

**SPU -
DRAINAGE AND
WASTEWATER**

This map of Seattle highlights several infrastructure projects and Combined Sewer Overflow (CSO) facilities. Projects are marked with black diamonds, and CSO facilities are marked with black dots. The map includes labels for major water bodies like Elliott Bay, Green Lake, Union Lake, and Lake Washington, as well as surrounding areas like Puget Sound. Key streets and highways are shown, including Interstate 5, Interstate 90, and State Route 520. Specific projects labeled include Thornton / Jackson Park Dentention Phase 2, 3rd Ave NW / NW 107th St Natural Ditch System, 35th Ave W / Elmore Trestle Replacement, E Boston Tr Drainage Project, Westlake Ave Storm Drain Rehab, Spokane St Bridge Salmon Habitat, and Atlas PI / SW Juneau Landslide Mitigation. CSO facilities are numbered #10, #11, #21, and #27.

Drainage Project

A horizontal bar chart with three categories labeled 0, 1, and 2. Category 0 has a bar with a black and white checkerboard pattern. Category 1 has a solid black bar. Category 2 has a solid grey bar. The bars are of equal length.



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 proposed 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 Proposed 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 Proposed 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. (See the "Duwamish Sediment Remediation" project.)
- **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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- **Placeholder Projects:** Several “placeholder” projects in the 2004-2009 Drainage and Wastewater CIP provide funding for emerging projects that may develop during the year and that are not specifically identified in the CIP. New projects that are developed from these funds are reviewed and approved by a capital planning committee. The committee reviews expenditures for the entire program monthly and establishes priorities among projects. SPU will keep the Executive and the City Council informed about expenditures from this project via the Department’s quarterly financial performance report.

Project Selection Process

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

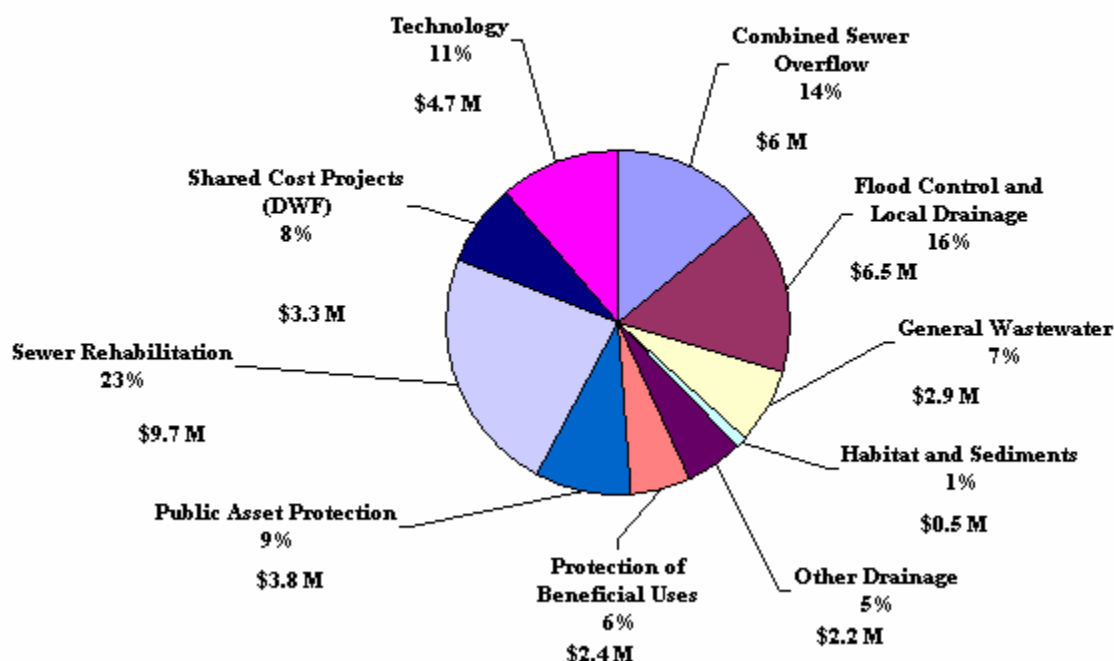
Project Identification, Project Prioritization, and Project Budget and Scheduling: In early 2003, all projects in the Drainage and Wastewater CIP were reviewed for consistency with the pending Comprehensive Drainage Plan Update, using criteria developed by the Integrated Cost and Scheduling (ICS) team. 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 below shows how Seattle Public Utilities’ proposed Drainage and Wastewater CIP allocates funding to these program categories in 2004:

Drainage & Wastewater 2004 Proposed 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 of 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 3rd Ave NW/NW 107th 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 – 47th 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 Proposed 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 that 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.

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Project Summary

| Program/Project | Project ID | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|--|------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Combined Sewer Overflow | | | | | | | | | | |
| Ballard Combined Sewer Overflow Storage | C303101 | 0 | 50 | 50 | 500 | 500 | 1,000 | 1,500 | 0 | 3,600 |
| Combined Sewer Overflow - Placeholder | C304101 | 0 | 0 | 250 | 0 | 0 | 0 | 0 | 4,235 | 4,485 |
| Combined Sewer Overflow Control Facility Retrofit | C302102 | 323 | 990 | 691 | 0 | 0 | 0 | 0 | 0 | 2,004 |
| CSO Modeling and Assessment | C399101 | 1,562 | 54 | 340 | 451 | 58 | 100 | 50 | 0 | 2,615 |
| CSO Monitoring Installation | C3AA108 | 1,603 | 194 | 33 | 0 | 0 | 0 | 0 | 0 | 1,830 |
| CSO Plan Implementation | C302101 | 141 | 394 | 500 | 144 | 1,605 | 2,090 | 2,390 | 2,700 | 9,964 |
| CSO Plan Update | C3AA103 | 1,299 | 107 | 100 | 395 | 463 | 100 | 100 | 100 | 2,664 |
| Fremont-Wallingford Combined Sewer Overflow (CSO) | C303102 | 0 | 50 | 50 | 500 | 800 | 1,360 | 1,540 | 0 | 4,300 |
| S Genesee Combined Sewer Overflow Storage | C303103 | 0 | 100 | 200 | 700 | 800 | 500 | 500 | 0 | 2,800 |
| S Henderson Combined Sewer Overflow Storage & Conveyance | C33NW105 | 0 | 0 | 200 | 400 | 400 | 800 | 500 | 0 | 2,300 |
| South Lake Union Combined Sewer Overflow - King Co. Payments | C3AA104 | 11,813 | 3,000 | 1,700 | 200 | 0 | 0 | 0 | 0 | 16,713 |
| South Lake Union Combined Sewer Overflow Phase II | C3AA106 | 1,239 | 2,357 | 1,789 | 0 | 0 | 0 | 0 | 0 | 5,385 |
| Windermere Combined Sewer Overflow Storage | C302103 | 151 | 375 | 58 | 1,807 | 92 | 0 | 0 | 0 | 2,483 |
| Combined Sewer Overflow Total | | 18,131 | 7,671 | 5,961 | 5,097 | 4,718 | 5,950 | 6,580 | 7,035 | 61,143 |

**Amounts in thousands of dollars*

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Project Summary

| Program/Project | Project ID | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|--|------------|-------|-------|-------|------|-------|-------|-------|--------|--------|
| Flood Control and Local Drainage | | | | | | | | | | |
| 12552 22nd Ave. NE Storm Drainage Improvements | C301323 | 73 | 137 | 168 | 0 | 0 | 0 | 0 | 0 | 378 |
| 20th Ave. NE Local Drainage | C301317 | 33 | 170 | 125 | 0 | 0 | 0 | 0 | 0 | 328 |
| 39th Ave. NE & NE 105th St. Drainage | C301315 | 709 | 400 | 0 | 0 | 0 | 0 | 0 | 0 | 1,109 |
| 3rd Ave. NW & N 110th Natural System | C301320 | 993 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 1,029 |
| 3rd Ave. NW & NW 107 St. Natural System | C300329 | 429 | 2,482 | 1,500 | 0 | 0 | 0 | 0 | 0 | 4,411 |
| 7th Ave. S & Duwamish River Drainage | C302318 | 5 | 50 | 300 | 200 | 500 | 2,726 | 2,000 | 0 | 5,781 |
| Comprehensive Ditch and Culvert Inventory | C3AA307 | 1,001 | 180 | 0 | 0 | 0 | 0 | 0 | 0 | 1,181 |
| Comprehensive Drainage Plan Update | C302301 | 552 | 1,754 | 200 | 0 | 0 | 0 | 0 | 0 | 2,506 |
| Drainage Spot Improvements | C333201 | 994 | 151 | 100 | 150 | 150 | 150 | 150 | 150 | 1,995 |
| Fairview Ave. N Drainage Assessment | C300321 | 105 | 224 | 10 | 0 | 0 | 0 | 0 | 0 | 339 |
| Flood Control & Local Drainage - Placeholder | C343201 | 0 | 0 | 507 | 864 | 2,578 | 4,852 | 9,663 | 12,934 | 31,398 |
| Georgetown Drainage Basin Study | C302311 | 92 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 142 |
| Harbor Island - Storm Drain Repair | C333204 | 0 | 66 | 10 | 437 | 0 | 0 | 0 | 0 | 513 |
| High Point Drainage System | C301303 | 184 | 525 | 875 | 0 | 0 | 0 | 0 | 0 | 1,584 |
| Jackson Park Detention Phase II | C399305 | 8,592 | 1,771 | 251 | 0 | 0 | 0 | 0 | 0 | 10,614 |
| Linden Ave. N & N 143rd Drainage Enhancement | C301321 | 87 | 406 | 300 | 0 | 0 | 0 | 0 | 0 | 793 |
| Linden Ave. Swale | C3AA318 | 169 | 0 | 0 | 400 | 0 | 0 | 0 | 0 | 569 |
| Mapes Creek Natural System | C302319 | 6 | 100 | 90 | 0 | 0 | 0 | 0 | 0 | 196 |
| MLK Way/Norfolk St. Sub-basin Storm Improvements | C333205 | 0 | 319 | 250 | 300 | 1,000 | 1,800 | 0 | 0 | 3,669 |

**Amounts in thousands of dollars*

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Project Summary

| Program/Project | Project ID | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|---|------------|---------------|---------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|
| Flood Control and Local Drainage | | | | | | | | | | |
| 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 |
| Flood Control and Local Drainage Total | | 21,192 | 12,303 | 6,501 | 4,870 | 7,188 | 11,453 | 15,283 | 13,684 | 92,474 |

**Amounts in thousands of dollars*

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Project Summary

| Program/Project | Project ID | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|---|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| General Wastewater | | | | | | | | | | |
| 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 |
| General Wastewater - Placeholder | C303299 | 0 | 322 | 161 | 338 | 347 | 0 | 0 | 159 | 1,327 |
| 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 |
| 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 |
| General Wastewater Total | | 4,526 | 4,417 | 2,869 | 2,507 | 1,749 | 1,178 | 1,626 | 1,789 | 20,661 |
| Habitat and Sediments | | | | | | | | | | |
| Duwamish Sediment Remediation | C300412 | 374 | 359 | 439 | 469 | 954 | 872 | 0 | 0 | 3,467 |
| Habitat & Sediments - Placeholder | C304501 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 30 |
| Habitat and Sediments Total | | 374 | 359 | 469 | 469 | 954 | 872 | 0 | 0 | 3,497 |

**Amounts in thousands of dollars*

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Project Summary

| Program/Project | Project ID | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|--------------------------------------|------------|--------------|--------------|--------------|------------|--------------|--------------|--------------|--------------|---------------|
| Other Drainage | | | | | | | | | | |
| Ballard Town Center Assessment | C33NW305 | 0 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 75 |
| GIS System Enhancements | C343502 | 0 | 0 | 114 | 0 | 0 | 0 | 0 | 0 | 114 |
| Heavy Equipment Purchases - Drainage | C300399 | 1,345 | 300 | 880 | 177 | 520 | 350 | 350 | 350 | 4,272 |
| Mobility Improvement | C33NW383 | 0 | 300 | 300 | 0 | 0 | 0 | 0 | 0 | 600 |
| Other Drainage - Placeholder | C343501 | 0 | 0 | 221 | 0 | 0 | 0 | 0 | 25 | 246 |
| SDOT 4% Program - Drainage | C33T101 | 423 | 782 | 630 | 610 | 677 | 792 | 819 | 819 | 5,552 |
| SR 519 - Drainage Review | C33NW332 | 0 | 50 | 20 | 0 | 0 | 0 | 0 | 0 | 70 |
| Water Reuse - Stormwater | C301302 | 290 | 192 | 20 | 0 | 0 | 0 | 0 | 0 | 502 |
| Other Drainage Total | | 2,058 | 1,699 | 2,185 | 787 | 1,197 | 1,142 | 1,169 | 1,194 | 11,431 |

**Amounts in thousands of dollars*

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Project Summary

| Program/Project | Project ID | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|---|------------|-------|------|------|-------|------|------|------|-------|-------|
| Protection of Beneficial Uses | | | | | | | | | | |
| 1st Ave. S Salmon Habitat | C333303 | 0 | 63 | 0 | 220 | 511 | 0 | 0 | 0 | 794 |
| Beer Sheva Habitat Improvement | C301319 | 91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 |
| Bitter Lake/N 137th Stormwater | C301322 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| BMP Program Implementation | C300316 | 155 | 0 | 0 | 0 | 0 | 0 | 0 | 1,000 | 1,155 |
| Creeks CIP Monitoring & Repair Program | C300309 | 488 | 184 | 141 | 250 | 250 | 250 | 250 | 250 | 2,063 |
| Creeks Emerging Issues Program | C305NW1 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 98 |
| Creekside Erosion Control | C300311 | 97 | 30 | 48 | 0 | 0 | 0 | 0 | 0 | 175 |
| Delridge Basin Phase II Channel Improvements | C3AA319 | 3,881 | 339 | 0 | 0 | 0 | 0 | 0 | 0 | 4,220 |
| Densmore Basin Water Quality Investigation | C333302 | 0 | 282 | 0 | 0 | 0 | 0 | 0 | 0 | 282 |
| Fauntleroy Creek Sediment Control | C333301 | 0 | 40 | 30 | 0 | 0 | 0 | 0 | 0 | 70 |
| Fecal TMDL Feasibility Pilot Project | C343302 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 100 |
| Georgetown Pump Station Salmon Habitat | C333304 | 0 | 59 | 5 | 700 | 700 | 0 | 0 | 0 | 1,464 |
| Lake Washington/Lower Duwamish Habitat Protection | C301385 | 47 | 0 | 0 | 902 | 925 | 950 | 950 | 950 | 4,724 |
| Longfellow Creek - SW Brandon to Juneau | C301336 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| Longfellow Creek - Yancy St. Phase 3 | C302332 | 302 | 566 | 175 | 0 | 0 | 0 | 0 | 0 | 1,043 |
| Monitoring System Upgrade | C343303 | 0 | 0 | 230 | 0 | 0 | 0 | 0 | 0 | 230 |
| Norfolk Drainage Basin Water Quality Improvements | C302302 | 26 | 158 | 45 | 1,100 | 0 | 0 | 0 | 0 | 1,329 |
| Property Acquisition | C3AA302 | 2,192 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,192 |
| Protection of Beneficial Uses - Placeholder | C343301 | 0 | 0 | 741 | 0 | 0 | 0 | 0 | 0 | 741 |
| Schmitz Creek Sediment Control | C33NW326 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 30 |

**Amounts in thousands of dollars*

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Project Summary

| Program/Project | Project ID | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|--|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Protection of Beneficial Uses | | | | | | | | | | |
| South Park Water Quality Study | C343304 | 0 | 0 | 150 | 0 | 0 | 0 | 0 | 0 | 150 |
| Spokane St. Bridge Salmon Habitat | C333305 | 0 | 116 | 0 | 0 | 0 | 0 | 0 | 0 | 116 |
| Taylor Creek - Phase 3 Restoration | C300313 | 131 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 147 |
| Taylor Creek Culverts Phase 2 | C399315 | 334 | 144 | 200 | 1,090 | 0 | 0 | 0 | 0 | 1,768 |
| Thornton - Lake City Way & NE 100th St. Culvert | C301331 | 724 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 784 |
| Thornton - Park 6 Instream Improvements | C301333 | 86 | 51 | 50 | 50 | 0 | 0 | 0 | 0 | 237 |
| Thornton Creek - Lake City Detention Ph IV | C301301 | 790 | 150 | 250 | 600 | 0 | 0 | 0 | 0 | 1,790 |
| Thornton Creek - Ravenna Ave. NE Habitat Restoration | C333306 | 0 | 29 | 105 | 0 | 0 | 0 | 0 | 0 | 134 |
| Thornton Creek Pond | C302331 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| West Seattle Golf Course - Detention | C399307 | 444 | 127 | 30 | 50 | 1,500 | 0 | 0 | 0 | 2,151 |
| Protection of Beneficial Uses Total | | 9,832 | 2,414 | 2,398 | 4,992 | 3,886 | 1,200 | 1,200 | 2,200 | 28,122 |

**Amounts in thousands of dollars*

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Project Summary

| Program/Project | Project ID | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|---|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| Public Asset Protection | | | | | | | | | | |
| Atlas Pl. SW & SW Juneau Landslide Mitigation | C300344 | 389 | 109 | 150 | 240 | 0 | 0 | 0 | 0 | 888 |
| Burke Gilman/NE 144th Landslide Mitigation | C301355 | 161 | 2 | 250 | 650 | 650 | 1,000 | 0 | 0 | 2,713 |
| E Boston Terrace Project | C300320 | 465 | 795 | 230 | 0 | 0 | 0 | 0 | 0 | 1,490 |
| Lake Dell/33 E Landslide Mitigation | C301352 | 54 | 20 | 20 | 300 | 0 | 0 | 0 | 0 | 394 |
| Landslide Prone Area Program - Placeholder | C333401 | 0 | 287 | 832 | 500 | 500 | 900 | 500 | 1,000 | 4,519 |
| Marine View Drive - 47th SW Landslide | C302352 | 108 | 610 | 878 | 0 | 0 | 0 | 0 | 0 | 1,596 |
| Marine View Drive Landslide Mitigation - North | C399321 | 527 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 528 |
| Perkins Lane W/W Ruffner St. Drainage Improvement | C301354 | 175 | 80 | 350 | 960 | 100 | 0 | 0 | 0 | 1,665 |
| Rainier Ave. S/S Carver - Landslide | C305NW3 | 0 | 0 | 0 | 80 | 180 | 490 | 550 | 0 | 1,300 |
| SW Jacobsen & Alaska Ave. SW Landslide Mitigation | C301353 | 88 | 138 | 439 | 0 | 0 | 0 | 0 | 0 | 665 |
| SW Prescott/Admiral Way Landslide Mitigation | C302353 | 37 | 100 | 361 | 250 | 200 | 0 | 0 | 0 | 948 |
| WPA Drains Study & Repair Program | C300338 | 327 | 151 | 250 | 100 | 100 | 100 | 100 | 100 | 1,228 |
| Public Asset Protection Total | | 2,331 | 2,293 | 3,760 | 3,080 | 1,730 | 2,490 | 1,150 | 1,100 | 17,934 |

**Amounts in thousands of dollars*

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Project Summary

| Program/Project | Project ID | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|---|------------|---------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|----------------|
| Sewer Rehabilitation | | | | | | | | | | |
| "No Dig" Pipe and Maintenance Hole Rehabilitation | C3AA403 | 9,221 | 1,064 | 1,500 | 1,543 | 1,552 | 1,605 | 1,991 | 2,000 | 20,476 |
| 3511 S Dearborn St. - Sewer Rehabilitation | C301412 | 98 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 120 |
| Point Sewer Pipe Repairs | C303401 | 7,367 | 2,770 | 4,084 | 3,624 | 3,644 | 3,768 | 3,881 | 4,000 | 33,138 |
| Pump Station Rehabilitation | C3AA406 | 2,244 | 1,318 | 1,333 | 1,746 | 1,755 | 1,808 | 1,994 | 2,000 | 14,198 |
| Sewer Emergency Repairs | C3AA404 | 2,018 | 413 | 400 | 450 | 450 | 450 | 461 | 494 | 5,136 |
| Sewer Full Line Replacements | C300488 | 11,889 | 4,309 | 1,887 | 1,744 | 1,855 | 2,000 | 4,010 | 2,500 | 30,194 |
| Sewer Rehabilitation - Placeholder | C304401 | 0 | 0 | 400 | 400 | 400 | 400 | 400 | 400 | 2,400 |
| Wastewater Rehabilitation Project Evaluation | C3AA401 | 855 | 86 | 88 | 91 | 94 | 94 | 97 | 100 | 1,505 |
| Sewer Rehabilitation Total | | 33,692 | 9,982 | 9,692 | 9,598 | 9,750 | 10,125 | 12,834 | 11,494 | 107,167 |

**Amounts in thousands of dollars*

SPU - Drainage & Wastewater

Project Summary

| Program/Project | Project ID | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|--|------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Shared Cost Projects (DWF) | | | | | | | | | | |
| 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 | 164 | 148 | 148 | 148 | 0 | 0 | 646 |
| Seattle Monorail Project - Wastewater | C33NW210 | 3 | 36 | 164 | 148 | 148 | 148 | 0 | 0 | 647 |
| 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 |
| Shared Cost Projects (DWF) Total | | 2,862 | 3,661 | 3,320 | 3,377 | 4,433 | 3,960 | 1,758 | 1,700 | 25,071 |
| Department Total | | 94,998 | 44,799 | 37,155 | 34,777 | 35,605 | 38,370 | 41,600 | 40,196 | 367,500 |

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

**Amounts in thousands of dollars*

Fund Source Summary

| Funding Source | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| SPU Drainage and Wastewater Fund | 94,998 | 44,799 | 37,155 | 34,777 | 35,605 | 38,370 | 41,600 | 40,196 | 367,500 |
| Department Total | 94,998 | 44,799 | 37,155 | 34,777 | 35,605 | 38,370 | 41,600 | 40,196 | 367,500 |

Note: Additional allocations for the SPU Drainage and Wastewater Fund 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 |
| O&M Costs (Savings) | | | 0 | 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 |
| O&M Costs (Savings) | | | 0 | 1 | 1 | 1 | 1 | 1 | 5 |

1st Ave. S Salmon Habitat

Program: Protection of Beneficial Uses **Start Date:** 1st Quarter 2003
Type: New Facility **End Date:** 4th Quarter 2006
Project ID: C333303

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | 11 | 11 | 22 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| O&M Costs (Savings) | | | 0 | 0 | 3 | 3 | 3 | 3 | 12 |

3511 S Dearborn St. - Sewer Rehabilitation

Program: Sewer Rehabilitation
Type: Rehabilitation or Restoration
Project ID: C301412

Start Date: 1st Quarter 2001
End Date: 3rd Quarter 2003

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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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

Program: Flood Control and Local Drainage
Type: New Facility
Project ID: C301315

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

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 |
| O&M Costs (Savings) | | | 0 | 5 | 5 | 5 | 5 | 5 | 25 |

*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 |
| O&M Costs (Savings) | | | 0 | 8 | 8 | 8 | 8 | 8 | 40 |

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 |
| O&M Costs (Savings) | | | 0 | 4 | 4 | 4 | 4 | 4 | 20 |

*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.

| | 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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

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 storm water 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 storm water 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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 9 | 9 | 9 | 27 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*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 storm water and Combined Sewer Overflow (CSO) discharges, and to improve downstream water quality. 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.

| | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|----------------------------------|-----|------|------|------|------|------|------|------|-------|
| SPU Drainage and Wastewater Fund | 91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91 |
| O&M Costs (Savings) | | | 0 | 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 |
| O&M Costs (Savings) | | | N/C | N/C | 2 | 2 | 2 | 2 | 8 |

*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 |
| O&M Costs (Savings) | | | 0 | 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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

Combined Sewer Overflow - Placeholder

Program: Combined Sewer Overflow **Start Date:** Ongoing
Type: New Facility **End Date:** Ongoing
Project ID: C304101

Location: Various

This project provides funding for any emerging project that may develop during the year and that is not specifically identified in the CIP. New projects developed from these funds are reviewed and approved by a capital planning committee consisting of relevant SPU project and finance staff. The committee reviews expenditures and prioritizes projects for the entire program on a monthly basis. 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 | 250 | 0 | 0 | 0 | 0 | 4,235 | 4,485 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

Creekside Erosion Control

Program: Protection of Beneficial Uses
Type: Improved Facility
Project ID: C300311

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

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 1 | 1 | 1 | 1 | 4 |

CSO Modeling and Assessment

Program: Combined Sewer Overflow
Type: Rehabilitation or Restoration
Project ID: C399101

Start Date: 1st Quarter 1999
End Date: Ongoing

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

CSO Monitoring Installation

Program: Combined Sewer Overflow
Type: Improved Facility
Project ID: C3AA108

Start Date: 1st Quarter 1999
End Date: 3rd Quarter 2004

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 315 | 315 | 315 | 315 | 315 | 1,575 |

*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.

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

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

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 82 | 82 | 82 | 82 | 82 | 410 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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 | 100 | 150 | 150 | 150 | 150 | 150 | 1,995 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

Duwamish Sediment Remediation

Program: Habitat and Sediments **Start Date:** 4th Quarter 2000
Type: Rehabilitation or Restoration **End Date:** 4th Quarter 2007
Project ID: C300412

Location: Lower Duwamish Waterway

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

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

| | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|----------------------------------|-----|------|------|------|------|------|------|------|-------|
| SPU Drainage and Wastewater Fund | 374 | 359 | 439 | 469 | 954 | 872 | 0 | 0 | 3,467 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 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 |
| O&M Costs (Savings) | | | N/C | 4 | 4 | 4 | 4 | 4 | 20 |

*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 |
| O&M Costs (Savings) | | | N/C | 4 | 4 | 4 | 4 | 4 | 20 |

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

E Boston Terrace Project

Program: Public Asset Protection **Start Date:** 1st Quarter 2001
Type: New Facility **End Date:** 4th Quarter 2004
Project ID: C300320

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 |
| O&M Costs (Savings) | | | 0 | 0 | 6 | 6 | 6 | 6 | 24 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

Facility Improvements (Drainage & Wastewater Fund)

Program: Shared Cost Projects (DWF) **Start Date:** 1st Quarter 2003
Type: Improved Facility **End Date:** 4th Quarter 2004
Project ID: C502010
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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

Fairview Ave. N Drainage Assessment

Program: Flood Control and Local Drainage **Start Date:** 3rd Quarter 2001
Type: Improved Facility **End Date:** 2nd Quarter 2004
Project ID: C300321
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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 1 | 1 | 1 | 1 | 4 |

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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

Flood Control & Local Drainage - Placeholder

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 any emerging project that may develop during the year and that is not specifically identified in the CIP. New projects developed from these funds are reviewed and approved by a capital planning committee. The committee reviews expenditures for the entire program monthly and establishes priorities among projects. 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 | 507 | 864 | 2,578 | 4,852 | 9,663 | 12,934 | 31,398 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

General Wastewater - Placeholder

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

Location: Citywide

This is a placeholder for providing spot improvements to small-capacity sewer systems throughout Seattle, as well as any 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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | 8 | 8 | 16 |

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

Habitat & Sediments - Placeholder

Program: Habitat and Sediments **Start Date:** Ongoing
Type: New Facility **End Date:** Ongoing
Project ID: C304501
Location: Various

This project provides funding for any emerging project that may develop during the year and that is not specifically identified in the CIP. New projects that are developed from these funds are reviewed and approved by a capital planning committee. The committee reviews expenditures for the entire program monthly and establishes priorities among projects. 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 | 30 | 0 | 0 | 0 | 0 | 0 | 30 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | 3 | 3 | 3 | 9 |

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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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 2-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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| O&M Costs (Savings) | | | 0 | 0 | 45 | 45 | 45 | 45 | 180 |

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 storm water 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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 3 | 3 | 3 | 9 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 (S 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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Landslide Prone Area Program - Placeholder

Program: Public Asset Protection **Start Date:** 1st Quarter 1999
Type: Improved 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 | 287 | 832 | 500 | 500 | 900 | 500 | 1,000 | 4,519 |
| <i>O&M Costs (Savings)</i> | | | 6 | 8 | 8 | 8 | 8 | 8 | 46 |

*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 |
| O&M Costs (Savings) | | | 0 | 3 | 3 | 3 | 3 | 3 | 15 |

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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 3 | 3 | 3 | 9 |

*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 |
| O&M Costs (Savings) | | | 0 | 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 |
| O&M Costs (Savings) | | | 0 | 0 | 10 | 10 | 10 | 10 | 40 |

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | 6 | 6 | 6 | 6 | 24 |

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 2 | 2 | 2 | 2 | 2 | 10 |

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 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 **Start Date:** 3rd Quarter 2002
Type: New Facility **End Date:** 4th Quarter 2007
Project ID: C333205

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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

Mobility Improvement

Program: Other Drainage **Start Date:** 1st Quarter 2003
Type: Improved Facility **End Date:** 4th Quarter 2004
Project ID: C33NW383

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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

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 |
| O&M Costs (Savings) | | | N/C | N/C | 1 | 1 | 1 | 1 | 4 |

*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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

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.

| | 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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | 4 | 4 | 4 | 12 |

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.

| | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|----------------------------------|-----|------|------|------|------|------|------|------|-------|
| SPU Drainage and Wastewater Fund | 0 | 92 | 0 | 650 | 650 | 650 | 620 | 600 | 3,262 |
| <i>O&M Costs (Savings)</i> | | | N/C | 32 | 32 | 32 | 32 | 32 | 160 |

*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-ways 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-ways. 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 |
| O&M Costs (Savings) | | | N/C | N/C | 16 | 16 | 16 | 16 | 64 |

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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 7 | 7 | 7 | 21 |

*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 |
| O&M Costs (Savings) | | | 0 | 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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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

Program: Flood Control and Local Drainage

Start Date: 1st Quarter 2001

Type: Improved Facility

End Date: 4th Quarter 2003

Project ID: C301314

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 |
| O&M Costs (Savings) | | | 0 | 4 | 4 | 4 | 4 | 4 | 20 |

Other Drainage - Placeholder

Program: Other Drainage

Start Date: Ongoing

Type: New Facility

End Date: Ongoing

Project ID: C343501

Location: Various

This project provides funding for any emerging project that develops during the year and that is not specifically identified in the CIP. New projects developed with these funds are reviewed and approved by a capital planning committee. The committee reviews expenditures for the entire program monthly and establishes priorities among projects. 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 | 221 | 0 | 0 | 0 | 0 | 25 | 246 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

Outfall Inspection - Drainage

Program: Flood Control and Local Drainage

Start Date: 1st Quarter 2002

Type: Rehabilitation or Restoration

End Date: 4th Quarter 2007

Project ID: C302304

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | 9 | 9 | 18 |

Pinehurst Natural Drainage System

Program: Flood Control and Local Drainage **Start Date:** 4th Quarter 2003
Type: New Facility **End Date:** TBD
Project ID: C333202

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.

| | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|----------------------------------|-----|------|------|------|------|------|------|------|-------|
| SPU Drainage and Wastewater Fund | 0 | 92 | 235 | 0 | 0 | 0 | 0 | 0 | 327 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | 15 | 15 | 15 | 45 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Point Sewer Pipe Repairs

Program: Sewer Rehabilitation
Type: Rehabilitation or Restoration
Project ID: C303401

Start Date: Ongoing
End Date: Ongoing

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Project Manager Guidebook - Drainage

Program: Shared Cost Projects (DWF)
Type: New Investment
Project ID: C301701D

Start Date: 1st Quarter 2001
End Date: 3rd Quarter 2004

Location: N/A

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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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

Location: N/A

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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Protection of Beneficial Uses - Placeholder

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 emerging projects that may develop during the year and that are not specifically identified in the CIP. New projects developed from these funds are reviewed and approved by a capital planning committee. The committee reviews expenditures for the entire program monthly and establishes priorities among projects. 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 | 741 | 0 | 0 | 0 | 0 | 0 | 741 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| O&M Costs (Savings) | | | 0 | 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 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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 7 | 7 | 7 | 21 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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

Location: N/A

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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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 | 164 | 148 | 148 | 148 | 0 | 0 | 646 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 | 164 | 148 | 148 | 148 | 0 | 0 | 647 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Sewer Emergency Repairs

Program: Sewer Rehabilitation **Start Date:** Ongoing
Type: Rehabilitation or Restoration **End Date:** Ongoing
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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

Sewer Full Line Replacements

Program: Sewer Rehabilitation **Start Date:** Ongoing
Type: Rehabilitation or Restoration **End Date:** Ongoing
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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Sewer Rehabilitation - Placeholder

Program: Sewer Rehabilitation **Start Date:** Ongoing
Type: New Facility **End Date:** Ongoing
Project ID: C304401

Location: Various

This project provides funding for any emerging projects that may develop during the year and that are not specifically identified in the CIP. New projects developed from these funds are reviewed and approved by a capital planning committee. The committee reviews expenditures for the entire program monthly and establishes priorities among projects. 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 | 400 | 400 | 400 | 400 | 400 | 400 | 2,400 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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 | 1,789 | 0 | 0 | 0 | 0 | 0 | 5,385 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 80 | 80 | 80 | 80 | 320 |

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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

South Park Water Quality Study

Program: Protection of Beneficial Uses
Type: New Facility
Project ID: C343304

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

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

Spokane St. Bridge Salmon Habitat

Program: Protection of Beneficial Uses
Type: Improved Facility
Project ID: C333305

Start Date: 1st Quarter 2003
End Date: On hold

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 |
| O&M Costs (Savings) | | | 0 | 0 | 1 | 1 | 1 | 1 | 4 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

SR 519 - Drainage Review

Program: Other Drainage

Start Date: 4th Quarter 2002

Type: New Facility

End Date: 4th Quarter 2004

Project ID: C33NW332

Location: SR 519

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

SW Jacobsen & Alaska Ave. SW Landslide Mitigation

Program: Public Asset Protection

Start Date: 3rd Quarter 2001

Type: New Facility

End Date: 4th Quarter 2004

Project ID: C301353

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 |
| O&M Costs (Savings) | | | 0 | 0 | 3 | 3 | 3 | 3 | 12 |

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.

| | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|----------------------------------|-------|------|------|------|------|------|------|------|-------|
| SPU Drainage and Wastewater Fund | 1,529 | 584 | 0 | 0 | 0 | 0 | 0 | 0 | 2,113 |
| O&M Costs (Savings) | | | 0 | 9 | 9 | 9 | 9 | 9 | 45 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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.

| | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|----------------------------------|-----|------|------|------|------|------|------|------|-------|
| SPU Drainage and Wastewater Fund | 37 | 100 | 361 | 250 | 200 | 0 | 0 | 0 | 948 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 0 | 4 | 4 | 8 |

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 |
| O&M Costs (Savings) | | | 0 | 1 | 1 | 1 | 1 | 1 | 5 |

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 a 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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 6 | 6 | 6 | 18 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| O&M Costs (Savings) | | | 0 | 6 | 6 | 6 | 6 | 6 | 30 |

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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 1 | 1 | 1 | 3 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 4 | 4 | 4 | 12 |

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 |
| O&M Costs (Savings) | | | 0 | 0 | 1 | 1 | 1 | 1 | 4 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

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.

| | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|----------------------------------|-----|------|------|------|------|------|------|------|-------|
| SPU Drainage and Wastewater Fund | 0 | 0 | 200 | 0 | 0 | 0 | 0 | 0 | 200 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

Thornton Creek Pond

Program: Protection of Beneficial Uses

Start Date: 4th Quarter 2002

Type: New Facility

End Date: 4th Quarter 2005

Project ID: C302331

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.

Council Bill 114551 (currently before the City Council) would 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. 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.

| | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|----------------------------------|-----|------|------|------|------|------|------|------|-------|
| SPU Drainage and Wastewater Fund | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

Wastewater Rehabilitation Project Evaluation

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

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 |
| <i>O&M Costs (Savings)</i> | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Water Reuse - Stormwater

Program: Other Drainage **Start Date:** 1st Quarter 2002
Type: New Facility **End Date:** 4th Quarter 2004
Project ID: C301302

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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

Water Reuse - Wastewater

Program: General Wastewater **Start Date:** 4th Quarter 2001
Type: New Facility **End Date:** 4th Quarter 2004
Project ID: C301203

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 |
| <i>O&M Costs (Savings)</i> | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*Amounts in thousands of dollars

SPU - Drainage & Wastewater

West Seattle Golf Course - Detention

Program: Protection of Beneficial Uses

Start Date: 1st Quarter 1999

Type: New Facility

End Date: 4th Quarter 2006

Project ID: C399307

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 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 0 | 3 | 3 | 6 |

Westlake Drainage

Program: Flood Control and Local Drainage

Start Date: 2nd Quarter 1995

Type: Improved Facility

End Date: 4th Quarter 2003

Project ID: C3AA328

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 |
| O&M Costs (Savings) | | | 0 | 31 | 31 | 31 | 31 | 31 | 155 |

Windermere Combined Sewer Overflow Storage

Program: Combined Sewer Overflow

Start Date: 1st Quarter 2003

Type: New Facility

End Date: 4th Quarter 2006

Project ID: C302103

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 |
| O&M Costs (Savings) | | | N/C | N/C | N/C | N/C | N/C | N/C | 0 |

*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.

| | LTD | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
|---|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| SPU Drainage and Wastewater Fund | 327 | 151 | 250 | 100 | 100 | 100 | 100 | 100 | 1,228 |
| O&M Costs (Savings) | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

*Amounts in thousands of dollars