
<b>Sewer Rehabilitation Total</b>		<b>33,692</b>	<b>9,982</b>	<b>9,292</b>	<b>9,198</b>	<b>9,350</b>	<b>9,725</b>	<b>12,434</b>	<b>11,094</b>	<b>104,767</b>

*\*Amounts in thousands of dollars*



# SPU - Drainage & Wastewater

## Project Summary

Program/Project	Project ID	LTD	2003	2004	2005	2006	2007	2008	2009	Total
<b>Shared Cost Projects (DWF)</b>										
Alaskan Way Viaduct & Seawall - Drainage	C33NW301	22	555	128	165	165	41	0	0	1,076
Alaskan Way Viaduct & Seawall - Wastewater	C33NW201	22	126	90	170	170	43	0	0	621
Civic Projects - Drainage	C333503	0	300	0	0	0	0	0	0	300
Civic Projects - Wastewater	C302203	11	254	0	0	0	0	0	0	265
DWW Operations Control Center Upgrade - Drainage	C33NW321	0	506	249	0	0	0	0	0	755
DWW Operations Control Center Upgrade - Wastewater	C33NW213	0	505	249	0	0	0	0	0	754
Facility Improvements (Drainage & Wastewater Fund)	C502010	0	365	380	0	0	0	0	0	745
Meter Replacement - Direct Service	C520000	2,371	692	692	1,536	1,582	1,630	1,678	1,700	11,881
Project Manager Guidebook - Drainage	C301701D	259	112	42	0	0	0	0	0	413
Project Manager Guidebook - Wastewater	C301701W	172	74	22	0	0	0	0	0	268
Seattle Monorail Project - Drainage	C33NW331	2	36	115	148	148	148	0	0	597
Seattle Monorail Project - Wastewater	C33NW210	3	36	115	148	148	148	0	0	598
Sound Transit Light Rail - Drainage	C33NW328	0	50	540	560	1,680	1,550	40	0	4,420
Sound Transit Light Rail - Wastewater	C33NW209	0	50	600	650	540	400	40	0	2,280
<b>Shared Cost Projects (DWF) Total</b>		<b>2,862</b>	<b>3,661</b>	<b>3,222</b>	<b>3,377</b>	<b>4,433</b>	<b>3,960</b>	<b>1,758</b>	<b>1,700</b>	<b>24,973</b>
<b>Department Total</b>		<b>94,624</b>	<b>44,153</b>	<b>36,968</b>	<b>34,777</b>	<b>35,605</b>	<b>38,370</b>	<b>41,600</b>	<b>35,936</b>	<b>362,033</b>

Note: Additional allocations for the SPU - Drainage & Wastewater are shown in the SPU - Technology section of this document.

*\*Amounts in thousands of dollars*

## SPU - Drainage & Wastewater

### Fund Source Summary

<b>Funding Source</b>	<b>LTD</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Total</b>
SPU Drainage and Wastewater Fund	94,624	44,153	36,968	34,777	35,605	38,370	41,600	35,936	<b>362,033</b>
<b>Department Total</b>	<b>94,624</b>	<b>44,153</b>	<b>36,968</b>	<b>34,777</b>	<b>35,605</b>	<b>38,370</b>	<b>41,600</b>	<b>35,936</b>	<b>362,033</b>

Note: Additional allocations for the SPU - Drainage & Wastewater are shown in the SPU - Technology section of this document.

*\*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  
**Project ID:** C3AA403

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This ongoing program rehabilitates sewer pipes prior to complete failure. "No Dig" technology avoids surface use disruption and costly surface repairs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	9,221	1,064	1,500	1,543	1,552	1,605	1,991	2,000	20,476
<b>TOTAL FUNDS</b>	<b>9,221</b>	<b>1,064</b>	<b>1,500</b>	<b>1,543</b>	<b>1,552</b>	<b>1,605</b>	<b>1,991</b>	<b>2,000</b>	<b>20,476</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

### 12552 22nd Ave. NE Storm Drainage Improvements

**Program:** Flood Control and Local Drainage **Start Date:** 4th Quarter 2001  
**Type:** New Facility **End Date:** 4th Quarter 2004  
**Project ID:** C301323

**Location:** 22ND AV NE and NE 125TH ST

**Neighborhood District:** North **Neighborhood Plan:** Not in a Neighborhood Plan

This project constructs a new piped storm drainage system draining to a newly constructed outfall emptying into the north branch of Thornton Creek. Two alternatives are being investigated: routing stormwater runoff to the east through City-owned right-of-way and private property; and routing runoff north through the unimproved right-of-way. Water quality Best Management Practices are also being evaluated for this project.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	73	137	168	0	0	0	0	0	378
<b>TOTAL FUNDS</b>	<b>73</b>	<b>137</b>	<b>168</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>378</b>
<i>O&amp;M Costs (Savings)</i>			0	1	1	1	1	1	

*\*Amounts in thousands of dollars*

## SPU - Drainage & Wastewater

### 1st Ave. S Salmon Habitat

**Program:** Protection of Beneficial Uses  
**Type:** New Facility  
**Project ID:** C333303

**Start Date:** 1st Quarter 2003  
**End Date:** 4th Quarter 2006

**Location:** 1ST AV S

**Neighborhood District:** Greater Duwamish      **Neighborhood Plan:** Not in a Neighborhood Plan

This project develops a feasibility analysis to regrade a currently unpaved site to provide more shallow water habitat during upper and middle tidal elevations. The project site is near the Duwamish bike trail and currently has a bench and a small amount of landscaping established by the Port of Seattle as a public access site. The Port intends to maintain these amenities as the habitat plan is developed by the City. Additional funding will be sought from various grant sources to construct the site.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	63	0	220	511	0	0	0	794
<b>TOTAL FUNDS</b>	<b>0</b>	<b>63</b>	<b>0</b>	<b>220</b>	<b>511</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>794</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	11	11	

### 20th Ave. NE Local Drainage

**Program:** Flood Control and Local Drainage  
**Type:** Improved Facility  
**Project ID:** C301317

**Start Date:** 3rd Quarter 2001  
**End Date:** 4th Quarter 2004

**Location:** 20th AV NE and NE 137TH ST

**Neighborhood District:** North      **Neighborhood Plan:** Broadview-Bitter Lake-Haller Lake

This project develops a plan and makes improvements to resolve safety concerns related to a ditch along 20th Ave. NE. The ditch is deep and has steep side slopes. High-velocity flows in the ditch have undercut the banks near residential properties. Reshaping the ditch makes it safer while also decreasing water velocity.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	33	170	125	0	0	0	0	0	328
<b>TOTAL FUNDS</b>	<b>33</b>	<b>170</b>	<b>125</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>328</b>
<i>O&amp;M Costs (Savings)</i>			0	0	3	3	3	3	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### 3511 S Dearborn St. - Sewer Rehabilitation

**Program:** Sewer Rehabilitation **Start Date:** 1st Quarter 2001  
**Type:** Rehabilitation or Restoration **End Date:** 3rd Quarter 2003  
**Project ID:** C301412

**Location:** 3511 S DEARBORN ST

**Neighborhood District:** Central

**Neighborhood Plan:** Not in a Neighborhood Plan

This project restores two deteriorated side sewer connections at S Dearborn St. between 12th Ave. and 14th Ave. with 12-inch ductile iron pipe.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	98	22	0	0	0	0	0	0	120
<b>TOTAL FUNDS</b>	<b>98</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>120</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

### 39th Ave. NE & NE 105th St. Drainage

**Program:** Flood Control and Local Drainage **Start Date:** 1st Quarter 2001  
**Type:** New Facility **End Date:** 4th Quarter 2003  
**Project ID:** C301315

**Location:** 39TH AV NE and NE 105TH ST

**Neighborhood District:** North

**Neighborhood Plan:** North District/Lake City

This project reduces flooding between 39th Ave. NE and 40th Ave. NE immediately south of NE 105th St. 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 steep slopes in the southwest toward Thornton Creek. A 48-inch diameter pipe is constructed within the NE 105th St. 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.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	709	400	0	0	0	0	0	0	1,109
<b>TOTAL FUNDS</b>	<b>709</b>	<b>400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,109</b>
<i>O&amp;M Costs (Savings)</i>			0	5	5	5	5	5	

*\*Amounts in thousands of dollars*

## SPU - Drainage & Wastewater

### 3rd Ave. NW & N 110th Natural System

**Program:** Flood Control and Local Drainage **Start Date:** 2nd Quarter 2001  
**Type:** Improved Facility **End Date:** 4th Quarter 2003  
**Project ID:** C301320  
**Location:** 3RD AV NW  
**Neighborhood District:** Northwest **Neighborhood Plan:** Broadview-Bitter Lake-Haller Lake

This project addresses stormwater management using a "natural system" approach that promotes sustainable drainage design. The project minimizes the use of standard engineered stormwater infrastructure, instead using the unimproved right-of-way, such as the existing ditch system. The project redesigns and configures the current asphalt-lined drainage ditch and culvert system to meet water quality and quantity objectives.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	993	36	0	0	0	0	0	0	1,029
<b>TOTAL FUNDS</b>	<b>993</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,029</b>
<i>O&amp;M Costs (Savings)</i>			0	8	8	8	8	8	

### 3rd Ave. NW & NW 107 St. Natural System

**Program:** Flood Control and Local Drainage **Start Date:** 4th Quarter 2000  
**Type:** Improved Facility **End Date:** 4th Quarter 2004  
**Project ID:** C300329  
**Location:** NW 107TH ST and 3RD AV NW  
**Neighborhood District:** Northwest **Neighborhood Plan:** Broadview-Bitter Lake-Haller Lake

This project addresses stormwater management using a "natural system" approach that promotes sustainable drainage design. The project minimizes the use of standard engineered stormwater infrastructure, using the unimproved right-of-way as a starting point for design. The project includes various elements: construction of an engineered system of stepped pools along the north side of NW 107th that detains runoff, filters pollutants and allows maximum opportunity for infiltration; use of vegetation as a stormwater management element and for aesthetic appeal; construction of a porous pathway on the south side of NW 107th to provide safe pedestrian access to a nearby elementary school; and creation of a stormwater management feature within the right-of-way along NW 107th to solve the localized drainage problem and provide educational outreach.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	429	2,482	1,500	0	0	0	0	0	4,411
<b>TOTAL FUNDS</b>	<b>429</b>	<b>2,482</b>	<b>1,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,411</b>
<i>O&amp;M Costs (Savings)</i>			0	4	4	4	4	4	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## 7th Ave. S & Duwamish River Drainage

**Program:** Flood Control and Local Drainage

**Start Date:** 3rd Quarter 2002

**Type:** New Facility

**End Date:** 4th Quarter 2008

**Project ID:** C302318

**Location:** 7TH AV S between SR99 & Duwamish River

**Neighborhood District:** Greater Duwamish

**Neighborhood Plan:** South Park

This project constructs a 12-inch to 24-inch collection system, including inlets and catch basins to collect stormwater runoff that floods roadways throughout the South Park lower basin. The project solves flooding problems on public and private property, encourages the economic viability of businesses in the area, and allows street improvements. Most of the pipes are installed on east-west streets and connected to the 72-inch trunk running north through the basin. The project evaluates the adequacy of the 72-inch trunk for conveying the collected flow to the Duwamish River. Alternatives for providing adequate downstream conveyance capacity are addressed in the preliminary engineering phase of the project. A funding source for the roadway improvement must be secured before the project can be constructed.

In the 2004 budget process, Council adopted a proviso that limits to \$300,000 the amount that SPU can spend on this project from funds appropriated in 2004 for the Flood Control and Local Drainage BCL.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	5	50	300	200	500	2,726	2,000	0	5,781
<b>TOTAL FUNDS</b>	<b>5</b>	<b>50</b>	<b>300</b>	<b>200</b>	<b>500</b>	<b>2,726</b>	<b>2,000</b>	<b>0</b>	<b>5,781</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## Alaskan Way Viaduct & Seawall - Drainage

**Program:** Shared Cost Projects (DWF)

**Start Date:** 4th Quarter 2001

**Type:** New Facility

**End Date:** 4th Quarter 2007

**Project ID:** C33NW301

**Location:** ALASKA WAY VIADUCT

**Neighborhood District:** Downtown

**Neighborhood Plan:** Commercial Core

This project funds SPU staff review and coordination of planning, environmental review, and preliminary engineering of a project to replace the Alaskan Way Viaduct and seawall with a new transportation facility. The Washington State Department of Transportation, in conjunction with the Seattle Department of Transportation (project TC366050), is conducting a study and developing a plan for demolition and replacement of the existing facilities. At this early stage, a number of options are being evaluated.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	22	555	128	165	165	41	0	0	1,076
<b>TOTAL FUNDS</b>	<b>22</b>	<b>555</b>	<b>128</b>	<b>165</b>	<b>165</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>1,076</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### Alaskan Way Viaduct & Seawall - Wastewater

**Program:** Shared Cost Projects (DWF) **Start Date:** 4th Quarter 2001  
**Type:** New Facility **End Date:** 4th Quarter 2007  
**Project ID:** C33NW201

**Location:** ALASKAN WAY VIADUCT

**Neighborhood District:** Downtown

**Neighborhood Plan:** Commercial Core

This project funds SPU staff review and coordination of planning, environmental review, and preliminary engineering of a project to replace the Alaskan Way Viaduct and seawall with a new transportation facility. The Washington State Department of Transportation, in conjunction with the Seattle Department of Transportation (project TC366050), is conducting a study and developing a plan for demolition and replacement of the existing facilities. At this early stage, a number of options are being evaluated.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	22	126	90	170	170	43	0	0	621
<b>TOTAL FUNDS</b>	<b>22</b>	<b>126</b>	<b>90</b>	<b>170</b>	<b>170</b>	<b>43</b>	<b>0</b>	<b>0</b>	<b>621</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

### Atlas Pl. SW & SW Juneau Landslide Mitigation

**Program:** Public Asset Protection **Start Date:** 3rd Quarter 2001  
**Type:** New Facility **End Date:** 4th Quarter 2005  
**Project ID:** C300344

**Location:** ATLAS PL SW and SW JUNEAU ST

**Neighborhood District:** Southwest

**Neighborhood Plan:** Not in a Neighborhood Plan

This project improves the surface water collection system in a landslide-prone area. Existing stormwater flow is inadequately routed into an existing 8-inch to 10-inch combined sewer line via shallow, concrete-topped catch basins. The original approach to construct a new storm drainage system was determined to be cost prohibitive. This approach replaces the existing shallow catch basins and adds catch basins. In addition, approximately 300 feet of abandoned combined sewer line may be re-established to reroute stormwater out of an existing 8-inch combined sewer located along a steep hillside.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	389	109	150	240	0	0	0	0	888
<b>TOTAL FUNDS</b>	<b>389</b>	<b>109</b>	<b>150</b>	<b>240</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>888</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	9	9	9	

\*Amounts in thousands of dollars



## Ballard Combined Sewer Overflow Storage

**Program:** Combined Sewer Overflow **Start Date:** 1st Quarter 2002  
**Type:** New Facility **End Date:** 4th Quarter 2010  
**Project ID:** C303101

**Location:** BALLARD

**Neighborhood District:** Ballard **Neighborhood Plan:** Not in a Neighborhood Plan

This project constructs Combined Sewer Overflow (CSO) storage facilities in the Ballard area, at Basins 150/151 and 152, which discharge to Salmon Bay. Major work includes flow monitoring and system modeling to analyze CSO reduction alternatives and selection of sites for the storage facility, as well as design, permits, and construction. The Ballard CSO project was proposed in the 1988 CSO Control Plan as a joint project with King County. SPU is assuming that King County reschedules its Ballard CSO Project in its 2005 CSO Plan update so that the joint project may proceed.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	50	50	500	500	1,000	1,500	0	3,600
<b>TOTAL FUNDS</b>	<b>0</b>	<b>50</b>	<b>50</b>	<b>500</b>	<b>500</b>	<b>1,000</b>	<b>1,500</b>	<b>0</b>	<b>3,600</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## Ballard Town Center Assessment

**Program:** Other Drainage **Start Date:** 3rd Quarter 2002  
**Type:** Improved Facility **End Date:** 4th Quarter 2003  
**Project ID:** C33NW305

**Location:** 20TH AV NW/25TH AV NW

**Neighborhood District:** Ballard **Neighborhood Plan:** Crown Hill/Ballard

This project develops an inventory and assessment of Level of Service demands for a drainage collection system (both combined and separated storm drain) currently serving a four-by-four block area of Ballard. Level of service is based on: historical flooding and back-up records; planned public and private improvements for Ballard Municipal Center (see Library CIP project BLBAL1 and Parks CIP project K733063); integrated Combined Sewer Overflow (CSO) and storm outfall management goals for selected downstream points; and Salmon Bay Waterway habitat management goals. The assessment also examines various alternatives for improving the efficiency of piped conveyance and relieving flow impacts at downstream overflows/outfalls. Alternatives may include shared detention, on-site storage methods, maintenance improvements, pipe network upgrades and rerouting.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	75	0	0	0	0	0	0	75
<b>TOTAL FUNDS</b>	<b>0</b>	<b>75</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>75</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

*\*Amounts in thousands of dollars*

# SPU - Drainage & Wastewater

## Beer Sheva Habitat Improvement

**Program:** Protection of Beneficial Uses **Start Date:** 4th Quarter 2001  
**Type:** New Facility **End Date:** TBD  
**Project ID:** C301319

**Location:** SEWARD PARK AV S and S HENDERSON ST

**Neighborhood District:** Southeast

**Neighborhood Plan:** Rainier Beach

This project makes several improvements to create a high-quality fish refuge and rearing habitat at the mouth of Mapes Creek and a natural creek channel in the lower portion of the creek. The project includes creating a natural creek mouth by placing the creek in an open, meandering creek channel in Beer Sheva Park, and relocating its discharge point into Lake Washington at the edge of the shoreline rather than offshore in deeper water. The middle portion of the creek is re-piped to separate its flow from stormwater and Combined Sewer Overflow (CSO) discharges, and to improve downstream water quality. This project is temporarily postponed pending completion of the Drainage Comprehensive Plan to enable this project and other proposed stormwater quality projects to be evaluated and prioritized.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	91	0	0	0	0	0	0	0	91
<b>TOTAL FUNDS</b>	<b>91</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>91</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## Bitter Lake/N 137th Stormwater

**Program:** Protection of Beneficial Uses **Start Date:** 2nd Quarter 2001  
**Type:** New Facility **End Date:** TBD  
**Project ID:** C301322

**Location:** GREENWOOD AV N and N 145TH ST

**Neighborhood District:** Northwest

**Neighborhood Plan:** Broadview-Bitter Lake-Haller Lake

This project funds the design and construction of selected alternatives for improving the quality of stormwater before it enters Bitter Lake. A preliminary engineering report, completed by a Seattle University civil engineering senior design team, evaluated options. Treatment options included wet vaults and media filters with swirl concentrators for pretreatment. Additional work designs and implements appropriate treatment systems for improving stormwater runoff quality from the Greenwood Ave. N storm drain before discharge to Bitter Lake. However, the project is temporarily postponed pending completion of the Drainage Comprehensive Plan, to enable this project and other proposed stormwater quality projects to be evaluated and prioritized citywide.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	10	0	0	0	0	0	0	0	10
<b>TOTAL FUNDS</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	2	2	2	2	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## BMP Program Implementation

**Program:** Protection of Beneficial Uses **Start Date:** 2nd Quarter 2000  
**Type:** New Facility **End Date:** TBD  
**Project ID:** C300316

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This program 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). The project is on hold pending completion of the Comprehensive Drainage Plan and several water quality plans.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	155	0	0	0	0	0	0	1,000	1,155
<b>TOTAL FUNDS</b>	<b>155</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,000</b>	<b>1,155</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## Burke Gilman/NE 144th Landslide Mitigation

**Program:** Public Asset Protection **Start Date:** 1st Quarter 2001  
**Type:** Improved Facility **End Date:** 4th Quarter 2007  
**Project ID:** C301355

**Location:** NE 145TH ST and 38TH AV NE

**Neighborhood District:** North **Neighborhood Plan:** Not in a Neighborhood Plan

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 implementing solutions to problem areas, and developing planning-level cost estimates.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	161	2	250	650	650	1,000	0	0	2,713
<b>TOTAL FUNDS</b>	<b>161</b>	<b>2</b>	<b>250</b>	<b>650</b>	<b>650</b>	<b>1,000</b>	<b>0</b>	<b>0</b>	<b>2,713</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Capital Planning for Beneficial Uses

**Program:** Protection of Beneficial Uses **Start Date:** 1st Quarter 2004  
**Type:** New Facility **End Date:** Ongoing  
**Project ID:** C343301  
**Location:** Various

This project provides funding for preliminary assessment of emerging demands that may develop during the year, such as water quality problems or emergency repairs of failed habitat projects. Some new demands may come about as a result of enforcement orders by regulatory agencies. Funding is used to develop scopes, budgets and schedules for new projects to be included in the 2005-2010 Proposed CIP or subsequent CIP proposals. For projects that cannot wait until the next funding cycle, SPU uses these funds to prepare documentation to seek Council approval for project design and construction to begin mid-year 2004. New projects that are developed from these funds are reviewed and approved by SPU's capital planning committee. The committee reviews expenditures for the entire drainage program monthly and establishes priorities among projects. Funding shown below for 2005 through 2009 is expected to be revised as part of the 2005-2010 Proposed CIP.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	141	0	0	0	0	0	141
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>141</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>141</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## Capital Planning for Flood Control

**Program:** Flood Control and Local Drainage **Start Date:** 1st Quarter 2004  
**Type:** New Facility **End Date:** Ongoing  
**Project ID:** C343201  
**Location:** Various

This project provides funding for preliminary assessment of emerging demands that may develop during the year, such as flooding problems or emergency repairs of failed infrastructure. Funding is used to develop scopes, budgets and schedules for new projects to be included in the 2005-2010 Proposed CIP or subsequent CIP proposals. For projects that cannot wait until the next funding cycle, SPU uses these funds to prepare documentation to seek Council approval for project design and construction to begin mid-year 2004. New projects that are developed from these funds are reviewed and approved by SPU's capital planning committee. The committee reviews expenditures for the entire drainage program monthly and establishes priorities among projects. Funding shown below for 2005 through 2009 is expected to be revised as part of the 2005-2010 Proposed CIP.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	207	864	2,578	4,852	9,663	12,934	31,098
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>207</b>	<b>864</b>	<b>2,578</b>	<b>4,852</b>	<b>9,663</b>	<b>12,934</b>	<b>31,098</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### Capital Planning for Public Asset Protection

**Program:** Public Asset Protection **Start Date:** 1st Quarter 2004  
**Type:** New Facility **End Date:** Ongoing  
**Project ID:** C333401

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This program improves 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. Operations and maintenance costs indicated below are included in the Department's operating budget. SPU will keep the Executive and the City Council informed about expenditures from this project via the Department's quarterly financial performance report.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	175	500	500	900	500	1,000	3,575
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>175</b>	<b>500</b>	<b>500</b>	<b>900</b>	<b>500</b>	<b>1,000</b>	<b>3,575</b>
<i>O&amp;M Costs (Savings)</i>			6	8	8	8	8	8	

### Civic Projects - Drainage

**Program:** Shared Cost Projects (DWF) **Start Date:** 1st Quarter 2003  
**Type:** New Facility **End Date:** 4th Quarter 2003  
**Project ID:** C333503

**Location:** Various

**Neighborhood District:** Southeast **Neighborhood Plan:** Rainier Beach

This project funds construction of drainage infrastructure for housing development or redevelopment projects for very low-income households. In 2003, funding was provided for the Seattle Housing Authority's NewHolly Phase 3 housing project. Funding is recovered in future years through increased water, wastewater, and drainage charges applied against the redevelopment project. See also project C302203 (Civic Projects - Wastewater & Civic Projects - Water) and project WFNEW390 in the Department's Water CIP.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	300	0	0	0	0	0	0	300
<b>TOTAL FUNDS</b>	<b>0</b>	<b>300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>300</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

*\*Amounts in thousands of dollars*

# SPU - Drainage & Wastewater

## Civic Projects - Wastewater

**Program:** Shared Cost Projects (DWF) **Start Date:** 4th Quarter 2002  
**Type:** New Facility **End Date:** 4th Quarter 2003  
**Project ID:** C302203

**Location:** Various

**Neighborhood District:** Southeast

**Neighborhood Plan:** Rainier Beach

This project funds construction of drainage infrastructure for housing development or redevelopment projects for very low-income households. In 2003, funding was provided for the Seattle Housing Authority's NewHolly Phase 3 housing project. Funding is recovered in future years through increased water, wastewater, and drainage charges applied against the redevelopment project. See also DWF project C333503 (Civic Projects - Drainage) and project WFNEW390 (Civic Projects - Water) in the Department's Water CIP.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	11	254	0	0	0	0	0	0	265
<b>TOTAL FUNDS</b>	<b>11</b>	<b>254</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>265</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## Combined Sewer Overflow Control Facility Retrofit

**Program:** Combined Sewer Overflow **Start Date:** 1st Quarter 2002  
**Type:** Rehabilitation or Restoration **End Date:** 4th Quarter 2004  
**Project ID:** C302102

**Location:** Various

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This project includes retrofit, upgrade, and modifications of existing Combined Sewer Overflow (CSO) reduction facilities utilizing hydrobrake, overflow weirs, and storage tanks. These CSO facilities are located in the Windermere, Magnolia, Genesee, Henderson, and Delridge areas. This project was evaluated during the development of the 2001 CSO Reduction Plan Amendment and represents the most cost-effective alternative to complying with CSO regulations in these areas.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	323	990	691	0	0	0	0	0	2,004
<b>TOTAL FUNDS</b>	<b>323</b>	<b>990</b>	<b>691</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,004</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### Comprehensive Ditch and Culvert Inventory

**Program:** Flood Control and Local Drainage **Start Date:** 2nd Quarter 1998  
**Type:** Rehabilitation or Restoration **End Date:** 4th Quarter 2003  
**Project ID:** C3AA307

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This data collection, analysis, and management program completes the inventory of citywide ditches 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 1,000 miles of City right-of-way have been mapped.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	1,001	180	0	0	0	0	0	0	1,181
<b>TOTAL FUNDS</b>	<b>1,001</b>	<b>180</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,181</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

### Comprehensive Drainage Plan Update

**Program:** Flood Control and Local Drainage **Start Date:** 1st Quarter 2002  
**Type:** Improved Facility **End Date:** 4th Quarter 2004  
**Project ID:** C302301

**Location:** Citywide

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 the City Council in 1999. The plan also includes recommendations for water quality monitoring and education programs in compliance with the City's National Pollutant Discharge Elimination System (NPDES) permit and Endangered Species Act (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.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	552	1,754	200	0	0	0	0	0	2,506
<b>TOTAL FUNDS</b>	<b>552</b>	<b>1,754</b>	<b>200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,506</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

*\*Amounts in thousands of dollars*

# SPU - Drainage & Wastewater

## Creeks CIP Monitoring & Repair Program

**Program:** Protection of Beneficial Uses **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Project ID:** C300309

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This program monitors the success of instream restoration and improvement projects, and collects baseline data before construction. This program also adjusts existing instream projects, repairs minor erosion problems, supports streamside reforestation, and assists stewardship.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	488	184	141	250	250	250	250	250	2,063
<b>TOTAL FUNDS</b>	<b>488</b>	<b>184</b>	<b>141</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>2,063</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## Creeks Emerging Issues Program

**Program:** Protection of Beneficial Uses **Start Date:** 1st Quarter 2004  
**Type:** Improved Facility **End Date:** 4th Quarter 2004  
**Project ID:** C305NW1

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This program identifies, designs, and constructs small stream-related projects 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.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	98	0	0	0	0	0	98
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>98</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>98</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## Creekside Erosion Control

**Program:** Protection of Beneficial Uses **Start Date:** 1st Quarter 2001  
**Type:** Improved Facility **End Date:** 4th Quarter 2004  
**Project ID:** C300311

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

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.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	97	30	48	0	0	0	0	0	175
<b>TOTAL FUNDS</b>	<b>97</b>	<b>30</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>175</b>
<i>O&amp;M Costs (Savings)</i>			0	0	1	1	1	1	

\*Amounts in thousands of dollars



## SPU - Drainage & Wastewater

### CSO Modeling and Assessment

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

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This project establishes and calibrates models of the City's combined sewer system, in order to support Combined Sewer Overflow (CSO) reduction planning and evaluate alternative strategies for reducing CSOs. These models are also used to assist in the design and operation of CSO reduction facilities.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	1,562	54	340	451	58	100	50	0	2,615
<b>TOTAL FUNDS</b>	<b>1,562</b>	<b>54</b>	<b>340</b>	<b>451</b>	<b>58</b>	<b>100</b>	<b>50</b>	<b>0</b>	<b>2,615</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

### CSO Monitoring Installation

**Program:** Combined Sewer Overflow **Start Date:** 1st Quarter 1999  
**Type:** Improved Facility **End Date:** 3rd Quarter 2004  
**Project ID:** C3AA108

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The City's Combined Sewer Overflow (CSO) National Pollutant Discharge Elimination System permit requires that monitoring devices be installed in all CSO outfalls. This installation was completed in 2002. In 2004, 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. Operations and maintenance costs identified below will be reflected in the Department's future operating budgets.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	1,603	194	33	0	0	0	0	0	1,830
<b>TOTAL FUNDS</b>	<b>1,603</b>	<b>194</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,830</b>
<i>O&amp;M Costs (Savings)</i>			0	315	315	315	315	315	

*\*Amounts in thousands of dollars*

# SPU - Drainage & Wastewater

## CSO Plan Implementation

**Program:** Combined Sewer Overflow **Start Date:** 1st Quarter 2002  
**Type:** Improved Facility **End Date:** Ongoing  
**Project ID:** C302101

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This program funds Combined Sewer Overflow (CSO) projects to control overflows into Salmon Bay, the Lake Washington Ship Canal, Lake Washington, and other water bodies. Projects are identified through the CSO 2001 Reduction Plan. Projected spending on this project has been slowed to reflect a delay in project design to resolve problems calibrating computer models to match measured flow data. Based on an anticipated presentation to the Department's Asset Management Committee, the schedule for the CSO Control Program may be revised. Compliance with the City's National Pollutant Discharge Elimination System Permit is not affected.

	<b>LTD</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Total</b>
SPU Drainage and Wastewater Fund	141	394	500	144	1,605	2,090	2,390	2,700	9,964
<b>TOTAL FUNDS</b>	<b>141</b>	<b>394</b>	<b>500</b>	<b>144</b>	<b>1,605</b>	<b>2,090</b>	<b>2,390</b>	<b>2,700</b>	<b>9,964</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## CSO Plan Update

**Program:** Combined Sewer Overflow **Start Date:** 1st Quarter 1999  
**Type:** Improved Facility **End Date:** Ongoing  
**Project ID:** C3AA103

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

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

	<b>LTD</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Total</b>
SPU Drainage and Wastewater Fund	1,299	107	100	395	463	100	100	100	2,664
<b>TOTAL FUNDS</b>	<b>1,299</b>	<b>107</b>	<b>100</b>	<b>395</b>	<b>463</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>2,664</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### Delridge Basin Phase II Channel Improvements

**Program:** Protection of Beneficial Uses **Start Date:** 2nd Quarter 1993  
**Type:** Improved Facility **End Date:** 4th Quarter 2003  
**Project ID:** C3AA319

**Location:** 26TH AV SW

**Neighborhood District:** Delridge

**Neighborhood Plan:** Delridge

This project makes improvements to the Longfellow Creek stream channel between SW Myrtle St. and SW Juneau St. 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.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	3,881	339	0	0	0	0	0	0	4,220
<b>TOTAL FUNDS</b>	<b>3,881</b>	<b>339</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,220</b>
<i>O&amp;M Costs (Savings)</i>			0	82	82	82	82	82	

### Densmore Basin Water Quality Investigation

**Program:** Protection of Beneficial Uses **Start Date:** 3rd Quarter 2002  
**Type:** New Facility **End Date:** 4th Quarter 2003  
**Project ID:** C333302

**Location:** N 143RD ST and 1ST AV NW

**Neighborhood District:** Northwest

**Neighborhood Plan:** Not in a Neighborhood Plan

A drainage improvement study has been completed for the Densmore drainage basin. This project evaluates potential impacts from the proposed drainage improvements on water quality in the basin (which includes Green Lake). The project also identifies and evaluates both structural and non-structural options to improve stormwater quality in the basin and mitigate impacts on Green Lake.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	282	0	0	0	0	0	0	282
<b>TOTAL FUNDS</b>	<b>0</b>	<b>282</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>282</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

### Diagonal Storm Drain Sediment Remediation

**Program:** Habitat and Sediments **Start Date:** 1st Quarter 2002  
**Type:** Improved Facility **End Date:** 3rd Quarter 2004  
**Project ID:** C301384

**Location:** DIAGONAL AV S and 2ND AV S

This project removes sediment from a large storm drain that discharges to the Duwamish River in order to prevent recontamination of sediments in the river. This work is a part of a larger source control project and is funded 20% by King County because of combined sewer overflows to this storm drain outfall.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	350	0	0	0	0	0	350
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>350</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>350</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

*\*Amounts in thousands of dollars*

# SPU - Drainage & Wastewater

## Drainage Spot Improvements

**Program:** Flood Control and Local Drainage **Start Date:** 2nd Quarter 1998  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Project ID:** C333201

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This program makes a number of spot improvements to drainage systems and creeks throughout Seattle. Projects increase the capacity of the drainage systems, prevent flooding, and restore 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 construction of check dams.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	994	151	400	150	150	150	150	150	2,295
<b>TOTAL FUNDS</b>	<b>994</b>	<b>151</b>	<b>400</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>2,295</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## DWW Operations Control Center Upgrade - Drainage

**Program:** Shared Cost Projects (DWF) **Start Date:** 1st Quarter 2003  
**Type:** Improved Facility **End Date:** 4th Quarter 2004  
**Project ID:** C33NW321

**Location:** 2700 AIRPORT WY S

**Neighborhood District:** Greater Duwamish **Neighborhood Plan:** Not in a Neighborhood Plan

This project upgrades the existing SPU Operations Control Center on Airport Way. The upgraded center accommodates Drainage and Wastewater Operations office staff from the Dexter Horton Building in downtown Seattle, as well as the pump station crews from SPU's Charles St. facility. Moving these staff to the Operations Control Center promotes better coordination with the rest of the Operations Branch.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	506	249	0	0	0	0	0	755
<b>TOTAL FUNDS</b>	<b>0</b>	<b>506</b>	<b>249</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>755</b>
<i>O&amp;M Costs (Savings)</i>			N/C	4	4	4	4	4	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### DWW Operations Control Center Upgrade - Wastewater

**Program:** Shared Cost Projects (DWF) **Start Date:** 1st Quarter 2003  
**Type:** Improved Facility **End Date:** 4th Quarter 2004  
**Project ID:** C33NW213

**Location:** 2700 AIRPORT WY S

**Neighborhood District:** Greater Duwamish **Neighborhood Plan:** Not in a Neighborhood Plan

This project upgrades the existing SPU Operations Control Center on Airport Way. The upgraded center accommodates Drainage and Wastewater Operations office staff from the Dexter Horton Building in downtown Seattle, as well as the pump station crews from SPU's Charles St. facility. Moving these staff to the Operations Control Center promotes better coordination with the rest of the Operations Branch.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	505	249	0	0	0	0	0	754
<b>TOTAL FUNDS</b>	<b>0</b>	<b>505</b>	<b>249</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>754</b>
<i>O&amp;M Costs (Savings)</i>			N/C	4	4	4	4	4	

### DWW Operations Planning Tool

**Program:** General Wastewater **Start Date:** 4th Quarter 2002  
**Type:** New Investment **End Date:** 4th Quarter 2004  
**Project ID:** C303203

**Location:** N/A

This project develops an online reference tool to consolidate and describe information on drainage- and wastewater-related City code requirements and the current condition of the City's drainage and wastewater system. This tool provides a resource for operations, permitting, planning, programming, and regulatory compliance. Drainage and wastewater permitting, planning, and operations decisions are based on both current system conditions and requirements expressed in the stormwater Code, Side Sewer Code, associated Director's Rules and other relevant policies. No tool currently exists to represent these policies and requirements as they apply across the current conditions of the jurisdiction.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	38	63	0	0	0	0	0	101
<b>TOTAL FUNDS</b>	<b>0</b>	<b>38</b>	<b>63</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>101</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

*\*Amounts in thousands of dollars*

# SPU - Drainage & Wastewater

## E Boston Terrace Project

**Program:** Public Asset Protection  
**Type:** New Facility  
**Project ID:** C300320

**Start Date:** 1st Quarter 2001  
**End Date:** 4th Quarter 2004

**Location:** 1617 E BOSTON TR

**Neighborhood District:** East District

**Neighborhood Plan:** Not in a Neighborhood Plan

This project provides drainage system improvements at E Boston Terrace and removes City stormwater runoff from a private side sewer, a portion of which is a deteriorated old wood stave line. The project intercepts stormwater runoff on a landslide-prone area and drains it to a City-owned system.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	465	795	230	0	0	0	0	0	1,490
<b>TOTAL FUNDS</b>	<b>465</b>	<b>795</b>	<b>230</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,490</b>
<i>O&amp;M Costs (Savings)</i>			0	0	6	6	6	6	

## Facility Improvements (Drainage & Wastewater Fund)

**Program:** Shared Cost Projects (DWF)  
**Type:** Improved Facility  
**Project ID:** C502010

**Start Date:** 1st Quarter 2003  
**End Date:** 4th Quarter 2004

**Location:** 700 5TH AV

This project funds logistical support services for SPU, including tenant improvements, office buildouts, and furniture. Additional funding is provided by Project C502010 in the Water CIP and Project C502010 in the Solid Waste CIP.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	365	380	0	0	0	0	0	745
<b>TOTAL FUNDS</b>	<b>0</b>	<b>365</b>	<b>380</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>745</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## Fairview Ave. N Drainage Assessment

**Program:** Flood Control and Local Drainage  
**Type:** Improved Facility  
**Project ID:** C300321

**Start Date:** 3rd Quarter 2001  
**End Date:** 2nd Quarter 2004

**Location:** FAIRVIEW AV N and E GARFIELD ST

**Neighborhood District:** Lake Union

**Neighborhood Plan:** Not in a Neighborhood Plan

This project provides storm drain extensions on Fairview Ave. E from the E Garfield outfall to Fairview Ave. 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 funding from the Seattle Department of Neighborhoods.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	105	224	10	0	0	0	0	0	339
<b>TOTAL FUNDS</b>	<b>105</b>	<b>224</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>339</b>
<i>O&amp;M Costs (Savings)</i>			0	0	1	1	1	1	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### Fauntleroy Creek Sediment Control

**Program:** Protection of Beneficial Uses **Start Date:** 2nd Quarter 2003  
**Type:** Rehabilitation or Restoration **End Date:** 4th Quarter 2004  
**Project ID:** C333301

**Location:** CALIFORNIA AV SW and SW BARTON ST

**Neighborhood District:** Southwest

**Neighborhood Plan:** Not in a Neighborhood Plan

This project designs and constructs improvements in Fauntleroy Park to control sediments and reduce erosion, consistent with the Fauntleroy Watershed Plan. The project also improves stream habitat in Fauntleroy Creek, which supports coho salmon. The scope of the project is still being defined, and the costs shown here (including construction costs) are estimated.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	40	30	0	0	0	0	0	70
<b>TOTAL FUNDS</b>	<b>0</b>	<b>40</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>70</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

### Fecal TMDL Feasibility Pilot Project

**Program:** Protection of Beneficial Uses **Start Date:** 1st Quarter 2004  
**Type:** New Facility **End Date:** 4th Quarter 2004  
**Project ID:** C343302

**Location:** Various

This project investigates bacteria problems identified in Seattle's creeks and evaluates options for reducing bacteria levels, including treatment. A pilot project may be initiated to test performance of some of the alternatives identified during the analysis. This project is one of the five new "early action" projects proposed as a result of SPU's work on the Comprehensive Drainage Plan Update. The cost of this project is absorbed within the existing Protection of Beneficial Uses program in 2004 by using savings from other projects.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	100	0	0	0	0	0	100
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Force Main/Pump Stations Plan and Improvements

**Program:** General Wastewater **Start Date:** 3rd Quarter 2002  
**Type:** Improved Facility **End Date:** Ongoing  
**Project ID:** C302204  
**Location:** Citywide

Through 2004, this program develops a long-term strategy for prioritizing improvements in the City's wastewater force mains and pump stations based on criteria such as average life expectancy, system capacity projections, and physical inventory data. The program allows SPU to make better capital replacement and repair decisions regarding pump stations and force mains, helping to optimize operations and maintenance efforts and costs associated with these assets over a longer-term planning horizon. Starting in 2005, funds budgeted in this program are used to implement the strategy and replace defective critical components.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	5	600	380	200	200	100	200	200	1,885
<b>TOTAL FUNDS</b>	<b>5</b>	<b>600</b>	<b>380</b>	<b>200</b>	<b>200</b>	<b>100</b>	<b>200</b>	<b>200</b>	<b>1,885</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## Forced Side Sewer Repairs

**Program:** General Wastewater **Start Date:** 1st Quarter 1994  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Project ID:** C3AA201  
**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This program funds repairs to side sewers when side sewer failure affects the public health and the property owner is unable to make the repair. SPU makes the repair and places a lien on the property.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	213	10	10	10	10	10	10	10	283
<b>TOTAL FUNDS</b>	<b>213</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>283</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

\*Amounts in thousands of dollars



## SPU - Drainage & Wastewater

### Fremont-Wallingford Combined Sewer Overflow (CSO)

**Program:** Combined Sewer Overflow **Start Date:** 1st Quarter 2003  
**Type:** Improved Facility **End Date:** 4th Quarter 2009  
**Project ID:** C303102  
**Location:** TBD

This project constructs Combined Sewer Overflow (CSO) storage, weir modification, and partial separation of stormwater and wastewater to reduce overflows in the Fremont/Wallingford area. The City is conducting flow monitoring and system modeling to further analyze project alternatives and cost estimates. Major work includes selection of sites for the storage facility, as well as design, permits, and construction. The project was proposed in the 1988 CSO Control Plan, to comply with CSO regulations.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	50	50	500	800	1,360	1,540	0	4,300
<b>TOTAL FUNDS</b>	<b>0</b>	<b>50</b>	<b>50</b>	<b>500</b>	<b>800</b>	<b>1,360</b>	<b>1,540</b>	<b>0</b>	<b>4,300</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

### Georgetown Drainage Basin Study

**Program:** Flood Control and Local Drainage **Start Date:** 2nd Quarter 2002  
**Type:** Improved Facility **End Date:** 4th Quarter 2003  
**Project ID:** C302311  
**Location:** Georgetown  
**Neighborhood District:** Greater Duwamish **Neighborhood Plan:** Georgetown

This project funds a planning-level analysis of drainage demands in the Georgetown neighborhood. Information previously developed by City and County Combined Sewer Overflow (CSO) studies and past drainage studies is used. This project is coordinated with the Norfolk Basin Plan, the City's new CSO Plan, and other initiatives in the area. The project is on hold until operations funding is identified for cleaning the lines so that monitoring can be accomplished.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	92	50	0	0	0	0	0	0	142
<b>TOTAL FUNDS</b>	<b>92</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>142</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

*\*Amounts in thousands of dollars*

# SPU - Drainage & Wastewater

## Georgetown Pump Station Salmon Habitat

**Program:** Protection of Beneficial Uses **Start Date:** 1st Quarter 2003  
**Type:** New Facility **End Date:** 4th Quarter 2006  
**Project ID:** C333304

**Location:** 7303 8TH AV S & Duwamish Waterway

**Neighborhood District:** Greater Duwamish **Neighborhood Plan:** Not in a Neighborhood Plan

This project funds SPU's contribution to the Department of Parks and Recreation to purchase the Georgetown Steam Plant Pump Station. The station is to be used to provide off-channel salmon habitat. Habitat created provides rearing opportunities for outmigrating juvenile salmonids and is part of the City's Endangered Species Act response for the Duwamish Waterway.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	59	5	700	700	0	0	0	1,464
<b>TOTAL FUNDS</b>	<b>0</b>	<b>59</b>	<b>5</b>	<b>700</b>	<b>700</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,464</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	8	8	

## GIS System Enhancements

**Program:** Other Drainage **Start Date:** 1st Quarter 2004  
**Type:** New Facility **End Date:** 4th Quarter 2004  
**Project ID:** C343502

**Location:** Citywide

The Drainage and Wastewater Geographic Information System (GIS) has undergone significant improvements over the course of the last few years to enhance accuracy and completeness. This project provides funding to complete yet-to-be addressed GIS data enhancements to deal with missing data, map/data correction backlog, and missing data attributes.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	114	0	0	0	0	0	114
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>114</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>114</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### Golden Gardens/View Ave. Landslide

**Program:** Public Asset Protection **Start Date:** 1st Quarter 2004  
**Type:** Improved Facility **End Date:** 4th Quarter 2004  
**Project ID:** DWFNew3

**Location:** GOLDEN GARDENS DR NW and VIEW AV NW

This project funds the preliminary engineering and initial design of a landslide mitigation project in the area of Golden Gardens Drive and View Avenue. There is uncontrolled stormwater discharging off of View Avenue onto private properties and an 8-inch sewer line and pump station on a steep slope that has experienced several landslides in the past. The Seattle Department of Parks and Recreation owns property downslope of both streets and Golden Gardens Drive has been damaged from past slides. Parks and SDOT have agreed in principle to allocate resources to this project.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	72	0	0	0	0	0	72
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>72</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>72</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

### Harbor Island - Storm Drain Repair

**Program:** Flood Control and Local Drainage **Start Date:** 3rd Quarter 2002  
**Type:** Rehabilitation or Restoration **End Date:** 4th Quarter 2005  
**Project ID:** C333204

**Location:** All of Harbor Island

**Neighborhood District:** Greater Duwamish **Neighborhood Plan:** Not in a Neighborhood Plan

This project repairs cracks and leaks in City-owned storm drains on Harbor Island to reduce the amount of contaminants discharged to the surrounding waterways through infiltration of contaminated groundwater. SPU has determined oil is flowing into the SW Florida Ave. drain via cracks and leaks in the system. Portions of that drain have been video-inspected as part of work being conducted for the Terminal 18 redevelopment project, and SPU is currently contracting to have the remainder of the SW Florida Ave. system cleaned and inspected. Other drains on Harbor Island may also be experiencing infiltration problems. In 2002, the remaining storm drains on Harbor Island were video-inspected to evaluate their condition and identify areas that require repair. This project is on hold until the Department reviews the videos and develops a repair plan.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	66	10	437	0	0	0	0	513
<b>TOTAL FUNDS</b>	<b>0</b>	<b>66</b>	<b>10</b>	<b>437</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>513</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	3	3	3	

*\*Amounts in thousands of dollars*

## SPU - Drainage & Wastewater

### Heavy Equipment Purchases - Drainage

**Program:** Other Drainage **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Project ID:** C300399

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This project replaces existing heavy equipment (such as vactors, loaders, and bulldozers) used by SPU field crews. These pieces of equipment have reached the end of their useful lives.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	1,345	300	880	177	520	350	350	350	4,272
<b>TOTAL FUNDS</b>	<b>1,345</b>	<b>300</b>	<b>880</b>	<b>177</b>	<b>520</b>	<b>350</b>	<b>350</b>	<b>350</b>	<b>4,272</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

### Heavy Equipment Purchases - Wastewater

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

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This project replaces existing heavy equipment (such as vactors, loaders, and bulldozers) used by SPU field crews. These pieces of equipment have reached the end of their useful lives.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	1,726	1,330	300	260	130	133	370	370	4,619
<b>TOTAL FUNDS</b>	<b>1,726</b>	<b>1,330</b>	<b>300</b>	<b>260</b>	<b>130</b>	<b>133</b>	<b>370</b>	<b>370</b>	<b>4,619</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## High Point Drainage System

**Program:** Flood Control and Local Drainage **Start Date:** 1st Quarter 2002  
**Type:** New Facility **End Date:** TBD  
**Project ID:** C301303

**Location:** SW JUNEAU ST/SW MYRTLE ST

**Neighborhood District:** Southwest

**Neighborhood Plan:** Not in a Neighborhood Plan

SPU will be partnering with Seattle Housing Authority (SHA) to construct 34 blocks of natural drainage system in SHA's High Point 120-acre redevelopment. The proposed natural drainage system will retrofit 10% of Longfellow Creek Watershed to meet the pre-developed pasture runoff conditions for the two-year design storm, as well as provide a distributed, block-scale water quality treatment system. In addition, the drainage system will include porous pavement sidewalks and up to three blocks of porous pavement streets. The High Point Natural Drainage System was approved by City Council in May 2003 as part of SHA's subdivision and street vacation application.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	184	525	875	0	0	0	0	0	1,584
<b>TOTAL FUNDS</b>	<b>184</b>	<b>525</b>	<b>875</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,584</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## Jackson Park Detention Phase II

**Program:** Flood Control and Local Drainage **Start Date:** 2nd Quarter 1999  
**Type:** New Facility **End Date:** 4th Quarter 2004  
**Project ID:** C399305

**Location:** Jackson Park Golf Course

**Neighborhood District:** North

**Neighborhood Plan:** Broadview-Bitter Lake-Haller Lake

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 creek channel. This project was substantially completed in 2003.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	8,592	1,771	251	0	0	0	0	0	10,614
<b>TOTAL FUNDS</b>	<b>8,592</b>	<b>1,771</b>	<b>251</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,614</b>
<i>O&amp;M Costs (Savings)</i>			0	0	45	45	45	45	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Lake Dell/33 E Landslide Mitigation

**Program:** Public Asset Protection **Start Date:** 3rd Quarter 2001  
**Type:** New Facility **End Date:** 4th Quarter 2005  
**Project ID:** C301352

**Location:** LAKE DELL AV and 32ND AV

**Neighborhood District:** Central

**Neighborhood Plan:** Not in a Neighborhood Plan

This project reduces the likelihood and damage of future landslides by funding preliminary engineering, design, and construction of a drainage system to convey stormwater down the hill to an appropriate discharge point. Based on the results of the geotechnical study performed for the project, the hillside will be monitored for the next two years.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	54	20	20	300	0	0	0	0	394
<b>TOTAL FUNDS</b>	<b>54</b>	<b>20</b>	<b>20</b>	<b>300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>394</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	3	3	3	

## Lake Washington/Lower Duwamish Habitat Protection

**Program:** Protection of Beneficial Uses **Start Date:** 4th Quarter 2001  
**Type:** Improved Facility **End Date:** Ongoing  
**Project ID:** C301385

**Location:** Lower Duwamish River

**Neighborhood District:** Greater Duwamish

**Neighborhood Plan:** Not in a Neighborhood Plan

This program acquires and/or develops habitat or other salmon-beneficial projects in the Green/Duwamish River systems. The projects or programs may be done in cooperation with the Port of Seattle, King County, affected tribes, or other agencies and organizations. As specific projects are developed, they are given their own project number and description, and reflected elsewhere in this CIP. In 2003, project C333305 (Spokane St. Bridge Salmon Habitat) was created; there are no funds reflected below for 2004, although the Department intends to add funds in 2005.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	47	0	0	902	925	950	950	950	4,724
<b>TOTAL FUNDS</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>902</b>	<b>925</b>	<b>950</b>	<b>950</b>	<b>950</b>	<b>4,724</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### Linden Ave. N & N 143rd Drainage Enhancement

**Program:** Flood Control and Local Drainage **Start Date:** 3rd Quarter 2001  
**Type:** New Facility **End Date:** 4th Quarter 2004  
**Project ID:** C301321  
**Location:** N 143RD ST to N 138TH ST  
**Neighborhood District:** Northwest **Neighborhood Plan:** Broadview-Bitter Lake-Haller Lake

This project constructs inlets and catch basins to collect stormwater runoff that floods the roadway at the intersection of Linden Ave. N and N 143rd St. The project includes constructing connecting pipes to convey the flow to the southwest corner of the intersection, constructing a natural system ditch draining to an existing low area that provides detention, and planting vegetation in the drainage ditch and around the detention facility. Alternatives for carrying the water south from this intersection are evaluated during preliminary engineering, and surveying is conducted to determine the feasibility of each. The project was delayed by negotiations with SDOT in 2003 about future potential road improvements. Construction occurs in 2004.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	87	406	300	0	0	0	0	0	793
<b>TOTAL FUNDS</b>	<b>87</b>	<b>406</b>	<b>300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>793</b>
<i>O&amp;M Costs (Savings)</i>			0	3	3	3	3	3	

### Linden Ave. Swale

**Program:** Flood Control and Local Drainage **Start Date:** 4th Quarter 2000  
**Type:** Improved Facility **End Date:** 4th Quarter 2005  
**Project ID:** C3AA318  
**Location:** N Park Ave. to Linden Ave. N from 130th St. to N 127th St.  
**Neighborhood District:** Northwest **Neighborhood Plan:** Broadview-Bitter Lake-Haller Lake

This project addresses drainage and flooding problems in an area between N 130th St. and N 125th St. Drainage from Bitter Lake currently flows through a ditch and culvert system from N 130th St. down N Park Ave. to N 128th St. and along N 128th St. to Linden Ave. N where it crosses the road to enter the Seattle 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 St. discharging into the existing ditch on the City Light property. This project is on hold pending completion of the Densmore Basin Plan and the Comprehensive Drainage Plan.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	169	0	0	400	0	0	0	0	569
<b>TOTAL FUNDS</b>	<b>169</b>	<b>0</b>	<b>0</b>	<b>400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>569</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	3	3	3	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### Longfellow Creek - SW Brandon to Juneau

**Program:** Protection of Beneficial Uses **Start Date:** 4th Quarter 2001  
**Type:** Improved Facility **End Date:** TBD  
**Project ID:** C301336

**Location:** 2519 SW JUNEAU ST

**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. This project is coordinated with the West Seattle Golf Course Detention project (C399307). The project is on hold pending a land swap between SPU and Parks to provide a more suitable site along SW Brandon St. for this project. Following the land swap, the Department intends to add funds to this project and proceed with design work.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	34	0	0	0	0	0	0	0	34
<b>TOTAL FUNDS</b>	<b>34</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

### Longfellow Creek - Yancy St. Phase 3

**Program:** Protection of Beneficial Uses **Start Date:** 1st Quarter 2003  
**Type:** Improved Facility **End Date:** 2nd Quarter 2004  
**Project ID:** C302332

**Location:** SW YANCY ST and 30TH AV SW

**Neighborhood District:** Delridge

**Neighborhood Plan:** Delridge

This project continues habitat improvements at the Yancy St. site along Longfellow Creek. Work includes additional bank stabilization, landscaping, and wetland enhancements. The project also addresses other repairs as necessary.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	302	566	175	0	0	0	0	0	1,043
<b>TOTAL FUNDS</b>	<b>302</b>	<b>566</b>	<b>175</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,043</b>
<i>O&amp;M Costs (Savings)</i>			0	0	10	10	10	10	

\*Amounts in thousands of dollars



# SPU - Drainage & Wastewater

## Mapes Creek Natural System

**Program:** Flood Control and Local Drainage

**Start Date:** 2nd Quarter 2003

**Type:** New Facility

**End Date:** 4th Quarter 2004

**Project ID:** C302319

**Location:** Mapes Creek Watershed

**Neighborhood District:** Southeast

**Neighborhood Plan:** Rainier Beach

This project addresses local neighborhood drainage improvements. The project identifies potential drainage improvement projects in the Mapes Creek drainage area for natural drainage systems implementation. The natural drainage system proposal will integrate conveyance, water quality and flow control objectives to enhance local drainage in the Rainier Beach neighborhood in southeast Seattle and improve aquatic health for Lake Washington. This project addresses the Southeast Sector for SPU's Natural System Program.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	6	100	90	0	0	0	0	0	196
<b>TOTAL FUNDS</b>	<b>6</b>	<b>100</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>196</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## Marine View Drive - 47th SW Landslide

**Program:** Public Asset Protection

**Start Date:** 2nd Quarter 2002

**Type:** Improved Facility

**End Date:** 4th Quarter 2004

**Project ID:** C302352

**Location:** 47TH AV SW and SW BRACE POINT DR

**Neighborhood District:** Southwest

**Neighborhood Plan:** Not in a Neighborhood Plan

This project installs catch basins, thickened pavement edges, and concrete gutters to reduce the amount of runoff that currently flows into landslide-prone areas below the street. The project also replaces undersized storm drain pipes from SW 98th St. to the Brace Point outfall, in order to reduce flooding. Construction occurs in 2004.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	108	610	878	0	0	0	0	0	1,596
<b>TOTAL FUNDS</b>	<b>108</b>	<b>610</b>	<b>878</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,596</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	6	6	6	6	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### Marine View Drive Landslide Mitigation - North

**Program:** Public Asset Protection **Start Date:** 3rd Quarter 1999  
**Type:** Improved Facility **End Date:** 2nd Quarter 2003  
**Project ID:** C399321  
**Location:** Various

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. Funds in 2003 represent minor closeout costs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	527	1	0	0	0	0	0	0	528
<b>TOTAL FUNDS</b>	<b>527</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>528</b>
<i>O&amp;M Costs (Savings)</i>			0	2	2	2	2	2	

### Meter Replacement - Direct Service

**Program:** Shared Cost Projects (DWF) **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Project ID:** C520000  
**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This program 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 repaired if possible.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	2,371	692	692	1,536	1,582	1,630	1,678	1,700	11,881
<b>TOTAL FUNDS</b>	<b>2,371</b>	<b>692</b>	<b>692</b>	<b>1,536</b>	<b>1,582</b>	<b>1,630</b>	<b>1,678</b>	<b>1,700</b>	<b>11,881</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### MLK Way/Norfolk St. Sub-basin Storm Improvements

**Program:** Flood Control and Local Drainage  
**Type:** New Facility  
**Project ID:** C333205

**Start Date:** 3rd Quarter 2002  
**End Date:** 4th Quarter 2007

**Location:** Norfolk Drainage Basin east of I-5

**Neighborhood District:** Greater Duwamish      **Neighborhood Plan:** Not in a Neighborhood Plan

This project replaces undersized pipes along Martin Luther King (MLK) Way, as well as the pipes connecting MLK Way to the existing drainage ditch along the eastern side of Interstate 5. The Norfolk Basin Draft Comprehensive Plan recommends these improvements in order to reduce flooding of structures and arterial streets. Assuming that SPU works in partnership with Sound Transit, this project also includes a parallel pipe design along MLK Way. Improvements within the Norfolk St. sub-basin but not along the MLK Way corridor would be identical to those mentioned above.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	319	250	300	1,000	1,800	0	0	3,669
<b>TOTAL FUNDS</b>	<b>0</b>	<b>319</b>	<b>250</b>	<b>300</b>	<b>1,000</b>	<b>1,800</b>	<b>0</b>	<b>0</b>	<b>3,669</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

### Mobility Improvement

**Program:** Other Drainage  
**Type:** Improved Facility  
**Project ID:** C33NW383

**Start Date:** 1st Quarter 2003  
**End Date:** 4th Quarter 2004

**Location:** Citywide

This program funds new drainage and sewer designers to work on Seattle Department of Transportation (SDOT) design functions and assist with cost estimates for transportation capital project grant applications. This coordination allows SPU to improve drainage in concert with transportation capital projects.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	300	300	0	0	0	0	0	600
<b>TOTAL FUNDS</b>	<b>0</b>	<b>300</b>	<b>300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>600</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Monitoring System Upgrade

**Program:** Protection of Beneficial Uses **Start Date:** 1st Quarter 2004  
**Type:** New Facility **End Date:** 4th Quarter 2004  
**Project ID:** C343303  
**Location:** Various  
**Neighborhood District:** Southwest **Neighborhood Plan:** South Park

This project purchases and installs flow monitoring hardware to upgrade the existing stream and storm flow monitoring network in various locations throughout the city. Monitors are upgraded to greatly reduce the need for routine maintenance and data downloading. Flow monitoring data is routinely used to design capital improvement projects and can also identify maintenance problems. Better data helps reduce costs and improves the effectiveness of future projects. This project is one of the five new "early action" projects proposed as a result of SPU's work on the Comprehensive Drainage Plan Update. The cost of this project is absorbed within the existing Protection of Beneficial Uses program in 2004 by using savings from other projects.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	230	0	0	0	0	0	230
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>230</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>230</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## N 125th St and Aurora Ave. N Storm Drain

**Program:** Flood Control and Local Drainage **Start Date:** 3rd Quarter 2002  
**Type:** New Facility **End Date:** 4th Quarter 2004  
**Project ID:** C302313  
**Location:** N 125TH ST and AURORA AV N  
**Neighborhood District:** Northwest **Neighborhood Plan:** Broadview-Bitter Lake-Haller Lake

This project funds a preliminary study for the construction of approximately 2,550 linear feet of new pipe combined with catch basins and connecting pipes along N 125th St. and Aurora Ave. N, as well as the upgrade of approximately 2,400 linear feet of existing pipe along Aurora Ave. N, to reduce street and property flooding. The project is consistent with SPU's Densmore Drainage Basin Study, and has been accelerated to coordinate with the Seattle Department of Transportation (SDOT), which plans to install new curbs, gutters, and sidewalks on the west side of Aurora Ave. N from N 110th to N 145th St. The shoulder is also upgraded and converted to a new bus lane. Construction of SDOT's project is targeted to begin the summer of 2005. SPU is planning to proceed with this project on an expedited basis to take advantage of cost sharing opportunities with SDOT. The project is also coordinated with downstream improvements SPU is making to move stormwater out of the Densmore Basin to Lake Union, and with the Water Quality Study planned for the Densmore Basin, which evaluates alternatives for improving water quality in the basin.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	2	25	852	0	0	0	0	0	879
<b>TOTAL FUNDS</b>	<b>2</b>	<b>25</b>	<b>852</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>879</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	1	1	1	1	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### N 135th St. & Stone Ave. N Detention

**Program:** Flood Control and Local Drainage **Start Date:** 1st Quarter 2003  
**Type:** New Facility **End Date:** 4th Quarter 2008  
**Project ID:** C302316  
**Location:** STONE AV N and N 135TH ST to N 130TH ST  
**Neighborhood District:** Northwest **Neighborhood Plan:** Broadview-Bitter Lake-Haller Lake

This project minimizes flooding by installing detention capacity and flow control along a section of commercial/industrial park just east and south of Aurora Ave. N & N 135th St., within the Densmore Basin. Chronic flooding occurs within the roadway and abutting private property at the intersection of N 130th St. and Stone Ave. N, as well as near the mid-block of Stone Ave. N, between N 130th and N 135th Streets. The project includes installation of a water quality treatment structure for research and public demonstration/education purposes.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	10	10	10	40	200	500	2,850	0	3,620
<b>TOTAL FUNDS</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>40</b>	<b>200</b>	<b>500</b>	<b>2,850</b>	<b>0</b>	<b>3,620</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

### N 137th St. and Meridian Ave. N Storm Drain

**Program:** Flood Control and Local Drainage **Start Date:** 3rd Quarter 2002  
**Type:** New Facility **End Date:** 3rd Quarter 2007  
**Project ID:** C302315  
**Location:** MERIDIAN AV N and N 137TH ST to N 130TH ST  
**Neighborhood District:** Northwest **Neighborhood Plan:** Broadview-Bitter Lake-Haller Lake

This project reduces flooding by either cleaning and improving an existing culvert system that crosses many properties in a series of easements or by constructing a new storm drain system in the public right-of-way. The project investigates the feasibility of providing an adequate level of service through improvements to the existing system. Based on that analysis, SPU could decide whether to construct a new system.

In the 2004 budget process, Council adopted a proviso that limits to \$35,000 the amount that SPU can spend on this project from funds appropriated in 2004 for the Flood Control and Local Drainage BCL.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	5	25	10	885	1,000	515	0	0	2,440
<b>TOTAL FUNDS</b>	<b>5</b>	<b>25</b>	<b>10</b>	<b>885</b>	<b>1,000</b>	<b>515</b>	<b>0</b>	<b>0</b>	<b>2,440</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

*\*Amounts in thousands of dollars*

## SPU - Drainage & Wastewater

### N 137th St. and Stone Ave. N Conveyance

**Program:** Flood Control and Local Drainage **Start Date:** 3rd Quarter 2002  
**Type:** New Facility **End Date:** 4th Quarter 2005  
**Project ID:** C302314

**Location:** STONE AV N and N 137TH ST to N 140TH ST

**Neighborhood District:** Northwest

**Neighborhood Plan:** Broadview-Bitter Lake-Haller Lake

This project minimizes flooding by constructing a storm drain, installing natural system improvements, or upgrading existing informal drainage structures. In all cases, captured flows are directed to existing downstream improvements. SPU works closely with project neighbors to arrive at an optimal solution.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	2	10	63	572	0	0	0	0	647
<b>TOTAL FUNDS</b>	<b>2</b>	<b>10</b>	<b>63</b>	<b>572</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>647</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	4	4	4	

### Natural Drainage System Improvements

**Program:** Flood Control and Local Drainage **Start Date:** 1st Quarter 2003  
**Type:** Improved Facility **End Date:** 4th Quarter 2009  
**Project ID:** C333206

**Location:** Various and 3RD AV NW

**Neighborhood District:** Northwest

**Neighborhood Plan:** Broadview-Bitter Lake-Haller Lake

The project creates water quantity control to minimize adverse hydraulic impacts to Pipers Creek and others. The project also promotes water quality treatment to remove road runoff pollutants before they reach the receiving waters. Project design focuses on the "natural system" approach to stormwater management, which utilizes environmentally friendly techniques, such as swales, infiltration, and landscaping, to achieve watershed goals and objectives.

In the 2004 budget process, Council adopted a proviso that limits to zero the amount that SPU can spend on this project from funds appropriated in 2004 for the Flood Control and Local Drainage BCL.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	92	0	650	650	650	620	600	3,262
<b>TOTAL FUNDS</b>	<b>0</b>	<b>92</b>	<b>0</b>	<b>650</b>	<b>650</b>	<b>650</b>	<b>620</b>	<b>600</b>	<b>3,262</b>
<i>O&amp;M Costs (Savings)</i>			N/C	32	32	32	32	32	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Natural System Study

**Program:** Flood Control and Local Drainage

**Start Date:** 1st Quarter 2003

**Type:** Improved Facility

**End Date:** 4th Quarter 2003

**Project ID:** C33NW319

**Location:** Not Applicable

This project assesses unimproved right-of-way within the city and identifies areas suitable for enhancing existing ditch drainage systems. In addition to identifying "natural system" drainage areas based on surface water management goals, the project assesses neighborhood, land use, and transportation objectives for unimproved right-of-way. The project produces a suitability map for "natural system" surface water management in the right-of-way. The project also identifies a menu of options for natural system enhancement based on local condition criteria and drainage basin performance goals relative to conveyance, detention or treatment. Each option is developed for consideration in the City's Street Improvement Manual update, and includes right-of-way elements, configuration and dimensions. For each option, associated standard plans are developed for consideration in the Standard Plans update to assist SPU in prioritizing drainage improvements, as well as to prescribe how drainage is to be improved by other public and private developers.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	150	0	0	0	0	0	0	150
<b>TOTAL FUNDS</b>	<b>0</b>	<b>150</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>150</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	16	16	16	16	

## Norfolk Drainage Basin Water Quality Improvements

**Program:** Protection of Beneficial Uses

**Start Date:** 3rd Quarter 2002

**Type:** New Facility

**End Date:** 4th Quarter 2005

**Project ID:** C302302

**Location:** Between I-5 & BNRR/SFRR at Seattle/Tukwilla Border

**Neighborhood District:** Greater Duwamish

**Neighborhood Plan:** Not in a Neighborhood Plan

This project conducts a water-quality study and makes water-quality treatment improvements to the Norfolk Basin as outlined and recommended in the Norfolk Basin Plan. A wet pond is constructed adjacent to existing Washington State Department of Transportation wet ponds and an existing natural wetland. The pond provides water quality enhancement and stormwater detention for the lower portion of the Norfolk Basin. Water quality improvement is achieved mainly by trapping pollutants conveyed from upstream sections of the storm drainage network along Martin Luther King Way. The project reduces the amount of pollutants entering the Duwamish River.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	26	158	45	1,100	0	0	0	0	1,329
<b>TOTAL FUNDS</b>	<b>26</b>	<b>158</b>	<b>45</b>	<b>1,100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,329</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	7	7	7	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Norfolk St. & Boeing Access Road Storm Improvements

**Program:** Flood Control and Local Drainage **Start Date:** 1st Quarter 2004  
**Type:** New Facility **End Date:** 4th Quarter 2004  
**Project ID:** C32NW304

**Location:** S NORFOLK ST and AIRPORT WY S to E MARGINAL WY S

**Neighborhood District:** Greater Duwamish **Neighborhood Plan:** Not in a Neighborhood Plan

This project funds planning for drainage improvements to the western portion of the Norfolk Basin to reduce flooding, as outlined in the Norfolk Basin Plan. Improvements identified in the plan include a new piped storm drainage conveyance system (approximately 17,000 linear feet of pipe ranging from one to six feet in diameter) along Airport Way S, Norfolk St., E Marginal Way, and the Boeing Access Road, in addition to construction of a new outfall into the Duwamish River. The improvements to be included in this project (to be funded in a future phase) are key downstream components that increase conveyance and discharge capacity for virtually all future upstream improvements in the Norfolk Basin.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	25	0	0	0	0	0	25
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## Northlake Way Drainage

**Program:** Flood Control and Local Drainage **Start Date:** 1st Quarter 2004  
**Type:** New Facility **End Date:** 4th Quarter 2004  
**Project ID:** C343202

**Location:** N NORTHLAKE WY and STONE WY N

**Neighborhood District:** Lake Union **Neighborhood Plan:** Not in a Neighborhood Plan

This project studies drainage problems on the north side of Lake Union and proposes solutions that can be implemented in conjunction with paving improvements planned by SDOT. This project is one of the five new "early action" projects proposed as a result of SPU's work on the Comprehensive Drainage Plan. The cost of this project is absorbed within the existing drainage capital program by using savings from other projects.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	100	0	0	0	0	0	100
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars



## SPU - Drainage & Wastewater

### NW 90th St. & 12th Ave. NW Drainage

**Program:** Flood Control and Local Drainage  
**Type:** Improved Facility  
**Project ID:** C301314

**Start Date:** 1st Quarter 2001  
**End Date:** 4th Quarter 2003

**Location:** NW 90th ST and 12TH AV NW

**Neighborhood District:** Ballard

**Neighborhood Plan:** Not in a Neighborhood Plan

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 and improve area drainage. This project includes street regrading to facilitate conveyance of stormwater.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	783	806	0	0	0	0	0	0	1,589
<b>TOTAL FUNDS</b>	<b>783</b>	<b>806</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,589</b>
<i>O&amp;M Costs (Savings)</i>			0	4	4	4	4	4	

### Outfall Inspection - Drainage

**Program:** Flood Control and Local Drainage  
**Type:** Rehabilitation or Restoration  
**Project ID:** C302304

**Start Date:** 1st Quarter 2002  
**End Date:** 4th Quarter 2007

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This project inspects and documents the condition of the City's 350 stormwater and wastewater outfalls. Size, length, and material of the outfalls are identified, and the information is used to update SPU's Geographic Information Systems (GIS) database. The project sets criteria for identifying necessary inspections and for establishing priorities and an inspection schedule. The project may include conducting a market survey on current outfall inspection technologies, standards and procedures, and the environmental impacts associated with each. Mapping, development of criteria and schedules, and market surveying are expected to be complete in 2003, with inspections occurring from 2003-2007. If inspections indicate repairs are necessary for some outfalls, separate CIP projects may be developed in subsequent years to fund those repairs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	117	210	210	210	210	210	0	0	1,167
<b>TOTAL FUNDS</b>	<b>117</b>	<b>210</b>	<b>210</b>	<b>210</b>	<b>210</b>	<b>210</b>	<b>0</b>	<b>0</b>	<b>1,167</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Outfall Inspection - Wastewater

**Program:** General Wastewater **Start Date:** 1st Quarter 2002  
**Type:** Rehabilitation or Restoration **End Date:** 4th Quarter 2007  
**Project ID:** C302202  
**Location:** Citywide

This project inspects and documents the condition of the City's 350 stormwater and wastewater outfalls. Size, length, and material of the outfalls are identified, and the information is used to update SPU's Geographic Information Systems (GIS) database. The project sets criteria for identifying necessary inspections and for establishing priorities and an inspection schedule. The project may include conducting a market survey on current outfall inspection technologies, standards and procedures, and the environmental impacts associated with each. Mapping, development of criteria and schedules, and market surveying are expected to be complete in 2003, with inspections occurring from 2003-2007. If inspections indicate that repairs are necessary for some outfalls, separate CIP projects may be developed in subsequent years to fund those repairs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	100	140	140	140	140	140	0	0	800
<b>TOTAL FUNDS</b>	<b>100</b>	<b>140</b>	<b>140</b>	<b>140</b>	<b>140</b>	<b>140</b>	<b>0</b>	<b>0</b>	<b>800</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## Perkins Lane W/W Ruffner St. Drainage Improvement

**Program:** Public Asset Protection **Start Date:** 1st Quarter 2001  
**Type:** Rehabilitation or Restoration **End Date:** 3rd Quarter 2006  
**Project ID:** C301354  
**Location:** PERKINS LN W and W RUFFNER ST

This project replaces the existing ditch system. The Department intended to replace it with a grate-covered concrete drainage channel, but due to the potential for conflicts with existing utilities and structures, it is likely that this option will not be used. The existing ditches may be re-established with an asphalt-lined ditch system, which reduces the surface water currently infiltrating through the deteriorated existing ditches. This does not reduce the time required for maintenance of the system.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	175	80	350	960	100	0	0	0	1,665
<b>TOTAL FUNDS</b>	<b>175</b>	<b>80</b>	<b>350</b>	<b>960</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,665</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	9	9	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Pinehurst Natural Drainage System

**Program:** Flood Control and Local Drainage  
**Type:** New Facility  
**Project ID:** C333202

**Start Date:** 4th Quarter 2003  
**End Date:** TBD

**Location:** Thornton Creek watershed

**Neighborhood District:** Northeast

**Neighborhood Plan:** Not in a Neighborhood Plan

This project constructs Natural Drainage System improvements to convey stormwater, using the unimproved right-of-way as a starting point for design. The project scope includes: constructing an engineered system of swales, stepped pools, or other design alternatives to detain runoff, filter pollutants and allow maximum opportunity for infiltration (where appropriate); using native vegetation as a stormwater management element, as well as for aesthetic appeal; and constructing a sidewalk on one side of each street within the project area (these sidewalks may include alternative design such as porous pavements). SPU is studying various approaches to life cycle maintenance; maintenance techniques are developed and decided with the support of an SPU Operations representative.

In the 2004 budget process, Council adopted a proviso that limits to \$235,000 the amount that SPU can spend on this project from funds appropriated in 2004 for the Flood Control and Local Drainage BCL.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	92	235	0	0	0	0	0	327
<b>TOTAL FUNDS</b>	<b>0</b>	<b>92</b>	<b>235</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>327</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	15	15	15	

## Piper's Creek - Detention

**Program:** Flood Control and Local Drainage  
**Type:** Improved Facility  
**Project ID:** C399326

**Start Date:** 3rd Quarter 1999  
**End Date:** 2nd Quarter 2007

**Location:** 777 NW CARKEEK PARK RD

**Neighborhood District:** Northwest

**Neighborhood Plan:** Broadview-Bitter Lake-Haller Lake

The Piper's Creek drainage system experiences excessive flow velocities, erosion and sedimentation problems during storms. This project reconstructs an existing detention pond on NW Carkeek Park Road to increase its safety and detain stormwater before it reaches Piper's Creek. The existing pond is loaded with sediment and has little detention capacity, requiring substantial improvements before it can serve as a detention facility. Alternatives to be considered during preliminary engineering include construction of only a sedimentation pond and improved outfall.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	117	160	100	50	900	50	0	0	1,377
<b>TOTAL FUNDS</b>	<b>117</b>	<b>160</b>	<b>100</b>	<b>50</b>	<b>900</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>1,377</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Point Sewer Pipe Repairs

**Program:** Sewer Rehabilitation **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Project ID:** C303401

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This program repairs and replaces failing and misaligned sewer pipes throughout the city. An ongoing closed circuit television (CCTV) system identifies pipes to be replaced. This program prevents complete pipe collapse by providing small repairs at numerous sites throughout the city, avoiding more costly full-line failures or repairs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	7,367	2,770	4,084	3,624	3,644	3,768	3,881	4,000	33,138
<b>TOTAL FUNDS</b>	<b>7,367</b>	<b>2,770</b>	<b>4,084</b>	<b>3,624</b>	<b>3,644</b>	<b>3,768</b>	<b>3,881</b>	<b>4,000</b>	<b>33,138</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## Project Manager Guidebook - Drainage

**Program:** Shared Cost Projects (DWF) **Start Date:** 1st Quarter 2001  
**Type:** New Investment **End Date:** 3rd Quarter 2004  
**Project ID:** C301701D

This project funds creation of a project management manual designed to support CIP and project management staff. The manual furthers SPU's objective of improving project management efficiencies and having well informed employees who understand how their jobs contribute to the Department's goals.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	259	112	42	0	0	0	0	0	413
<b>TOTAL FUNDS</b>	<b>259</b>	<b>112</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>413</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## Project Manager Guidebook - Wastewater

**Program:** Shared Cost Projects (DWF) **Start Date:** 1st Quarter 2001  
**Type:** New Investment **End Date:** 3rd Quarter 2004  
**Project ID:** C301701W

This project funds creation of a project management manual designed to support CIP and project management staff. The manual furthers SPU's objective of improving project management efficiencies and having well informed employees who understand how their jobs contribute to the Department's goals.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	172	74	22	0	0	0	0	0	268
<b>TOTAL FUNDS</b>	<b>172</b>	<b>74</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>268</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Property Acquisition

**Program:** Protection of Beneficial Uses **Start Date:** Ongoing  
**Type:** New Facility **End Date:** Ongoing  
**Project ID:** C3AA302  
**Location:** Citywide

This program funds acquisition of property to implement the various projects. Properties are purchased as they become available or as specific project drainage improvement sites are identified based on criteria established by the Department. Although this project is expected to continue after 2004, future funding levels have not been identified.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	2,192	0	0	0	0	0	0	0	2,192
<b>TOTAL FUNDS</b>	<b>2,192</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,192</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## Pump Station Rehabilitation

**Program:** Sewer Rehabilitation **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Project ID:** C3AA406  
**Location:** BINMIC (Ballard Interbay Mftg. & Ind. Ctr), Eastlake

This annual capital program provides for wastewater pump station repairs and rehabilitation, including design and installation of emergency generators, and material and labor costs for equipment replacement (pumps and valves), as well as equipment for the remote monitoring system (SCADA). This project implements the Pump Station Asset Management Plan.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	2,244	1,318	1,333	1,746	1,755	1,808	1,994	2,000	14,198
<b>TOTAL FUNDS</b>	<b>2,244</b>	<b>1,318</b>	<b>1,333</b>	<b>1,746</b>	<b>1,755</b>	<b>1,808</b>	<b>1,994</b>	<b>2,000</b>	<b>14,198</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## Rainier Ave. S/S Carver - Landslide

**Program:** Public Asset Protection **Start Date:** 1st Quarter 2005  
**Type:** Improved Facility **End Date:** 4th Quarter 2008  
**Project ID:** C305NW3  
**Location:** RAINIER AV S/S CARVER

**Neighborhood District:** Southeast **Neighborhood Plan:** Not in a Neighborhood Plan

This project funds the analysis of drainage problems in this landslide-prone area and the development of recommendations for solutions. The project also funds preliminary engineering and construction for improvements to help stabilize the area and protect SPU facilities.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	0	80	180	490	550	0	1,300
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>180</b>	<b>490</b>	<b>550</b>	<b>0</b>	<b>1,300</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### S Genesee Combined Sewer Overflow Storage

**Program:** Combined Sewer Overflow **Start Date:** 1st Quarter 2003  
**Type:** New Facility **End Date:** TBD  
**Project ID:** C303103

**Location:** S GENESEE ST

**Neighborhood District:** Southeast

**Neighborhood Plan:** Not in a Neighborhood Plan

This project constructs four storage facilities for Combined Sewer Overflow (CSO) reduction in the S Genesee area. Major work includes selection of storage facility sites, additional flow monitoring and modeling, design, permits, and construction. If deemed necessary, pre-design, value engineering, facility plan, environmental review, and post-construction site improvement are part of the project.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	100	200	700	800	500	500	0	2,800
<b>TOTAL FUNDS</b>	<b>0</b>	<b>100</b>	<b>200</b>	<b>700</b>	<b>800</b>	<b>500</b>	<b>500</b>	<b>0</b>	<b>2,800</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

### S Henderson Combined Sewer Overflow Storage & Conveyance

**Program:** Combined Sewer Overflow **Start Date:** 1st Quarter 2004  
**Type:** New Facility **End Date:** 4th Quarter 2008  
**Project ID:** C33NW105

**Location:** S HENDERSON ST and RAINIER AV S

**Neighborhood District:** Southeast

**Neighborhood Plan:** Not in a Neighborhood Plan

This project constructs five storage facilities for Combined Sewer Overflow (CSO) reduction in the S Henderson/Rainier Ave. S area. It also includes a pipeline upgrade south of S Henderson St. along Rainier Ave. S Major work includes selection of storage facility sites, additional flow monitoring and modeling, design, permits, and construction. If deemed necessary, pre-design, value engineering, facility plan, environmental review, and post-construction site improvement are also part of this project.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	200	400	400	800	500	0	2,300
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>200</b>	<b>400</b>	<b>400</b>	<b>800</b>	<b>500</b>	<b>0</b>	<b>2,300</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Salmon Bay Drainage Improvements

**Program:** Flood Control and Local Drainage **Start Date:** 4th Quarter 2000  
**Type:** Improved Facility **End Date:** On hold  
**Project ID:** C300327  
**Location:** NW 54TH ST  
**Neighborhood District:** Ballard **Neighborhood Plan:** BINMIC (Ballard Interbay Northend)

This project investigates ponding in an industrial area south of NW Market St. between 24th and 28th Avenues NW. The project is coordinated with operation of an existing railroad bed still active under a franchise agreement with Burlington Northern Railroad and with potential improvements in the area being considered by Seattle Department of Transportation (SDOT). The corridor serves as the primary method of access for Salmon Bay waterfront properties and as secondary access for the properties fronting NW Market St. Water collects in low areas and drains onto and ponds upon the waterfront properties adjacent to and below the railroad right-of-way. The project scope has been reduced to attempt to find a low-cost solution that addresses the drainage concerns of the neighboring properties. The project was delayed, at community request, until a decision is made by SDOT on location for a bicycle route in the area.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	145	0	10	112	0	0	0	0	267
<b>TOTAL FUNDS</b>	<b>145</b>	<b>0</b>	<b>10</b>	<b>112</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>267</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	7	7	7	

## Sanitary Sewer Overflow Capacity Study/Implementation

**Program:** General Wastewater **Start Date:** 2nd Quarter 2002  
**Type:** Improved Facility **End Date:** 4th Quarter 2006  
**Project ID:** C302205

This project develops a guidance document and self-audit tool for SPU to apply to its wastewater collection system programs and practices, as part of complying with a proposed federal ruling on Sanitary Sewer Overflows (SSOs). The project creates an inventory of the components of the wastewater collection system, and helps ensure that SPU's reporting and record keeping practices reflect federal Capacity, Management, Operations and Maintenance (CMOM) program standards. The project identifies gaps in regulatory compliance, and generates recommendations for improving preventive maintenance of the wastewater system and complying with proposed SSO regulations.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	8	687	400	300	300	0	0	0	1,695
<b>TOTAL FUNDS</b>	<b>8</b>	<b>687</b>	<b>400</b>	<b>300</b>	<b>300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,695</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Schmitz Creek Sediment Control

**Program:** Protection of Beneficial Uses **Start Date:** 1st Quarter 2005  
**Type:** Rehabilitation or Restoration **End Date:** 4th Quarter 2005  
**Project ID:** C33NW326

**Location:** Schmitz Park

**Neighborhood District:** Southwest

**Neighborhood Plan:** Not in a Neighborhood Plan

This project designs and constructs improvements in Schmitz Park to control sediments and reduce erosion. In addition, the project adds stream habitat improvements. The scope of the project and the costs are not known at this time. The project implements recommendations for Schmitz Creek as developed in SPU's Urban Creeks Watershed Analysis.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	0	30	0	0	0	0	30
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## SDOT 4% Program - Drainage

**Program:** Other Drainage **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Project ID:** C33T101

**Location:** Citywide

Based on a 1999 interdepartmental agreement and subsequent negotiations, SPU is jointly funding drainage code compliance on certain Seattle Department of Transportation (SDOT) capital improvement projects. Per the negotiations, the amount of funding is limited to no more than 4% of the Drainage and Wastewater CIP in each year.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	423	782	630	610	677	792	819	819	5,552
<b>TOTAL FUNDS</b>	<b>423</b>	<b>782</b>	<b>630</b>	<b>610</b>	<b>677</b>	<b>792</b>	<b>819</b>	<b>819</b>	<b>5,552</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## SDOT 4% Program - Wastewater

**Program:** General Wastewater **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Project ID:** C32T101

**Location:** Citywide

Based on a 1999 interdepartmental agreement and subsequent negotiations, SPU is jointly funding drainage code compliance on certain Seattle Department of Transportation (SDOT) capital improvement projects. Per the negotiations, the amount of funding is limited to no more than 4% of the drainage and wastewater CIP in each year.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	1,677	803	785	846	506	695	946	950	7,208
<b>TOTAL FUNDS</b>	<b>1,677</b>	<b>803</b>	<b>785</b>	<b>846</b>	<b>506</b>	<b>695</b>	<b>946</b>	<b>950</b>	<b>7,208</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

\*Amounts in thousands of dollars



## SPU - Drainage & Wastewater

### Seattle Monorail Project - Drainage

**Program:** Shared Cost Projects (DWF) **Start Date:** 3rd Quarter 2002  
**Type:** New Facility **End Date:** 4th Quarter 2007  
**Project ID:** C33NW331

**Location:** W SEATTLE, SW MORGAN ST & BALLARD, NW 85TH ST

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Seattle Monorail Project (SMP) is planning an initial 14-mile monorail route between Ballard and West Seattle that would travel through downtown Seattle. A preferred alignment and financing plan were approved by Seattle voters in November 2002. This project funds planning and design of SPU utility relocations and improvements associated with implementation of a new monorail. The project does not include funding for any SPU construction-related costs. An agreement between the SMP and the City for reimbursement of some costs incurred by City departments (primarily SDOT) has been negotiated. See also project C33NW210 (Seattle Monorail Project - Wastewater), as well as projects in the City Light, SDOT and Seattle Center CIPs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	2	36	115	148	148	148	0	0	597
<b>TOTAL FUNDS</b>	<b>2</b>	<b>36</b>	<b>115</b>	<b>148</b>	<b>148</b>	<b>148</b>	<b>0</b>	<b>0</b>	<b>597</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

### Seattle Monorail Project - Wastewater

**Program:** Shared Cost Projects (DWF) **Start Date:** 1st Quarter 2002  
**Type:** New Facility **End Date:** 4th Quarter 2007  
**Project ID:** C33NW210

**Location:** W SEATTLE, SW MORGAN ST & BALLARD, NW 85TH ST

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

The Seattle Monorail Project (SMP) is planning an initial 14-mile monorail route between Ballard and West Seattle that would travel through downtown Seattle. A preferred alignment and financing plan were approved by Seattle voters in November, 2002. This project funds planning and design of SPU utility relocations and improvements associated with implementation of a new monorail. The project does not include funding for any SPU construction-related costs. An agreement between the SMP and the City for reimbursement of some costs incurred by City departments (primarily SDOT) has been negotiated. See also project C33NW331 (Seattle Monorail Project - Drainage,) as well as projects in the City Light, SDOT and Seattle Center CIPs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	3	36	115	148	148	148	0	0	598
<b>TOTAL FUNDS</b>	<b>3</b>	<b>36</b>	<b>115</b>	<b>148</b>	<b>148</b>	<b>148</b>	<b>0</b>	<b>0</b>	<b>598</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Sediment Remediation Studies

**Program:** Habitat and Sediments **Start Date:** 1st Quarter 2004  
**Type:** Improved Facility **End Date:** Ongoing  
**Project ID:** DWFNew1  
**Location:** Various

This project provides funding for preliminary studies and analysis for cleanup of contaminated sediment sites in which the City is a participant. Funding is used to develop studies and analyses required by regulatory agencies for determining the boundaries and clean up requirements for specific action sites. The study phase of sediment remediation projects often require multiple years before specific cleanup actions are defined. As regulatory agency cleanup requirements become clear, individual cleanup projects are included in subsequent CIP proposals. Funding shown below for 2005 through 2009 is expected to be revised as part of the 2005-2010 Proposed CIP.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	1,340	869	1,354	1,272	400	400	5,635
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>1,340</b>	<b>869</b>	<b>1,354</b>	<b>1,272</b>	<b>400</b>	<b>400</b>	<b>5,635</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## Sewage System Modeling

**Program:** General Wastewater **Start Date:** 3rd Quarter 1998  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Project ID:** C3AA206  
**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This project facilitates sewer capacity assessment and development of computer models and other methodologies for sewer system evaluation, including data collection.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	545	107	110	113	116	100	100	100	1,291
<b>TOTAL FUNDS</b>	<b>545</b>	<b>107</b>	<b>110</b>	<b>113</b>	<b>116</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>1,291</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## Sewer Emergency Repairs

**Program:** Sewer Rehabilitation **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Project ID:** C3AA404  
**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

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

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	2,018	413	400	450	450	450	461	494	5,136
<b>TOTAL FUNDS</b>	<b>2,018</b>	<b>413</b>	<b>400</b>	<b>450</b>	<b>450</b>	<b>450</b>	<b>461</b>	<b>494</b>	<b>5,136</b>
<i>O&amp;M Costs (Savings)</i>			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  
**Project ID:** C300488

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This program replaces and repairs sewer lines citywide. Closed circuit television (CCTV) inspections identify defects in sewer mainlines. Each mainline defect is catalogued in the Department's database and assigned a priority number, which designates the urgency of repair under this program. SPU uses a criticality analysis as part of an asset management approach to evaluating life cycle costs, and revises priorities among project selection and rehab methodology.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	11,889	4,309	1,887	1,744	1,855	2,000	4,010	2,500	30,194
<b>TOTAL FUNDS</b>	<b>11,889</b>	<b>4,309</b>	<b>1,887</b>	<b>1,744</b>	<b>1,855</b>	<b>2,000</b>	<b>4,010</b>	<b>2,500</b>	<b>30,194</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

## Small Landslides Projects

**Program:** Public Asset Protection **Start Date:** 1st Quarter 2004  
**Type:** Improved Facility **End Date:** Ongoing  
**Project ID:** DWFNew2

This project provides for spot improvements in landslide-prone areas throughout Seattle. Typical improvements include installing berms, swales, catch basins, storm drains, subsurface drains and small slope stability improvement projects. Individual spot improvement projects will not exceed \$150,000. SPU will keep the Executive and the City Council informed about expenditures from this project via the Department's quarterly financial performance report.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	585	0	0	0	0	0	585
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>585</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>585</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Small Sewer Improvements

**Program:** General Wastewater **Start Date:** 1st Quarter 2003  
**Type:** Improved Facility **End Date:** Ongoing  
**Project ID:** C303299  
**Location:** Citywide

This project provides spot improvements to small-capacity sewer systems throughout Seattle, as well as other small projects related to wastewater. Typical improvements include rerouting of a sewer line or relocation of a maintenance hole. SPU will keep the Executive and the City Council informed about expenditures from this project via the Department's quarterly financial performance report.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	322	161	338	347	0	0	159	1,327
<b>TOTAL FUNDS</b>	<b>0</b>	<b>322</b>	<b>161</b>	<b>338</b>	<b>347</b>	<b>0</b>	<b>0</b>	<b>159</b>	<b>1,327</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## Sound Transit Light Rail - Drainage

**Program:** Shared Cost Projects (DWF) **Start Date:** 4th Quarter 2002  
**Type:** New Facility **End Date:** Ongoing  
**Project ID:** C33NW328  
**Location:** M L KING JR WY S and S WALDEN ST to S NORFOLK ST  
**Neighborhood District:** Southeast **Neighborhood Plan:** Martin Luther King, Jr. @ Holly Street

This project funds SPU's costs related to Sound Transit's planning, design and construction of the Central Link Light Rail system. Sound Transit proposes to construct and operate this electrical light rail transit system, which includes more than 14 miles of alignment. The first phase of Sound Transit's project constructs a light rail segment from the Convention Place Station to S 154 St. near Seattle/Tacoma Airport. The City of Seattle, including SPU, has an ongoing agreement for reimbursement from Sound Transit. See also Sound Transit projects in the Water, City Light, and SDOT CIPs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	50	540	560	1,680	1,550	40	0	4,420
<b>TOTAL FUNDS</b>	<b>0</b>	<b>50</b>	<b>540</b>	<b>560</b>	<b>1,680</b>	<b>1,550</b>	<b>40</b>	<b>0</b>	<b>4,420</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### Sound Transit Light Rail - Wastewater

**Program:** Shared Cost Projects (DWF) **Start Date:** 1st Quarter 2002  
**Type:** New Facility **End Date:** Ongoing  
**Project ID:** C33NW209

**Location:** M L KING JR WY S and S WALDEN ST to S NORFOLK ST

**Neighborhood District:** Southeast

**Neighborhood Plan:** Martin Luther King, Jr. @ Holly Street

This project funds SPU's costs related to Sound Transit's planning, design and construction of the Central Link Light Rail system. Sound Transit proposes to construct and operate this electrical light rail transit system, which includes more than 14 miles of alignment. The first phase of Sound Transit's project constructs a light rail segment from the Convention Place Station to S 154 St. near Seattle/Tacoma Airport. The City of Seattle, including SPU, has an ongoing agreement for reimbursement from Sound Transit. See also Sound Transit projects in the Water, City Light, and SDOT CIPs.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	50	600	650	540	400	40	0	2,280
<b>TOTAL FUNDS</b>	<b>0</b>	<b>50</b>	<b>600</b>	<b>650</b>	<b>540</b>	<b>400</b>	<b>40</b>	<b>0</b>	<b>2,280</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

### South Lake Union Combined Sewer Overflow - King Co. Payments

**Program:** Combined Sewer Overflow **Start Date:** 4th Quarter 1996  
**Type:** New Facility **End Date:** 4th Quarter 2005  
**Project ID:** C3AA104

**Location:** DENNY WY

**Neighborhood District:** Lake Union

**Neighborhood Plan:** Not in a Neighborhood Plan

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% of the full project budget, and is reflected below.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	11,813	3,000	1,700	200	0	0	0	0	16,713
<b>TOTAL FUNDS</b>	<b>11,813</b>	<b>3,000</b>	<b>1,700</b>	<b>200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16,713</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### South Lake Union Combined Sewer Overflow Phase II

**Program:** Combined Sewer Overflow **Start Date:** 1st Quarter 1995  
**Type:** New Facility **End Date:** 4th Quarter 2004  
**Project ID:** C3AA106

**Location:** VALLEY ST

**Neighborhood District:** Lake Union **Neighborhood Plan:** Not in a Neighborhood Plan

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

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	1,239	2,357	1,950	0	0	0	0	0	5,546
<b>TOTAL FUNDS</b>	<b>1,239</b>	<b>2,357</b>	<b>1,950</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,546</b>
<i>O&amp;M Costs (Savings)</i>			0	0	80	80	80	80	

### South Lake Washington Sewer Main Assessment

**Program:** General Wastewater **Start Date:** 1st Quarter 2003  
**Type:** Rehabilitation or Restoration **End Date:** 4th Quarter 2005  
**Project ID:** C303201

**Location:** Various

**Neighborhood District:** Southeast **Neighborhood Plan:** Not in a Neighborhood Plan

This project provides a comprehensive assessment of the condition of a combined sewer main. The assessment includes a closed circuit television (CCTV) investigation and sewer line cleaning. The assessment results in recommendations for repairs necessary for the normal functioning of the sewer line.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	100	500	300	0	0	0	0	900
<b>TOTAL FUNDS</b>	<b>0</b>	<b>100</b>	<b>500</b>	<b>300</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>900</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

## South Park Water Quality Study

**Program:** Protection of Beneficial Uses **Start Date:** 1st Quarter 2004  
**Type:** New Facility **End Date:** 4th Quarter 2004  
**Project ID:** C343304

**Location:** SR99-Duwamish River

**Neighborhood District:** Southwest

**Neighborhood Plan:** South Park

A drainage improvement study has been completed for the South Park drainage basin. In light of that study, this project evaluates both structural and nonstructural options to improve stormwater quality in the basin and mitigate impacts on the Duwamish River, a possible Superfund site. This project is one of the five new "early action" projects proposed as a result of SPU's work on the Comprehensive Drainage Plan Update. The cost of this project is absorbed within the existing Protection of Beneficial Uses program in 2004 by using savings from other projects.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	150	0	0	0	0	0	150
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>150</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>150</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## Spokane St. Bridge Salmon Habitat

**Program:** Protection of Beneficial Uses **Start Date:** 1st Quarter 2003  
**Type:** Improved Facility **End Date:** On hold  
**Project ID:** C333305

**Location:** W MARGINAL WY S/S SPOKANE ST

**Neighborhood District:** Southwest

**Neighborhood Plan:** Not in a Neighborhood Plan

This project results in a feasibility study for the regrading of the bank of an existing public access site to provide juvenile salmonids with greater access to shallow water habitat during upper and middle tidal elevations. The project is part of the City's Endangered Species Act (ESA) response to improve habitat in the Duwamish Waterway. The upland portion of this parcel is owned by the Seattle Department of Transportation (SDOT) and is being developed by the Port of Seattle, SDOT, and King County Metro as a public access site to be maintained by SDOT. This project is currently on hold seeking grant funding for construction of the site.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	116	0	0	0	0	0	0	116
<b>TOTAL FUNDS</b>	<b>0</b>	<b>116</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>116</b>
<i>O&amp;M Costs (Savings)</i>			0	0	1	1	1	1	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## SR 519 - Drainage Review

**Program:** Other Drainage  
**Type:** New Facility  
**Project ID:** C33NW332  
**Location:** SR 519

**Start Date:** 4th Quarter 2002  
**End Date:** 4th Quarter 2004

This project funds the Department's review of the SR 519 transportation project, which is likely to affect the drainage system in this area. SPU design staff ensure that the new drainage facilities constructed under this project are designed and constructed to Department standards. Design staff also determine whether there is an opportunity to upgrade existing City drainage facilities at this location in conjunction with the SR 519 project. See also project TC365020 in the Seattle Department of Transportation CIP.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	50	20	0	0	0	0	0	70
<b>TOTAL FUNDS</b>	<b>0</b>	<b>50</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>70</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## SW Jacobsen & Alaska Ave. SW Landslide Mitigation

**Program:** Public Asset Protection  
**Type:** New Facility  
**Project ID:** C301353

**Start Date:** 3rd Quarter 2001  
**End Date:** 4th Quarter 2004

**Location:** SW JACOBSEN RD and SW HUDSON ST

**Neighborhood District:** Southwest

**Neighborhood Plan:** Not in a Neighborhood Plan

This project includes collection of surface water runoff not currently entering the existing drainage system and conveys the runoff away from this landslide-prone area. The surface drainage improvements will likely consist of berms and additional catch basins. The project reduces the likelihood of damage from future landslides. Construction occurs in 2004.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	88	138	439	0	0	0	0	0	665
<b>TOTAL FUNDS</b>	<b>88</b>	<b>138</b>	<b>439</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>665</b>
<i>O&amp;M Costs (Savings)</i>			0	0	3	3	3	3	

\*Amounts in thousands of dollars



## SPU - Drainage & Wastewater

### SW Juneau Storm Drain

**Program:** Flood Control and Local Drainage

**Start Date:** 3rd Quarter 2001

**Type:** New Facility

**End Date:** 4th Quarter 2003

**Project ID:** C301311

**Location:** SW JUNEAU ST and 30TH AV SW to 34TH AV SW

**Neighborhood District:** Delridge

**Neighborhood Plan:** Delridge

This project provides a completed stormwater drainage system in the area of 30th Ave. SW to 34th Ave. SW from Juneau St. to Brandon St. 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. 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.

	<b>LTD</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Total</b>
SPU Drainage and Wastewater Fund	1,529	584	0	0	0	0	0	0	2,113
<b>TOTAL FUNDS</b>	<b>1,529</b>	<b>584</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,113</b>
<i>O&amp;M Costs (Savings)</i>			0	9	9	9	9	9	

### SW Prescott/Admiral Way Landslide Mitigation

**Program:** Public Asset Protection

**Start Date:** 3rd Quarter 2002

**Type:** New Facility

**End Date:** 4th Quarter 2006

**Project ID:** C302353

**Location:** SW ADMIRAL WY and SW SPOKANE ST

**Neighborhood District:** Not applicable

**Neighborhood Plan:** Admiral

This project studies drainage and slope stability problems in the area south of SW Prescott St., up and downslope of SW Admiral Way. The project defines and prioritizes solutions to the problem flooding and stability areas that either put SPU facilities at risk or pose risks to other properties because of the lack of adequate drainage facilities. Following completion of the study, the project also funds the design and implementation of the priority projects.

	<b>LTD</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Total</b>
SPU Drainage and Wastewater Fund	37	100	361	250	200	0	0	0	948
<b>TOTAL FUNDS</b>	<b>37</b>	<b>100</b>	<b>361</b>	<b>250</b>	<b>200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>948</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	4	4	

*\*Amounts in thousands of dollars*

# SPU - Drainage & Wastewater

## Taylor Creek - Phase 3 Restoration

**Program:** Protection of Beneficial Uses **Start Date:** 1st Quarter 2000  
**Type:** Improved Facility **End Date:** 4th Quarter 2003  
**Project ID:** C300313

**Location:** LAKE RIDGE DR S

**Neighborhood District:** Southeast **Neighborhood Plan:** Not in a Neighborhood Plan

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

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	131	16	0	0	0	0	0	0	147
<b>TOTAL FUNDS</b>	<b>131</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>147</b>
<i>O&amp;M Costs (Savings)</i>			0	1	1	1	1	1	

## Taylor Creek Culverts Phase 2

**Program:** Protection of Beneficial Uses **Start Date:** 4th Quarter 1999  
**Type:** New Facility **End Date:** 4th Quarter 2005  
**Project ID:** C399315

**Location:** Taylor Creek/Rainier Ave S

**Neighborhood District:** Greater Duwamish **Neighborhood Plan:** Not in a Neighborhood Plan

This project designs and constructs fish passage improvements at the culvert that conveys Taylor Creek under Rainier Ave. S. There are currently three different types of culverts connected together that make up this culvert system under Rainier Ave. S: a short 42-inch diameter section crossing a 20-foot side street; a three-by-four-foot box culvert under Rainier Ave. S; and a corrugated metal culvert that runs under an adjacent apartment. The points where these three culverts connect have 8-10-inch drops which impede fish passage. In addition the culverts are velocity barriers during most rainstorms.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	334	144	200	1,090	0	0	0	0	1,768
<b>TOTAL FUNDS</b>	<b>334</b>	<b>144</b>	<b>200</b>	<b>1,090</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,768</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	6	6	6	

## Thornton - Lake City Way & NE 100th St. Culvert

**Program:** Protection of Beneficial Uses **Start Date:** 1st Quarter 2001  
**Type:** Improved Facility **End Date:** 2nd Quarter 2003  
**Project ID:** C301331

**Location:** LAKE CITY WY NE AND NE 100TH ST and NE 100TH ST

**Neighborhood District:** North **Neighborhood Plan:** North District/Lake City

This project designs and constructs fish passage improvements at the culvert that conveys Thornton Creek under Lake City Way NE.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	724	60	0	0	0	0	0	0	784
<b>TOTAL FUNDS</b>	<b>724</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>784</b>
<i>O&amp;M Costs (Savings)</i>			0	6	6	6	6	6	

\*Amounts in thousands of dollars

## Thornton - Park 6 Instream Improvements

**Program:** Protection of Beneficial Uses **Start Date:** 2nd Quarter 2001  
**Type:** Improved Facility **End Date:** 4th Quarter 2005  
**Project ID:** C301333

**Location:** 5TH AV NE and NE 104TH ST

**Neighborhood District:** North

**Neighborhood Plan:** Northgate

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 providing design advice and implementing the bulk of the project.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	86	51	50	50	0	0	0	0	237
<b>TOTAL FUNDS</b>	<b>86</b>	<b>51</b>	<b>50</b>	<b>50</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>237</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	1	1	1	

## Thornton Creek - Lake City Detention Ph IV

**Program:** Protection of Beneficial Uses **Start Date:** 1st Quarter 2001  
**Type:** New Facility **End Date:** 4th Quarter 2005  
**Project ID:** C301301

**Location:** 35TH AV NE and NE 110TH ST

**Neighborhood District:** North

**Neighborhood Plan:** North District/Lake City

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 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 improves aesthetic appeal as a public access site. The preliminary engineering phase evaluates several alternatives to the project and conducts a circulation study of Meadowbrook Pond to identify a way to prevent stagnant water from being trapped in the pond.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	790	150	250	600	0	0	0	0	1,790
<b>TOTAL FUNDS</b>	<b>790</b>	<b>150</b>	<b>250</b>	<b>600</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,790</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	4	4	4	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Thornton Creek - Ravenna Ave. NE Habitat Restoration

**Program:** Protection of Beneficial Uses **Start Date:** 3rd Quarter 2002  
**Type:** Improved Facility **End Date:** 4th Quarter 2004  
**Project ID:** C333306

**Location:** RAVENNA AV NE

**Neighborhood District:** North

**Neighborhood Plan:** North District/Lake City

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.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	29	105	0	0	0	0	0	134
<b>TOTAL FUNDS</b>	<b>0</b>	<b>29</b>	<b>105</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>134</b>
<i>O&amp;M Costs (Savings)</i>			0	0	1	1	1	1	

## Thornton Creek Basin Plan

**Program:** Flood Control and Local Drainage **Start Date:** 1st Quarter 2004  
**Type:** New Facility **End Date:** 4th Quarter 2004  
**Project ID:** C343203

**Location:** Thornton Creek watershed

**Neighborhood District:** North

**Neighborhood Plan:** Northgate

This project studies drainage problems identified in the Thornton Creek Basin Wide Flow Control Plan and develops a list of specific projects and programs that can be constructed to address them, together with budgets and schedules. The plan incorporates and coordinates all aspects of stormwater management, including natural systems, detention, conveyance improvements, habitat needs, water quality, source control, and public education within this basin. This project is one of the five new "early action" projects proposed as a result of SPU's work on the Comprehensive Drainage Plan. The cost of this project is absorbed within the existing drainage capital program by using savings from other projects.

In the 2004 budget process, Council adopted a proviso that limits to \$200,000 the amount that SPU can spend on this project from funds appropriated in 2004 for the Flood Control and Local Drainage BCL.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	200	0	0	0	0	0	200
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>200</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Thornton Creek Pond

**Program:** Protection of Beneficial Uses  
**Type:** New Facility  
**Project ID:** C302331

**Start Date:** 4th Quarter 2002  
**End Date:** 4th Quarter 2005

**Location:** 5TH AV NE and NE 100TH ST

**Neighborhood District:** North

**Neighborhood Plan:** Northgate

This project addresses problems associated with runoff in the area of the Northgate Mall. The project also addresses water quality, detention, and infiltration to benefit Thornton Creek. The project includes water-quality treatment devices, a pond, swales, and landscaping, and is part of a broader effort by the City to stimulate economic revitalization and bring other community and environmental benefits to Northgate. The City intends to seek recovery of a share of the capital and annual maintenance costs from property owners in the vicinity of Northgate Mall whose stormwater is received by the pond.

Council Bill 114551 (currently before the City Council) proposed to amend SPU's 2003-2008 Adopted CIP and 2003 Adopted Budget to create this project and appropriate \$6.4 million in 2003 for the project. If the legislation is enacted, these funds will be shown in the funding display below, and the funds would carry over into future years until spent.

In the 2004 budget process, Council adopted a proviso that limits to zero the amount that SPU can spend on this project from funds appropriated in 2004 for the Protection of Beneficial Uses BCL.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	0	0	0	0	0	0	0	0	0
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## Wastewater Rehabilitation Project Evaluation

**Program:** Sewer Rehabilitation  
**Type:** Rehabilitation or Restoration  
**Project ID:** C3AA401

**Start Date:** Ongoing  
**End Date:** Ongoing

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This program evaluates future wastewater rehabilitation projects by investigating existing records, reports, and plans, obtaining field data from closed circuit television (CCTV) inspection and for gauging, developing alternatives and cost estimates, and making recommendations.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	855	86	88	91	94	94	97	100	1,505
<b>TOTAL FUNDS</b>	<b>855</b>	<b>86</b>	<b>88</b>	<b>91</b>	<b>94</b>	<b>94</b>	<b>97</b>	<b>100</b>	<b>1,505</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## Water Reuse - Stormwater

**Program:** Other Drainage  
**Type:** New Facility  
**Project ID:** C301302

**Start Date:** 1st Quarter 2002  
**End Date:** 4th Quarter 2004

**Location:** Citywide

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This project funds one or more stormwater reuse projects, selected upon completion of an SPU-sponsored water reuse research study. In 2004, the "Residential Rainwater Harvesting Pilot Project" installs rainwater harvesting cisterns on 24 homes citywide. Funds are also used for rainwater reclamation projects in partnership with other entities (including the Seattle Department of Parks and Recreation, and King County), or projects funded only by SPU.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	290	192	20	0	0	0	0	0	502
<b>TOTAL FUNDS</b>	<b>290</b>	<b>192</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>502</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## Water Reuse - Wastewater

**Program:** General Wastewater  
**Type:** New Facility  
**Project ID:** C301203

**Start Date:** 4th Quarter 2001  
**End Date:** 4th Quarter 2004

**Location:** TBD

This project funds one or more wastewater reuse projects, selected upon completion of an SPU-sponsored water reuse research study. Funds are used for projects in partnership with other entities (including the Seattle Department of Parks and Recreation, and King County), or projects funded only by SPU.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	252	280	20	0	0	0	0	0	552
<b>TOTAL FUNDS</b>	<b>252</b>	<b>280</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>552</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

## West Seattle Golf Course - Detention

**Program:** Protection of Beneficial Uses  
**Type:** New Facility  
**Project ID:** C399307

**Start Date:** 1st Quarter 1999  
**End Date:** 4th Quarter 2006

**Location:** SW GENESEE ST

**Neighborhood District:** Delridge **Neighborhood Plan:** 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 spanning the creek.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	444	127	30	50	1,500	0	0	0	2,151
<b>TOTAL FUNDS</b>	<b>444</b>	<b>127</b>	<b>30</b>	<b>50</b>	<b>1,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,151</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	3	3	

\*Amounts in thousands of dollars

## SPU - Drainage & Wastewater

### Westlake Drainage

**Program:** Flood Control and Local Drainage  
**Type:** Improved Facility  
**Project ID:** C3AA328

**Start Date:** 2nd Quarter 1995  
**End Date:** 4th Quarter 2003

**Location:** WESTLAKE AV N/ Blaine

**Neighborhood District:** Lake Union

**Neighborhood Plan:** Queen Anne

This project installs a complete drainage system along Westlake Ave. N, north of Blaine St. to Aurora Ave. N, and rehabilitates the existing drainage system south of Blaine St. to Galer St. In coordination with construction of a pedestrian/bicycle path, the drainage project also improves surface drainage collection in adjacent parking areas.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	4,458	1,318	0	0	0	0	0	0	5,776
<b>TOTAL FUNDS</b>	<b>4,458</b>	<b>1,318</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,776</b>
<i>O&amp;M Costs (Savings)</i>			0	31	31	31	31	31	

### Windermere Combined Sewer Overflow Storage

**Program:** Combined Sewer Overflow  
**Type:** New Facility  
**Project ID:** C302103

**Start Date:** 1st Quarter 2003  
**End Date:** 4th Quarter 2006

**Location:** TBD

This project constructs two storage facilities for Combined Sewer Overflow (CSO) reduction in the Windermere area. Major work includes selection of storage facility sites, additional flow monitoring and modeling, design, permitting, and construction. If deemed necessary, pre-design, facility planning, environmental review, and post-construction site improvement are included as part of the project. Projected spending on this project has been slowed to reflect a delay in design of projects to resolve problems with calibrating computer models to match measured flow data. Based on an anticipated presentation to the Asset Management Committee, the schedule for the CSO Control Program may be revised. Compliance with the City's NPDES Permit is not affected.

	LTD	2003	2004	2005	2006	2007	2008	2009	Total
SPU Drainage and Wastewater Fund	151	375	58	1,807	92	0	0	0	2,483
<b>TOTAL FUNDS</b>	<b>151</b>	<b>375</b>	<b>58</b>	<b>1,807</b>	<b>92</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,483</b>
<i>O&amp;M Costs (Savings)</i>			N/C	N/C	N/C	N/C	N/C	N/C	

\*Amounts in thousands of dollars

# SPU - Drainage & Wastewater

## WPA Drains Study & Repair Program

**Program:** Public Asset Protection **Start Date:** 3rd Quarter 2000  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Project ID:** C300338

**Location:** Various

**Neighborhood District:** In more than one district **Neighborhood Plan:** Not in a Neighborhood Plan

This program prioritizes and makes necessary repairs on drains installed as a result of extensive landslide damage during the winter of 1933-1934. The Works Progress Administration sponsored the construction of landslide mitigation projects at 29 sites around the city between 1935-1941. This project was one of the recommended activities from the Landslide Policy Paper adopted by the City Council in 1998.

	<b>LTD</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Total</b>
SPU Drainage and Wastewater Fund	327	151	250	100	100	100	100	100	1,228
<b>TOTAL FUNDS</b>	<b>327</b>	<b>151</b>	<b>250</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>1,228</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	

\*Amounts in thousands of dollars