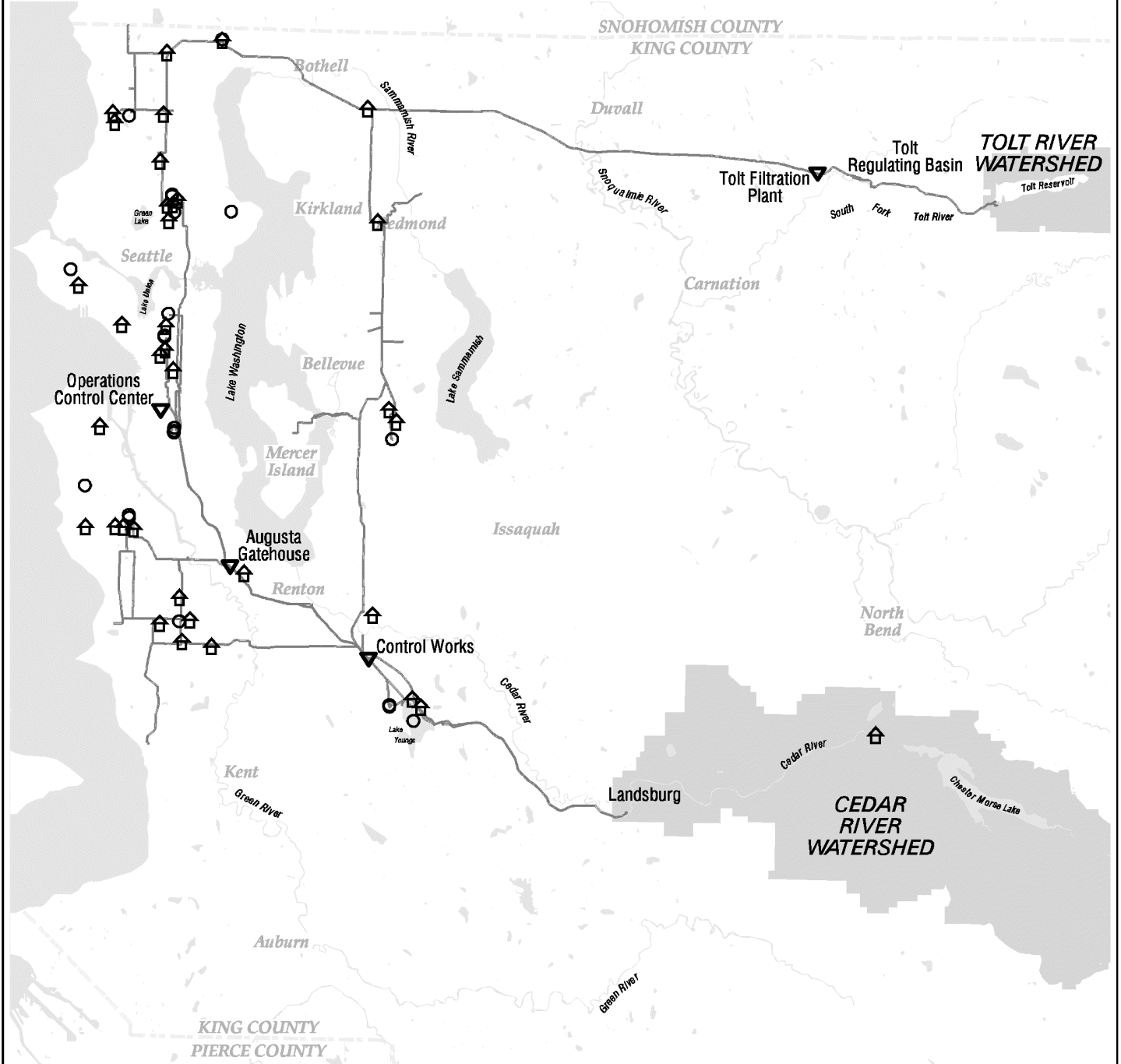







# **SPU - WATER**

# Seattle Public Utilities Water Division - Seattle Area Facilities



	Pump Station		Water Transmission Line
	Reservoir		Seattle Public Utilities Watershed
	Other Facility		



## Overview of Facilities and Programs

The City owns and Seattle Public Utilities operates a water system that serves a population of approximately 1.3 million people living in a 450-square mile area that extends from Edmonds to Des Moines and from Puget Sound to Lake Joy near Duvall. Seattle Public Utilities sells water directly in Seattle and immediately adjacent areas, and sells wholesale to nearly 30 suburban water utilities for distribution of water to their customers.

The water system is supplied by three sources. The largest source is the Cedar River Watershed, located south of North Bend and extending to the crest of the Cascade Mountains. The centerpiece of the 90,000-acre watershed is Chester Morse Lake. Water from this reservoir enters the Cedar River and is then fed into the Lake Youngs supply reservoir through a diversion structure at Landsburg. From Lake Youngs, the water enters the transmission pipeline system. The second source, the South Fork Tolt River supply, is located approximately 20 miles north of the Cedar River Watershed and is fed by a 13,400-acre watershed, which drains into the Tolt Reservoir. The third source, the Highline Well Field, is located south of the Seattle City limits near Riverton Heights Reservoir, and consists of three wells. Together these three sources provide an average annual yield of 158 million gallons per day (MGD) of drinking water.

The water system Capital Improvement Program (CIP) is prioritized to support the challenges Seattle Public Utilities faces on several fronts: increased water quality regulations that result in exploration of new treatment options; a decades-old infrastructure that requires rehabilitation and increased maintenance; and regional growth, which the Department must address both as a supplier of water and as a proponent of conservation.

## Highlights

- ◆ **Cedar Treatment Facility:** The new Cedar Treatment Facility improves the quality of water from the Cedar source, ensures compliance with drinking water regulations and the State Department of Health agreed order, and improves periodic taste and odor problems. The project includes a disinfection facility and clearwell; a new Lake Youngs intake and pump station; and improvements to existing water transmission lines. A total of \$110 million was included in the 2001-2006 Adopted CIP for the completion of this facility. The cost of the contract negotiated in 2001 was \$22 million less than was anticipated in that CIP.
- ◆ **Open Distribution System Reservoirs:** In compliance with water quality regulations, the City is planning to cover all nine open drinking-water reservoirs over the next 25 years. Hypochlorite treatment improvements are to be incorporated at five of the sites. During 2002-2007, Seattle Public Utilities plans to finish covering three reservoirs (Lincoln, Bitter Lake, and Lake Forest Park) and to begin covering three additional reservoirs (Beacon, Volunteer, and Myrtle). Approximately \$38 million is included in the six-year CIP for these projects.
- ◆ **Cedar River Watershed Habitat Conservation Plan (HCP):** To ensure high quality source water in the Cedar River Watershed, an extensive watershed management program has been developed. Major HCP components include investments in habitat protection, such as fisheries enhancement, the protection of stream banks and watercourses, and restoration of watershed lands. Approximately \$43 million is included in the 2002-2007 Adopted CIP for these projects.
- ◆ **Endangered Species Act:** Seattle Public Utilities is developing projects as part of the City's overall response to the listing of Chinook salmon under the Endangered Species Act. Approximately \$3 million is included in the 2002-2007 Adopted Water CIP for these new projects.

- ◆ **Nisqually Earthquake:** SPU anticipates spending approximately \$3.2 million between 2001 and 2002 on various infrastructure repairs resulting from the February 28, 2001 Nisqually Earthquake. SPU anticipates that the Federal Emergency Management Agency (FEMA) will reimburse 75% of project cost for eligible projects. Timing of FEMA reimbursement varies depending on the project size. Most small projects should receive reimbursement sometime in 2001 or early 2002. The large projects, with cost greater than \$50,600, receive reimbursement upon completion of the project in late 2002 or early 2003. While SPU expects to receive FEMA reimbursement in 2002 and 2003, the Department is managing projects based on its current funding capacity. SPU plans to use cash and existing bond funds to “float” the costs of the earthquake projects until reimbursement is received from FEMA.

### Anticipated Operating Expenses Associated with Capital Facilities Projects

In some projects the Department has identified operations and maintenance costs of zero, or has not calculated a number (N/C). In these cases, the cost impacts of the project are either insignificant or are offset by cost savings realized by other projects. Total operations and maintenance costs of approximately \$1.9 million are included in the Department's 2002 Adopted Budget. Projects with operating costs in 2002 include the following:

- ◆ **Cedar River Watershed Education Center:** This project constructs a regional center for environmental education at the entrance to the Cedar River Watershed. The 9,868 square foot facility includes an interpretive hall with an interactive exhibit, an auditorium with a kitchen and meeting area that is available for conferences and private rentals, a learning laboratory for school and family programs, a heritage research library, and archival storage. The integrated landscape reflects the varied plant communities of the watershed. Accessible trails and the relocated Cedar Falls Road connect the Center to the Rattlesnake Lake Recreation Area and three regional trail systems. The estimated annual cost of running the Education Center is \$149,000.
- ◆ **Tolt Treatment Facility:** This project provides for the design and construction of a 120 million gallon per day capacity treatment facility on the Tolt River. The Tolt Filtration Plant ensures that the Tolt water supply meets all current and reasonably anticipated drinking water quality regulations, and improves the reliability of Seattle Public Utilities' overall water supply system. Seattle Public Utilities is currently implementing a design-build-operate approach for the completion of the design, construction, and long term operation of the plant. The estimated annual cost of running the plant in 2002 is \$1.6 million.

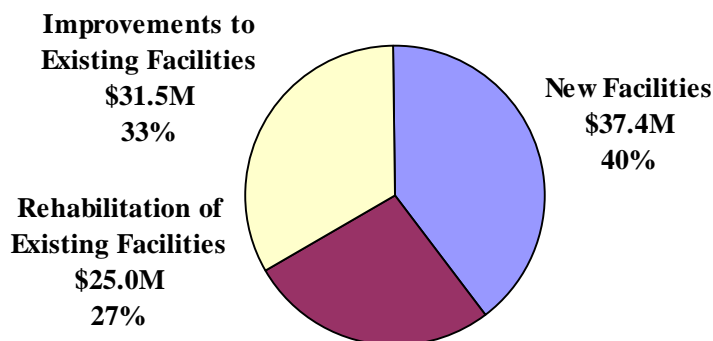
### Project Selection Process

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

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

The following chart shows how the Seattle Public Utilities’ 2002-2007 Adopted Water CIP allocates funding to these types of projects:

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



Seattle Public Utilities used a comprehensive approach to develop the 2002-2007 Capital Improvement Program. The Department encouraged wide staff participation throughout the process. The process included the following steps:

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

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

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

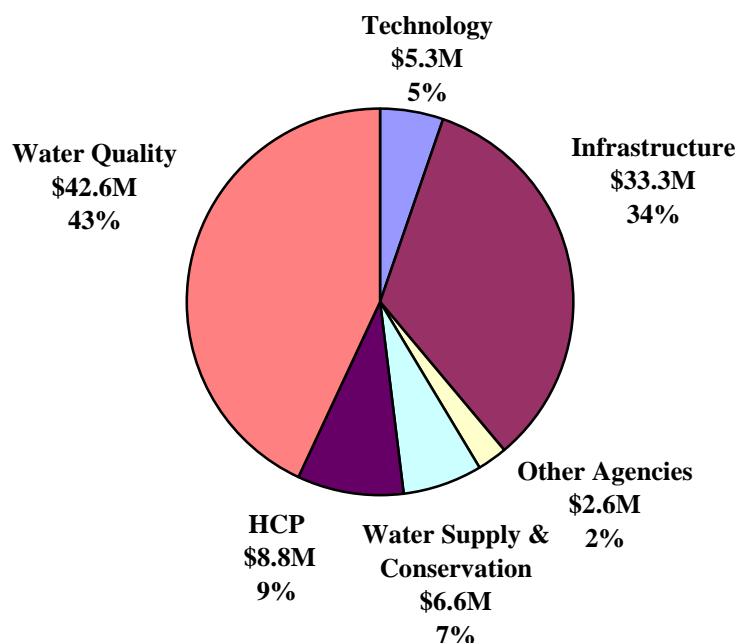
**Program Category Summaries**

The Water CIP allocates \$454 million during the next six-year period. The CIP is comprised of six program categories, which are shown in the following chart and summarized below. A detailed listing of all programs for

## SPU – WATER

the Water CIP follows this overview. Water-supported technology projects are shown grouped with other technology projects following the Department's three CIP sections

### 2002 SPU Water Adopted CIP by Program Category



**Infrastructure:** This program repairs and upgrades the City's water lines, pump stations, and other facilities. Included in this program are projects for seismic upgrades to water tanks and pump stations, water main replacements, road and bridge improvements in the watersheds, and service renewals.

**Water Quality:** This program designs and constructs water treatment facilities and repairs, and upgrades water reservoirs. Included in this program are projects for the treatment facilities on the Cedar River, and reservoir covering projects for the Lincoln, Bitter Lake, Lake Forest, Beacon, Volunteer, and Myrtle reservoirs.

**Water Supply/Conservation:** This program repairs and upgrades water transmission pipelines and promotes residential and commercial water conservation. Included in this program are substantial improvements to the Tolt II Pipeline. Also included are conservation programs designed to reduce water demand by one percent per year, and projects in response to the Endangered Species Act listing of Chinook salmon.

**Habitat Conservation Plan:** This program includes projects directly related to the Cedar River Watershed Habitat Conservation Plan. Projects are grouped into eight areas of focus: road improvements and decommissioning; stream and riparian restoration; upland forest restoration; Landsburg fish passage improvements; Cedar sockeye hatchery; Ballard Locks improvements; downstream fish habitat; and Cedar permanent dead storage evaluation.

**Other Agencies:** This program designs and constructs capital improvements for other agencies, or in response to other agencies' projects, usually on a reimbursement basis.

**Technology:** This program makes use of recent technology advances to increase efficiency and productivity. Included in this program is an upgrade to the water Supervisory Control and Data Acquisition system that is used to monitor and control the City's water system. Water-supported technology projects are shown grouped with other technology projects following the Department's three CIP sections.

# SPU - WATER

## Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
<b>Habitat Conservation Program</b>										
Ballard Locks Improvements	WFHCP6	0	320	201	142	135	1,207	210	0	<b>2,215</b>
Cedar Sockeye Hatchery	WFHCP5	0	676	896	854	5,066	5,002	173	460	<b>13,127</b>
Dead Storage Evaluation	WFHCP8	6	124	331	542	336	34	468	0	<b>1,841</b>
Downstream Fish Habitat and Restoration	WFHCP7	0	753	1,209	917	2,482	764	0	0	<b>6,125</b>
Landsburg Fish Passage Improvements	WFHCP4	5	701	3,873	3,785	153	0	0	91	<b>8,608</b>
Road Improvements/Decommissioning	WFHCP1	0	844	864	775	795	815	605	1,136	<b>5,834</b>
Stream and Riparian Restoration	WFHCP2	0	699	709	720	737	756	775	980	<b>5,376</b>
Upland Forest Restoration	WFHCP3	0	571	672	690	706	725	743	922	<b>5,029</b>
<b>Habitat Conservation Program Total</b>		<b>11</b>	<b>4,688</b>	<b>8,755</b>	<b>8,425</b>	<b>10,410</b>	<b>9,303</b>	<b>2,974</b>	<b>3,589</b>	<b>48,155</b>
<b>Infrastructure</b>										
Augusta Gatehouse Rehabilitation	C197004	4	0	0	59	255	156	0	0	<b>474</b>
Cathodic Protection Phase VI	WFNEW112	120	105	560	0	0	0	0	0	<b>785</b>
Cathodic Protection Phase VII	WFNEW120	0	0	190	644	220	677	231	0	<b>1,962</b>
Cedar Falls Backup Fire Suppression System	WFNEW440	0	170	478	0	0	0	0	0	<b>648</b>
Cedar Falls Railroad Hazardous Material Remediation	C100078	86	50	50	54	220	0	0	0	<b>460</b>
Cedar Falls Storage Building Construction	C194019	262	0	0	0	0	0	1,723	0	<b>1,985</b>
Cedar Moraine Improvements	C197009	221	192	194	107	110	113	0	0	<b>937</b>
Cedar River Pipeline 2 - Replacement of Portion	WFNEW122	0	0	258	268	5,503	0	0	0	<b>6,029</b>
Cedar River Watershed Bridge Replacement, Phase 10	WFNEW024	0	0	0	0	0	135	1,126	0	<b>1,261</b>

\*Amounts in thousands of dollars



## Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
<b>Infrastructure</b>										
Cedar River Watershed Bridge Replacement, Phase 12	WFNEW0 27	0	0	0	0	0	0	463	0	<b>463</b>
Cedar River Watershed Bridge Replacement, Phase 8	C199067	1	100	702	0	0	0	0	0	<b>803</b>
Cedar River Watershed Bridge Replacement, Phase 9	WFNEW0 23	71	0	0	0	78	812	0	0	<b>961</b>
Cedar River Watershed Education Center	C193003	4,048	2,246	5	0	0	0	0	0	<b>6,299</b>
Cedar River Watershed Headquarters Facilities Improvements	C100051	0	50	50	54	55	56	58	0	<b>323</b>
Cedar River Watershed Road Improvements- Non HCP	C191001	6,496	754	772	698	842	884	930	0	<b>11,376</b>
Distribution System Fireflow & Pressure Improvements	WFNEW4 20	0	0	0	537	550	2,256	11,563	0	<b>14,906</b>
Distribution System In-Line Gate Valves Replacement	C199012	145	94	94	75	77	79	81	73	<b>718</b>
Earthquake Repairs - Water Fund CIP	C1123	0	0	1,200	0	0	0	0	0	<b>1,200</b>
Group Health Fire Flow Improvement	C199076	850	13	0	0	0	0	0	0	<b>863</b>
Heavy Equipment Purchases - Water	C199068	1,296	1,535	1,810	1,126	2,309	1,780	2,657	2,662	<b>15,175</b>
Holly Park Redevelopment Phase III - Watermain Extension	WFNEW3 90	275	0	0	0	0	310	0	0	<b>585</b>
Honey Creek Drain Pipe Improvements	C196020	184	805	65	0	0	0	0	0	<b>1,054</b>
Hydrant Replacement & Relocation Program	C1110	1,435	240	245	242	248	254	260	272	<b>3,196</b>
In-town Reservoirs Dam Safety Improvements	WFNEW3 05	0	0	0	0	0	45	58	0	<b>103</b>
Lake Youngs Bypass Number Four Rehabilitation	WFNEW3 15	0	883	260	0	0	0	0	0	<b>1,143</b>

\*Amounts in thousands of dollars

# SPU - WATER

## Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
<b>Infrastructure</b>										
Lake Youngs Outlet Dam Rehabilitation	WFNEW380	0	0	4	91	187	0	0	0	282
Lake Youngs Outlet Dam Warning System	C101006	0	58	132	134	0	0	0	0	324
Landsburg Dam Emergency Spillway Improvement	WFNEW013	0	0	0	161	385	451	4,625	0	5,622
Landsburg Dam Safety Improvements	C198011	0	15	14	0	0	0	0	0	29
Maple Leaf Gatehouse Pipe Refurbishing	C195001	5	36	382	409	0	0	0	0	832
Mercer Island 30" Supply Line Improvements	WFNEW430	0	0	0	0	0	113	463	0	576
Metering: Demand Metering Improvements	WFNEW255	0	78	78	32	33	20	0	0	241
Metering: Direct Service Meter Replacement	C1108	5,122	757	1,456	1,563	1,831	1,877	1,924	1,815	16,345
Metering: New Purveyor Meter Program	C1121	0	168	215	215	220	226	231	242	1,517
Metering: Purveyor Meter Replacement Program	C1107	434	605	298	344	352	361	370	387	3,151
Metering: System Meter Replacement	C1TT006	151	50	50	107	0	0	0	0	358
N/NE 80th Street Feeder Rehabilitation	C196022	52	143	1,364	2,577	0	0	0	0	4,136
Painting Program: Beverly Park Tank	WFNEW116	0	0	0	0	0	142	267	0	409
Painting Program: Maple Leaf Tank	WFNEW117	0	0	0	0	0	0	29	0	29
Painting Program: Myrtle Tank	WFNEW110	76	0	0	135	265	0	0	0	476
Painting Program: Richmond Highland I and II	WFNEW115	0	0	0	109	61	1,411	10	0	1,591
Pump Station - Maple Leaf #2	C1AA003	653	0	0	0	0	0	578	0	1,231
Pump Station - Phinney Ridge	C1AA004	688	223	2,106	1,287	0	0	0	0	4,304
Pump Station - Queen Anne	C1AA005	1,414	0	0	687	2,421	1,128	0	0	5,650

\*Amounts in thousands of dollars

## Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
<b>Infrastructure</b>										
Pump Station Improvements - Install Station Motors	C199052	92	50	50	54	55	0	0	0	<b>301</b>
Replace Air Valve Chambers	C199060	187	64	126	129	132	135	139	145	<b>1,057</b>
Seismic Upgrade and Painting: Barton Standpipe	C194001	186	20	414	0	0	0	0	0	<b>620</b>
Seismic Upgrade and Painting: Foy Standpipe	WFNEW480	207	41	697	5	0	0	0	0	<b>950</b>
Seismic Upgrade and Painting: Woodland Park	C194002	176	36	294	0	0	0	0	0	<b>506</b>
Seismic Upgrade: Beverly Park Tank	C194008	143	0	0	65	770	661	12	0	<b>1,651</b>
Seismic Upgrade: Cedar River Pipeline at Ginger Creek	WFNEW300	5,267	0	239	406	0	0	0	0	<b>5,912</b>
Seismic Upgrade: Landsburg Tank	C194005	65	0	0	0	0	11	231	0	<b>307</b>
Seismic Upgrade: Maple Leaf Tank	C194007	166	0	128	515	11	0	0	0	<b>820</b>
Seismic Upgrade: Myrtle Tanks #1 and #2	C194006	2,614	360	1,996	216	0	0	0	0	<b>5,186</b>
Seismic Upgrade: Pipeline Backbone System	C1102	1,942	735	4,174	537	6,053	564	6,360	0	<b>20,365</b>
Seismic Upgrade: Pump Station Building 6-B	C194012	77	0	0	143	366	214	12	0	<b>812</b>
Seismic Upgrade: Pump Station Building 6-C	C194013	47	0	0	0	0	180	488	0	<b>715</b>
Seismic Upgrade: Queen Anne Replacement #1 and #2	C194004	751	157	461	2,829	0	0	0	0	<b>4,198</b>
Seismic Upgrade: Volunteer Park Standpipe	C194009	204	0	0	0	0	144	199	0	<b>547</b>
Seismic Upgrade: West Seattle Pipeline	C197034	74	261	266	0	0	0	0	0	<b>601</b>
Service Renewals and Retirements Program	C1109	3,000	3,062	3,088	3,299	3,381	3,466	3,552	4,961	<b>27,809</b>
Service Renewals: Address Customer Requested Renewals	C121004	130	113	114	107	110	113	116	0	<b>803</b>

\*Amounts in thousands of dollars

# SPU - WATER

## Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
<b>Infrastructure</b>										
Snoqualmie River Bank Stabilization	WFNEW019	45	15	32	487	0	0	0	0	<b>579</b>
System Dewatering Program	C1105	847	300	740	794	814	1,272	1,304	1,210	<b>7,281</b>
Tank Site Remediation Program	C1114	681	500	501	537	1,101	1,128	1,156	0	<b>5,604</b>
Taps Program - New (Installation)	C1113	15,356	2,798	2,835	2,684	2,751	3,118	3,196	3,344	<b>36,082</b>
Tolt Dam Safety Improvements	C198002	354	871	317	62	0	0	0	0	<b>1,604</b>
Tolt Instrument and Warning System Upgrade	C1AA012	1,803	50	25	27	28	28	29	0	<b>1,990</b>
Tolt Pipeline I, Phase IIIB	C199003	25	111	0	0	110	3,666	0	0	<b>3,912</b>
Tolt Pipeline II, Phase IV	C194029	8,806	9,454	48	0	0	0	0	0	<b>18,308</b>
Tolt Pipeline II, Phase VI-B	WFNEW118	0	0	0	107	550	632	0	0	<b>1,289</b>
Tolt Pipeline II, Phases II and III	C1AA010	63,282	1,470	63	0	0	0	0	0	<b>64,815</b>
Tolt River Watershed Bridge Replacement Phase 2	C193004	49	0	0	0	0	305	0	0	<b>354</b>
Tolt River Watershed Bridge Replacement Phase 3	C197029	0	0	0	0	0	90	896	0	<b>986</b>
Tolt River Watershed Road Improvement Program	C196007	1,188	180	180	215	198	124	0	0	<b>2,085</b>
Transmission Pipeline Analysis	C101043	0	340	346	301	308	316	324	0	<b>1,935</b>
Volunteer Gatehouse Re-Roofing and Repairs	WFNEW335	0	0	0	0	0	0	116	0	<b>116</b>
Walsh Lake Ditch Phase III	WFNEW206	77	132	133	145	55	0	0	0	<b>542</b>
Watermain Extension Program	C153000	4,214	901	833	805	825	846	867	0	<b>9,291</b>
Watermain Rehabilitation Planning and Inspection	C115000	448	497	506	429	0	0	0	0	<b>1,880</b>
Watermain Rehabilitation Program	WFNEW455	0	0	0	0	4,953	5,076	5,203	5,445	<b>20,677</b>

*\*Amounts in thousands of dollars*

## Project Summary

<b>Program/Project</b>	<b>Project ID</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
<b>Infrastructure</b>										
Watermain Replacement Program	C1104	9,114	1,598	1,614	1,611	0	0	0	0	<b>13,937</b>
West Seattle Inlet Pipe Rehabilitation	C197016	222	310	17	0	0	0	0	0	<b>549</b>
<b>Infrastructure Total</b>		<b>145,928</b>	<b>33,796</b>	<b>33,269</b>	<b>28,224</b>	<b>38,793</b>	<b>35,375</b>	<b>51,847</b>	<b>20,556</b>	<b>387,788</b>
<b>Other Agencies</b>										
Cable/Fiber Optics Projects	WFNEW2 95	0	25	26	26	26	27	28	0	<b>158</b>
Cedar River Watershed Northridge Trail	WFNEW2 60	0	15	83	88	0	0	0	0	<b>186</b>
Comprehensive Water System Plan	C199022	1,060	95	0	0	0	564	578	0	<b>2,297</b>
Denny Combined Sewer Overflow	C145002	16	111	140	86	11	0	0	0	<b>364</b>
Henderson Combined Sewer Overflow	C199069	6	46	21	11	0	0	0	0	<b>84</b>
Holgate/Amtrak Water Relocation	C115068	59	440	0	0	0	0	0	0	<b>499</b>
Marine View/Des Moines Creek Transmission Line Relocation	C197021	372	278	0	0	0	0	0	0	<b>650</b>
Other Agency - Multiple Utility Relocation Program	C1201	5,191	650	650	752	770	846	867	908	<b>10,634</b>
Port of Seattle Terminal 18	C197023	782	400	10	0	0	0	0	0	<b>1,192</b>
Renton Franchise/Line Valve along Cedar River Pipeline	WFNEW0 11	0	103	164	376	440	11	0	0	<b>1,094</b>
SeaTac Third Runway Pipeline Relocation	C199075	80	94	470	55	91	15	0	0	<b>805</b>
Sound Transit - Water System Relocations and Replacements	WFNEW1 19	378	151	604	644	660	564	347	424	<b>3,772</b>
South Lake Union Combined Sewer Overflow (CSO), Phase II	C3WF106	614	247	0	11	0	0	0	0	<b>872</b>

\*Amounts in thousands of dollars

# SPU - WATER

## Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
<b>Other Agencies</b>										
South Lake Union Neighborhood Improvements	WFNEW3 25	0	4	5	0	0	0	0	0	9
Spot Sewer Improvement - Water Utility Impacts	WFNEW3 40	0	49	50	59	61	0	0	0	219
University Way NE - The Ave	C101037	0	448	413	11	0	0	0	0	872
<b>Other Agencies Total</b>		<b>8,558</b>	<b>3,156</b>	<b>2,636</b>	<b>2,119</b>	<b>2,059</b>	<b>2,027</b>	<b>1,820</b>	<b>1,332</b>	<b>23,707</b>
<b>Water Quality</b>										
Cedar River Watershed Boundary Land Acquisition	C198008	0	165	103	0	110	113	116	0	607
Cedar Treatment Facility	C196015	11,092	5,221	29,213	42,574	10,522	118	0	0	98,740
Lake Youngs Management/Protection Plan	WFNEW2 85	0	25	37	208	12	0	0	0	282
Lake Youngs Perimeter Drain	C197013	6	139	180	0	0	0	0	0	325
Lake Youngs Perimeter Drains Flow Monitoring	WFNEW2 90	0	0	31	24	0	0	0	0	55
Landsburg Treatment Building	WFNEW2 70	0	0	0	0	0	0	116	0	116
Reservoir Covering: Beacon	WFNEW3 50	0	0	0	0	0	1,749	10,580	0	12,329
Reservoir Covering: Bitter Lake	C196010	703	3,167	152	0	0	0	0	0	4,022
Reservoir Covering: Lake Forest Park	C196011	7,124	225	8,741	27	0	0	0	0	16,117
Reservoir Covering: Lincoln	C196012	4,651	4,842	3,150	0	0	0	0	0	12,643
Reservoir Covering: Myrtle	WFNEW3 60	0	0	0	0	0	338	1,804	0	2,142
Reservoir Covering: Volunteer	WFNEW3 55	0	0	515	1,074	3,302	6,881	0	0	11,772
Reservoir Fence Improvements: Myrtle-Roosevelt-Maple Leaf	WFNEW2 80	0	0	270	0	0	0	0	0	270
Reservoir Fence Relocation/Replacement: Lake Forest Park	WFNEW3 95	0	0	208	0	0	0	0	0	208

*\*Amounts in thousands of dollars*

## Project Summary

Program/Project	Project ID	LTD	2001	2002	2003	2004	2005	2006	2007	Total
<b>Water Quality</b>										
Tolt Treatment Decommissioning	WFNEW3 45	0	0	0	187	0	0	0	0	187
<b>Water Quality Total</b>		<b>23,576</b>	<b>13,784</b>	<b>42,600</b>	<b>44,094</b>	<b>13,946</b>	<b>9,199</b>	<b>12,616</b>	<b>0</b>	<b>159,815</b>
<b>Water Supply/Conservation/ESA</b>										
Cedar Overflow Dike Flashboard Replacement	WFNEW4 00	0	15	52	268	0	0	0	0	335
ESA-Chinook Research & Monitoring	C101048	100	100	200	107	110	113	116	121	967
ESA-Snohomish River Basin Habitat Protection Program	C101003	200	360	361	387	396	406	416	436	2,962
Landsburg Improvements - Non- HCP	C199073	0	356	1,495	1,526	73	0	0	0	3,450
Morse Lake Pump Plant - Pipeline Number One Corrosion	WFNEW2 65	0	0	0	0	45	0	0	0	45
North Fork Tolt Diversion	C192004	130	3	3	3	3	3	3	0	148
One Percent a Year Conservation--Seattle & Regional	C199032	1,509	3,200	4,050	4,349	4,457	4,569	5,666	6,050	33,850
Reuse Program	C192006	1,101	50	483	483	0	0	0	0	2,117
Sockeye Mitigation: Non-HCP Interim Hatchery	C1AA013	4,971	153	5	0	0	0	0	0	5,129
Tolt Fisheries Mitigation	WFNEW3 85	0	0	0	0	111	0	0	0	111
<b>Water Supply/Conservation/ESA Total</b>		<b>8,011</b>	<b>4,237</b>	<b>6,649</b>	<b>7,123</b>	<b>5,195</b>	<b>5,091</b>	<b>6,201</b>	<b>6,607</b>	<b>49,114</b>
<b>Department Total</b>		<b>186,084</b>	<b>59,661</b>	<b>93,909</b>	<b>89,985</b>	<b>70,403</b>	<b>60,995</b>	<b>75,458</b>	<b>32,084</b>	<b>668,579</b>

\*Amounts in thousands of dollars

**Fund Source Summary**

<b>Funding Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	186,084	59,661	93,909	89,985	70,403	60,995	75,458	32,084	<b>668,579</b>
<b>Department Total</b>	<b>186,084</b>	<b>59,661</b>	<b>93,909</b>	<b>89,985</b>	<b>70,403</b>	<b>60,995</b>	<b>75,458</b>	<b>32,084</b>	<b>668,579</b>

*\*Amounts in thousands of dollars*



**Augusta Gatehouse Rehabilitation**

**Program:** Infrastructure **Start Date:** 1999 1st Quarter  
**Type:** Improved Facility **End Date:** 2005 3rd Quarter  
**Location:** BEACON AV S and S AUGUSTA ST **Project ID:** C197004  
**Urban Village:** Beacon Hill **Neighborhood District:** Southeast

This project installs new valves to allow remote control of the flows into and out of the West Seattle pipeline via Augusta Gatehouse. It also allows for control of the intertie of the Cedar River Pipes and the West Seattle Pipeline during earthquakes.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	4	0	0	59	255	156	0	0	474
<b>TOTAL FUNDS</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>59</b>	<b>255</b>	<b>156</b>	<b>0</b>	<b>0</b>	<b>474</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Ballard Locks Improvements**

**Program:** Habitat Conservation Program **Start Date:** 2000 1st Quarter  
**Type:** Improved Facility **End Date:** 2007 4th Quarter  
**Location:** 3015 NW 54TH ST **Project ID:** WFHCP6  
**Urban Village:** Ballard **Neighborhood District:** Ballard

This project is a sub-element of the Cedar River Habitat Conservation Plan and associated Cedar River Instream Flow Agreement. Improvements include the planning, design, and construction of freshwater conservation and smolt passage facilities at the Ballard Locks to improve fish passage and survival at the Locks. This project is part of a comprehensive instream flow management program for the Cedar River that protects the City's continued ability to divert adequate amounts of high quality water for regional use while protecting instream resources and the U.S. Army Corps of Engineers' ability to provide adequate flows for operating the Locks.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	320	201	142	135	1,207	210	0	2,215
<b>TOTAL FUNDS</b>	<b>0</b>	<b>320</b>	<b>201</b>	<b>142</b>	<b>135</b>	<b>1,207</b>	<b>210</b>	<b>0</b>	<b>2,215</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

# SPU - WATER

## Cable/Fiber Optics Projects

**Program:** Other Agencies **Start Date:** 2001 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Location:** Citywide **Project ID:** WFNEW295

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

This project enables SPU to respond to the numerous cable and fiber optic projects occurring in Seattle. Work includes project coordination, scheduling, design, and the relocation/replacement of water facilities that would be adversely impacted by construction and utility conflicts.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	25	26	26	26	27	28	0	158
<b>TOTAL FUNDS</b>	<b>0</b>	<b>25</b>	<b>26</b>	<b>26</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>0</b>	<b>158</b>
<i>O&amp;M Costs (Savings)</i>			0	1	1	1	1	1	5

## Cathodic Protection Phase VI

**Program:** Infrastructure **Start Date:** 2000 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2002 4th Quarter  
**Location:** Regional **Project ID:** WFNEW112

This project focuses on the portion of existing Tolt Pipeline Number One in the area around the Lake Forest Reservoir. This project makes the pipeline electrically continuous and installs cathodic protection, which shifts the electric potential of the pipeline so that normal corrosion processes of the steel cylinder and reinforcing rod are inhibited. This work is crucial to slow normal corrosion processes until pipeline rehabilitation or replacement is studied and recommendations are made in the years following completion of the parallel Tolt Pipeline II Phase IV.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	120	105	560	0	0	0	0	0	785
<b>TOTAL FUNDS</b>	<b>120</b>	<b>105</b>	<b>560</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>785</b>
<i>O&amp;M Costs (Savings)</i>			0	0	12	12	12	12	48

\*Amounts in thousands of dollars

**Cathodic Protection Phase VII**

<b>Program:</b> Infrastructure	<b>Start Date:</b> 2002 2nd Quarter
<b>Type:</b> Rehabilitation or Restoration	<b>End Date:</b> 2006 4th Quarter
<b>Location:</b> Landsburg and Lake Young	<b>Project ID:</b> WFNEW120

This project focuses on installation of cathodic protection for the existing Lake Youngs Supply Lines 4 and 5 (LYSL 4,5). The work was identified when LYSL 4 was replaced in 1992, and corrosive soils were encountered along the pipe alignment. This project makes the LYSL 5 pipeline electrically continuous and installs cathodic protection which shifts the electric potential of both pipelines so that normal corrosion processes of the steel cylinder and reinforcing rod are inhibited. Depending upon the coverage results of the installed system, additional anode bed installations may be handled in future phases of this project. This work provides additional life expectancy for both pipelines.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	190	644	220	677	231	0	1,962
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>190</b>	<b>644</b>	<b>220</b>	<b>677</b>	<b>231</b>	<b>0</b>	<b>1,962</b>
<i>O&amp;M Costs (Savings)</i>			0	7	12	12	12	12	55

**Cedar Falls Backup Fire Suppression System**

<b>Program:</b> Infrastructure	<b>Start Date:</b> 2000 3rd Quarter
<b>Type:</b> Rehabilitation or Restoration	<b>End Date:</b> 2002 4th Quarter
<b>Location:</b> Cedar Falls	<b>Project ID:</b> WFNEW440

This project provides an alternate water source to the Cedar Falls fire main. SPU can no longer rely on Seattle City Light's penstock supply.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	170	478	0	0	0	0	0	648
<b>TOTAL FUNDS</b>	<b>0</b>	<b>170</b>	<b>478</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>648</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

## Cedar Falls Railroad Hazardous Material Remediation

<b>Program:</b> Infrastructure	<b>Start Date:</b> 2000 3rd Quarter
<b>Type:</b> Rehabilitation or Restoration	<b>End Date:</b> 2004 4th Quarter
<b>Location:</b> Cedar Falls	<b>Project ID:</b> C100078

Phase I of this project assesses all possible impacts to the Cedar River because of railroad ties discarded by Burlington Northern along 12 miles of right-of-way near Landsburg. At the end of the study, the City is seeking a quit claim deed from Burlington Northern. Phase II is an environmental management and assessment of possible contamination of City property adjacent to the Cedar Falls railroad switch yard and depot site. (An earlier environmental assessment detected significant soil contamination of the railroad property). Future actions are determined once the assessments are completed.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	86	50	50	54	220	0	0	0	460
<b>TOTAL FUNDS</b>	<b>86</b>	<b>50</b>	<b>50</b>	<b>54</b>	<b>220</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>460</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

## Cedar Falls Storage Building Construction

<b>Program:</b> Infrastructure	<b>Start Date:</b> 1994 1st Quarter
<b>Type:</b> New Facility	<b>End Date:</b> 2006 4th Quarter
<b>Location:</b> Cedar Falls	<b>Project ID:</b> C194019

This project constructs a 10,000 square foot storage building at Cedar Falls to store spare pumps and related equipment for the Morse Lake floating pump stations. It also serves to store vehicles and equipment used by Watershed staff for road maintenance and forest management in the Cedar River Watershed. This project was developed from the Master Development Plan for Cedar Falls and is part of the Cedar River Watershed Infrastructure Improvements Program.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	262	0	0	0	0	0	1,723	0	1,985
<b>TOTAL FUNDS</b>	<b>262</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,723</b>	<b>0</b>	<b>1,985</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

\*Amounts in thousands of dollars

**Cedar Moraine Improvements**

<b>Program:</b> Infrastructure	<b>Start Date:</b> 1997 1st Quarter
<b>Type:</b> Rehabilitation or Restoration	<b>End Date:</b> 2005 4th Quarter
<b>Location:</b> Cedar Watershed	<b>Project ID:</b> C197009

Cedar Moraine is a porous, glacial deposit abutting Chester Morse Lake. In December 1918, during the initial filling of the reservoir, a massive landslide occurred as a result of high groundwater. Subsequently, a network of observation wells was installed so that the level of groundwater could be recorded. Over time, some of the wells became blocked. This project began in 1997 to evaluate the conditions of the network, provide rehabilitation, and recommend further improvements. Based on a 1999 dam safety study, the project focus is shifting slightly to improve monitoring capabilities along the northwest slopes of the moraine, and to drill additional wells.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	221	192	194	107	110	113	0	0	937
<b>TOTAL FUNDS</b>	<b>221</b>	<b>192</b>	<b>194</b>	<b>107</b>	<b>110</b>	<b>113</b>	<b>0</b>	<b>0</b>	<b>937</b>
<i>O&amp;M Costs (Savings)</i>			1	1	2	2	2	2	<b>10</b>

**Cedar Overflow Dike Flashboard Replacement**

<b>Program:</b> Water Supply/Conservation/ESA	<b>Start Date:</b> 2001 1st Quarter
<b>Type:</b> New Facility	<b>End Date:</b> 2003 2nd Quarter
<b>Location:</b> Cedar River Watershed	<b>Project ID:</b> WFNEW400

The flashboards at the overflow dike, which separates Morse Lake from the Masonry Pool, significantly reduce leakage to the groundwater from the reservoir system, thereby increasing the amount of water available to meet water supply and instream flow demands. The current flashboards cannot practically be removed and replaced each year, so they remain permanently in place. This project replaces the current wood plank flashboard system with a rubber dam that can be raised and lowered easily under a range of water levels. Improved flood control benefits of this project were assessed in the Masonry Dam Flood Operations Study, Phase I (1998).

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	15	52	268	0	0	0	0	335
<b>TOTAL FUNDS</b>	<b>0</b>	<b>15</b>	<b>52</b>	<b>268</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>335</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

\*Amounts in thousands of dollars

# SPU - WATER

## Cedar River Pipeline 2 - Replacement of Portion

**Program:** Infrastructure **Start Date:** 2002 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2004 4th Quarter  
**Location:** **Project ID:** WFNEW122  
 7TH AV NE and NE 47TH ST  
**Urban Village:** In more than one urban village **Neighborhood District:** In more than one district

This project replaces a severely corroded portion of an 88 year-old 42-inch riveted steel main. Timely replacement with a well-coated, cathodically protected, welded steel pipeline results in negligible risk of major property damage and personal liabilities associated with a major leak or pipeline failure. The limits of the replacement are determined during the planning phase of the project.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	258	268	5,503	0	0	0	6,029
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>258</b>	<b>268</b>	<b>5,503</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,029</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	5	5	5	15

## Cedar River Watershed Boundary Land Acquisition

**Program:** Water Quality **Start Date:** 2001 1st Quarter  
**Type:** New Facility **End Date:** 2006 4th Quarter  
**Location:** **Project ID:** C198008  
 Cedar River Watershed

This project involves efforts to protect water quality and valuable habitat at or near the boundary of the Cedar Watershed as necessary. This program may involve land exchanges as well as land purchases at or near the boundary.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	165	103	0	110	113	116	0	607
<b>TOTAL FUNDS</b>	<b>0</b>	<b>165</b>	<b>103</b>	<b>0</b>	<b>110</b>	<b>113</b>	<b>116</b>	<b>0</b>	<b>607</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Cedar River Watershed Bridge Replacement, Phase 10

**Program:** Infrastructure **Start Date:** 2005 2nd Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2006 4th Quarter  
**Location:** **Project ID:** WFNEW024  
 Cedar Watershed

This project replaces the deteriorating and failing Cedar 50 Road and Taylor Creek 51 Road bridges with permanent concrete structures.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	0	0	0	135	1,126	0	1,261
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>135</b>	<b>1,126</b>	<b>0</b>	<b>1,261</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

**Cedar River Watershed Bridge Replacement, Phase 12**

**Program:** Infrastructure **Start Date:** 2006 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2007 4th Quarter  
**Location:** Cedar Watershed **Project ID:** WFNEW027

This project cleans and paints the rusting Cedar River railroad bridges.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	0	0	0	0	463	0	463
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>463</b>	<b>0</b>	<b>463</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

**Cedar River Watershed Bridge Replacement, Phase 8**

**Program:** Infrastructure **Start Date:** 1999 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2002 4th Quarter  
**Location:** Cedar Watershed **Project ID:** C199067

This project replaces the deteriorating and failing Middle Fork Taylor Creek 60 Road Bridge with a permanent concrete structure.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	1	100	702	0	0	0	0	0	803
<b>TOTAL FUNDS</b>	<b>1</b>	<b>100</b>	<b>702</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>803</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

**Cedar River Watershed Bridge Replacement, Phase 9**

**Program:** Infrastructure **Start Date:** 2000 3rd Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2005 4th Quarter  
**Location:** Cedar Watershed **Project ID:** WFNEW023

This project replaces the deteriorating and failing Rex 300 Road and Tinkham Creek bridges with permanent concrete structures.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	71	0	0	0	78	812	0	0	961
<b>TOTAL FUNDS</b>	<b>71</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>78</b>	<b>812</b>	<b>0</b>	<b>0</b>	<b>961</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

*\*Amounts in thousands of dollars*

## Cedar River Watershed Education Center

**Program:** Infrastructure  
**Type:** New Facility  
**Location:**  
 Cedar Watershed

**Start Date:** 1994 1st Quarter  
**End Date:** 2002 4th Quarter  
**Project ID:** C193003

This project constructs a regional center for environmental education at the entrance to the Cedar River Watershed. The 9,868 square foot facility includes an interpretive hall with an interactive exhibit, an auditorium with a kitchen and meeting area that is available for conferences and private rentals, a learning laboratory for school and family programs, a heritage research library, and archival storage. The integrated landscape reflects varied plant communities of the watershed. Accessible trails and the relocated Cedar Falls Road connect the Center to the Rattlesnake Lake Recreation Area and three regional trail systems.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	4,048	2,246	5	0	0	0	0	0	6,299
<b>TOTAL FUNDS</b>	<b>4,048</b>	<b>2,246</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,299</b>
<i>O&amp;M Costs (Savings)</i>			149	149	149	149	149	149	<b>894</b>

## Cedar River Watershed Headquarters Facilities Improvements

**Program:** Infrastructure  
**Type:** Rehabilitation or Restoration  
**Location:**  
 Cedar Watershed

**Start Date:** 2000 2nd Quarter  
**End Date:** Ongoing  
**Project ID:** C100051

This project replaces leaky roofs, repairs plumbing, and paints existing facilities at Cedar Falls.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	0	50	50	54	55	56	58	0	323
<b>TOTAL FUNDS</b>	<b>0</b>	<b>50</b>	<b>50</b>	<b>54</b>	<b>55</b>	<b>56</b>	<b>58</b>	<b>0</b>	<b>323</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

\*Amounts in thousands of dollars



**Cedar River Watershed Northridge Trail**

<b>Program:</b> Other Agencies	<b>Start Date:</b> 2001 1st Quarter
<b>Type:</b> New Facility	<b>End Date:</b> 2003 4th Quarter
<b>Location:</b> Northern boundary of CRW	<b>Project ID:</b> WFNEW260

This project involves planning and implementation of an alternative trail connection along the northern ridge boundary of Cedar River Watershed. Planning, public process, construction, and management are done in cooperation with the Washington State Parks Department, the US Forest Service, other agencies, and adjacent landowners.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	0	15	83	88	0	0	0	0	186
<b>TOTAL FUNDS</b>	<b>0</b>	<b>15</b>	<b>83</b>	<b>88</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>186</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Cedar River Watershed Road Improvements-Non HCP**

<b>Program:</b> Infrastructure	<b>Start Date:</b> Ongoing
<b>Type:</b> Rehabilitation or Restoration	<b>End Date:</b> Ongoing
<b>Location:</b> Cedar Watershed	<b>Project ID:</b> C191001

The Cedar River Watershed contains over 615 miles of forest roads. This project funds major improvements (beyond routine maintenance) on roads designated as having long-term purpose for forest fire suppression, fish and wildlife management, forest management, security, and public education. Roads not deemed to be of long-term necessity are "deconstructed" by removing potentially unstable sidecast and fill material, constructing frequent waterbars, and re-establishing stream crossings. This work is designed to provide long-term stability, to approximate the drainage flows that existed prior to management activities, and to be complementary to road improvement and decommissioning projects included in the Habitat Conservation Plan (HCP). HCP commitment assumes these projects are to be completed.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	6,496	754	772	698	842	884	930	0	11,376
<b>TOTAL FUNDS</b>	<b>6,496</b>	<b>754</b>	<b>772</b>	<b>698</b>	<b>842</b>	<b>884</b>	<b>930</b>	<b>0</b>	<b>11,376</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

# SPU - WATER

## Cedar Sockeye Hatchery

**Program:** Habitat Conservation Program  
**Type:** New Facility  
**Location:**  
 Cedar River

**Start Date:** 2001 1st Quarter  
**End Date:** 2050 4th Quarter  
**Project ID:** WFHCP5

This project, a component of the Cedar River Habitat Conservation Plan, implements measures to mitigate impacts on sockeye salmon caused by the migration barrier formed by the Landsburg Diversion Dam. The project consists of a spring water supply, broodstock holding facilities, an incubation facility capable of producing 34 million "swim-up" fry, housing for the on-site hatchery manager, a broodstock collection trap in the lower river, and a fry acclimation facility. The project is expected to be an essential component in mid-Puget Sound salmon recovery efforts that are being developed in response to current and future inclusion of various salmonid fish species under the federal Endangered Species Act.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	676	896	854	5,066	5,002	173	460	13,127
<b>TOTAL FUNDS</b>	<b>0</b>	<b>676</b>	<b>896</b>	<b>854</b>	<b>5,066</b>	<b>5,002</b>	<b>173</b>	<b>460</b>	<b>13,127</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	379	387	391	<b>1,157</b>

## Cedar Treatment Facility

**Program:** Water Quality  
**Type:** New Facility  
**Location:**  
 Lake Youngs Reservoir

**Start Date:** 1996 1st Quarter  
**End Date:** 2005 2nd Quarter  
**Project ID:** C196015

This project develops and implements water treatment improvements on the Cedar River supply to improve water quality, ensure compliance with drinking water regulations, and improve the periodic taste and odor problems that occur on the Cedar source. Under this project, new ozone disinfecting facilities (compatible with filtration) are planned, designed, and constructed near the Lake Youngs Reservoir. SPU is utilizing a design-build-operate contracting method for this project, similar to that used for the new Tolt Water Treatment Facility.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	11,092	5,221	29,213	42,574	10,522	118	0	0	98,740
<b>TOTAL FUNDS</b>	<b>11,092</b>	<b>5,221</b>	<b>29,213</b>	<b>42,574</b>	<b>10,522</b>	<b>118</b>	<b>0</b>	<b>0</b>	<b>98,740</b>
<i>O&amp;M Costs (Savings)</i>			0	0	355	1,775	2,130	2,200	<b>6,460</b>

\*Amounts in thousands of dollars

**Comprehensive Water System Plan**

<b>Program:</b> Other Agencies	<b>Start Date:</b> 1999 1st Quarter
<b>Type:</b> Rehabilitation or Restoration	<b>End Date:</b> Ongoing
<b>Location:</b> Regional	<b>Project ID:</b> C199022
<b>Urban Village:</b> In more than one urban village	<b>Neighborhood District:</b> In more than one district

State regulations require water utilities to submit a new comprehensive water system plan every six years as a condition of state utility operating permit renewal. This project results in an environmental review and updated Comprehensive Water System Plan that is expected to gain city, county, and state agency approval in the Fall of 2001.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	1,060	95	0	0	0	564	578	0	2,297
<b>TOTAL FUNDS</b>	<b>1,060</b>	<b>95</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>564</b>	<b>578</b>	<b>0</b>	<b>2,297</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Dead Storage Evaluation**

<b>Program:</b> Habitat Conservation Program	<b>Start Date:</b> 2000 1st Quarter
<b>Type:</b> Improved Facility	<b>End Date:</b> 2006 4th Quarter
<b>Location:</b> Cedar River Watershed	<b>Project ID:</b> WFHCP8

This project is a component of the Cedar River Habitat Conservation Plan and evaluates alternatives to develop permanent access to the dead storage below the natural outlet in Chester Morse Lake. Currently, water can only be accessed by operating the Morse Lake temporary pumping plants, and is permitted only during water shortage emergencies. Project elements include environmental studies, engineering and water rights evaluations, cost estimates, yield analyses, negotiations over instream flow augmentation, and other studies. The environmental impact and mitigation study includes a literature search, an assessment of increased reservoir drawdown on fish, wildlife, and wetland vegetation over a three year period, observation of effects on ecology, and the design and implementation of any improvements found in the evaluation to be necessary.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	6	124	331	542	336	34	468	0	1,841
<b>TOTAL FUNDS</b>	<b>6</b>	<b>124</b>	<b>331</b>	<b>542</b>	<b>336</b>	<b>34</b>	<b>468</b>	<b>0</b>	<b>1,841</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

*\*Amounts in thousands of dollars*

# SPU - WATER

## Denny Combined Sewer Overflow

**Program:** Other Agencies **Start Date:** 1998 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2004 3rd Quarter  
**Location:** **Project ID:** C145002

DEXTER AV and ROY ST

**Urban Village:** South Lake Union

**Neighborhood District:** Not in a district

8TH AV N and REPUBLICAN ST

**Urban Village:** South Lake Union

**Neighborhood District:** Not in a district

The project relocates watermains due to the construction of Combined Sewer Overflow facilities by the City and King County near Myrtle Edwards Park.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	16	111	140	86	11	0	0	0	364
<b>TOTAL FUNDS</b>	<b>16</b>	<b>111</b>	<b>140</b>	<b>86</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>364</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Distribution System Fireflow & Pressure Improvements

**Program:** Infrastructure **Start Date:** Ongoing  
**Type:** Improved Facility **End Date:** Ongoing  
**Location:** **Project ID:** WFNEW420

Citywide

**Urban Village:** In more than one urban village

**Neighborhood District:** In more than one district

This project improves fire flow delivery to portions of the distribution system that are currently serviced inadequately due to undersized or old deteriorated water lines or development that requires more fire flow capacity than the existing water system delivers. The improvements include installation of new feeders and watermains, and/or the replacement of undersized and/or deteriorated existing water lines, and possible construction of facilities for additional supply to problem areas during fire fighting from higher pressure zones. The specific scope and location of the improvements is currently being defined by the System Deficiencies Analysis project, completed in 2001.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	0	0	0	537	550	2,256	11,563	0	14,906
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>537</b>	<b>550</b>	<b>2,256</b>	<b>11,563</b>	<b>0</b>	<b>14,906</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

**Distribution System In-Line Gate Valves Replacement**

<b>Program:</b> Infrastructure	<b>Start Date:</b> Ongoing
<b>Type:</b> Rehabilitation or Restoration	<b>End Date:</b> Ongoing
<b>Location:</b> Citywide	<b>Project ID:</b> C199012

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

This project replaces aging in-line gate valves throughout the water distribution system. Many of these valves are more than 50 years old and are obsolete. Spare parts are difficult, and in some cases impossible, to obtain.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	145	94	94	75	77	79	81	73	718
<b>TOTAL FUNDS</b>	<b>145</b>	<b>94</b>	<b>94</b>	<b>75</b>	<b>77</b>	<b>79</b>	<b>81</b>	<b>73</b>	<b>718</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

**Downstream Fish Habitat and Restoration**

<b>Program:</b> Habitat Conservation Program	<b>Start Date:</b> 2001 1st Quarter
<b>Type:</b> Rehabilitation or Restoration	<b>End Date:</b> 2005 4th Quarter
<b>Location:</b> Cedar River	<b>Project ID:</b> WFHCP7

This project is a component of the Cedar River Habitat Conservation Plan (HCP). The purpose of this project is to plan, design, and implement downstream habitat protection and restoration measures in the lower 22 miles of the mainstem Cedar River. This partially mitigates the effects of the City's water supply facilities and operations on aquatic resources in the Cedar River. A broad range of mitigation alternatives were examined during the development of the HCP. The exact listing of activities within this project is determined during the first year of the HCP, including restoration work at Walsh Lake.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	753	1,209	917	2,482	764	0	0	6,125
<b>TOTAL FUNDS</b>	<b>0</b>	<b>753</b>	<b>1,209</b>	<b>917</b>	<b>2,482</b>	<b>764</b>	<b>0</b>	<b>0</b>	<b>6,125</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

\*Amounts in thousands of dollars

# SPU - WATER

## Earthquake Repairs - Water Fund CIP

**Program:** Infrastructure **Start Date:** 2001 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2002 4th Quarter  
**Location:** Citywide **Project ID:** C1123

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

This project repairs infrastructure damage resulting from the February 28, 2001 Nisqually Earthquake. There are five large new projects in the Water Fund CIP as a result of the earthquake:

1. Eastside Reservoir Repair--SPU built this underground reservoir in 1989. During the earthquake, the reservoir roof shifted slightly relative to the rest of the structure, resulting in cracks in the reservoir floor, damaged access hatches, a cracked stair, and cracks in the asphalt access road.
2. Masonry Pool Slide Repair at the Chester Morse Dam--The slopes at the entrance to the emergency spillway were damaged, resulting in turbidity events at the Landsburg diversion dam.
3. Tolt Pipeline 1 at Tolt East Side Supply (TESS) Junction Repair--The earthquake damaged a 36-inch valve and the connections on both sides of the pipeline.
4. 24-inch Holgate Watermain Replacement--The earthquake damaged the 24-inch cast-ironed lead joint pipe.
5. Mercer Island Supply Line Repair--This 16-inch supply line, one of two water lines to Mercer Island along this reach, is suspended on hangers off the I-90 bridge across the Mercer Slough. The earthquake damaged a few hangers. Even before the earthquake, SPU had planned seismic upgrade work on this line in 2001. SPU has combined the earthquake repair and the planned seismic upgrade work into one project.

Additional earthquake-related projects in the Water Fund include repair to the Lake Youngs Dam safety instruments, Lakes Young Tunnel standpipe, Operations Control Center, Tolt Screenhouse, various watershed bridges, and the Hanford watermain at 1st Avenue.

Total project costs are unknown and may be revised based upon additional engineering and project team review.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	1,200	0	0	0	0	0	1,200
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>1,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,200</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>
<b>Cash Flow</b>		1,200	0	0	0	0	0	0	

\*Amounts in thousands of dollars

**ESA-Chinook Research & Monitoring**

**Program:** Water Supply/Conservation/ESA  
**Type:** Rehabilitation or Restoration  
**Location:**  
 Snohomish River system

**Start Date:** 2000 3rdQuarter  
**End Date:** 2007 4th Quarter  
**Project ID:** C101048

This program provides funding for research into, and monitoring of, the health of the region's salmon population. This project is part of the City's responsibilities related to the listing of Chinook salmon as a threatened species under the Endangered Species Act.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	100	100	200	107	110	113	116	121	967
<b>TOTAL FUNDS</b>	<b>100</b>	<b>100</b>	<b>200</b>	<b>107</b>	<b>110</b>	<b>113</b>	<b>116</b>	<b>121</b>	<b>967</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**ESA-Snohomish River Basin Habitat Protection Program**

**Program:** Water Supply/Conservation/ESA  
**Type:** Rehabilitation or Restoration  
**Location:**  
 N/A

**Start Date:** 2000 2nd Quarter  
**End Date:** 2006 4th Quarter  
**Project ID:** C101003

This project develops habitat for salmon-beneficial projects in the Snohomish River system. Projects may occur in cooperation with King County, affected Tribes, or other local, state, or federal agencies.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	200	360	361	387	396	406	416	436	2,962
<b>TOTAL FUNDS</b>	<b>200</b>	<b>360</b>	<b>361</b>	<b>387</b>	<b>396</b>	<b>406</b>	<b>416</b>	<b>436</b>	<b>2,962</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

*\*Amounts in thousands of dollars*

# SPU - WATER

## Group Health Fire Flow Improvement

**Program:** Infrastructure **Start Date:** 1999 1st Quarter  
**Type:** New Facility **End Date:** 2002 4th Quarter  
**Location:** 16TH AV E and E DENNY WY **Project ID:** C199076  
**Urban Village:** Capitol Hill **Neighborhood District:** Central  
**Neighborhood Plan:** Capitol Hill

This project improves the fire flow in the Capitol Hill neighborhood near Group Health Hospital by installing a new 16-inch feeder main on E Denny Way, from Broadway to 16th Avenue E, and by replacing the mains in 15th Avenue E and 16th Avenue E from E Denny Way to E Thomas Street, and from E Denny Way to E John Street, respectively.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	850	13	0	0	0	0	0	0	863
<b>TOTAL FUNDS</b>	<b>850</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>863</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

## Heavy Equipment Purchases - Water

**Program:** Infrastructure **Start Date:** 1999 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Location:** N/A **Project ID:** C199068

This project replaces existing heavy equipment (such as loaders and bulldozers) used at Water Utility facilities. This equipment has reached the end of its useful life.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	1,296	1,535	1,810	1,126	2,309	1,780	2,657	2,662	15,175
<b>TOTAL FUNDS</b>	<b>1,296</b>	<b>1,535</b>	<b>1,810</b>	<b>1,126</b>	<b>2,309</b>	<b>1,780</b>	<b>2,657</b>	<b>2,662</b>	<b>15,175</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

\*Amounts in thousands of dollars



**Henderson Combined Sewer Overflow**

**Program:** Other Agencies **Start Date:** 1998 4th Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2003 3rd Quarter  
**Location:** SEWARD PARK AV S and S HENDERSON ST **Project ID:** C199069

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

King County is constructing a combined sewer pipeline from the Metro pump station at Seward Park Avenue and Henderson Street to E Marginal Way and S Norfolk Street. This project includes relocation of watermains and services to make way for the proposed pipeline, monitoring of pipelines in areas where the pipeline is tunneled, watermain connections, and service work to support King County's project. King County is reimbursing 100% of the City's expenditures.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	6	46	21	11	0	0	0	0	84
<b>TOTAL FUNDS</b>	<b>6</b>	<b>46</b>	<b>21</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>84</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Holgate/Amtrak Water Relocation**

**Program:** Other Agencies **Start Date:** 1998 4th Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2002 4th Quarter  
**Location:** S HOLGATE ST and 4TH AV S to 1ST AV S **Project ID:** C115068

**Urban Village:** Duwamish **Neighborhood District:** Greater Duwamish

**Neighborhood Plan:** Duwamish

This project is necessitated by Amtrak's redevelopment of rail yard facilities at S Holgate Street between 3rd Avenue S and 4th Avenue S. As part of this redevelopment, the grade of S Holgate Street is lowered, reducing the cover over the existing 20-inch feeder main in S Holgate St. This project replaces the main at a lower depth (at Amtrak's expense) and extends the watermain replacement from 3rd Avenue S to 1st Avenue S (at SPU's expense). Additionally, SPU supports Amtrak's project by performing shutdowns, water service relocations and installation of new services.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	59	440	0	0	0	0	0	0	499
<b>TOTAL FUNDS</b>	<b>59</b>	<b>440</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>499</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

# SPU - WATER

## Holly Park Redevelopment Phase III - Watermain Extension

**Program:** Infrastructure **Start Date:** 2005 1st Quarter  
**Type:** New Facility **End Date:** 2005 4th Quarter  
**Location:** **Project ID:** WFNEW390  
 To be determined  
**Urban Village:** MLK Jr. @ Holly **Neighborhood District:** Southeast  
**Neighborhood Plan:** Martin Luther King, Jr. @ Holly Street

This project provides a standard watermain to serve the rebuilt Holly Park community.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	275	0	0	0	0	310	0	0	585
<b>TOTAL FUNDS</b>	<b>275</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>310</b>	<b>0</b>	<b>0</b>	<b>585</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Honey Creek Drain Pipe Improvements

**Program:** Infrastructure **Start Date:** 1996 4th Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2002 4th Quarter  
**Location:** **Project ID:** C196020  
 Lake Youngs Rd. and 184th Avenue SE

This project constructs an intake structure at 184th Avenue SE and Lake Youngs Road, replaces approximately 680 feet of 30-inch clay pipe with new 30-inch pipe on piling supports, and installs a new catch basin. Present and future flooding potential in the area serviced by storm water diversion system is addressed.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	184	805	65	0	0	0	0	0	1,054
<b>TOTAL FUNDS</b>	<b>184</b>	<b>805</b>	<b>65</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,054</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Hydrant Replacement & Relocation Program

**Program:** Infrastructure **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Location:** **Project ID:** C1110  
 Citywide

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

This project replaces older and damaged hydrants to ensure a reliable and adequate supply of water for fire protection.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	1,435	240	245	242	248	254	260	272	3,196
<b>TOTAL FUNDS</b>	<b>1,435</b>	<b>240</b>	<b>245</b>	<b>242</b>	<b>248</b>	<b>254</b>	<b>260</b>	<b>272</b>	<b>3,196</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

**In-town Reservoirs Dam Safety Improvements**

**Program:** Infrastructure **Start Date:** 2005 1st Quarter  
**Type:** Improved Facility **End Date:** 2006 4th Quarter  
**Location:** Various **Project ID:** WFNEW305  
**Urban Village:** In more than one urban village **Neighborhood District:** In more than one district

This project evaluates and upgrades Seattle Public Utilities' existing in-town dam safety monitoring systems. Dams at the Beacon North, Bitter Lake, Lake Forest, Maple Leaf, Myrtle, Volunteer and West Seattle reservoirs are designated as High, Class 1A, the highest hazard classification under the Department of Ecology Dam Safety Regulations.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	0	0	0	45	58	0	103
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>58</b>	<b>0</b>	<b>103</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

**Lake Youngs Bypass Number Four Rehabilitation**

**Program:** Infrastructure **Start Date:** 2001 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2002 4th Quarter  
**Location:** Near Lake Youngs Reservoir **Project ID:** WFNEW315

This project repairs the existing pipe joints and the pipe lining that were determined to be deficient during an internal inspection of the Lake Youngs Bypass Number Four completed in early 2000.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	883	260	0	0	0	0	0	1,143
<b>TOTAL FUNDS</b>	<b>0</b>	<b>883</b>	<b>260</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,143</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

**Lake Youngs Management/Protection Plan**

**Program:** Water Quality **Start Date:** 2001 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2004 4th Quarter  
**Location:** TBD **Project ID:** WFNEW285

This project develops a long range management and protection program for the Lake Youngs Reservation, including a resource assessment and inventory. Forest conditions are evaluated and aquatic and terrestrial habitats are inventoried and classified.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	25	37	208	12	0	0	0	282
<b>TOTAL FUNDS</b>	<b>0</b>	<b>25</b>	<b>37</b>	<b>208</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>282</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

*\*Amounts in thousands of dollars*

# SPU - WATER

## Lake Youngs Outlet Dam Rehabilitation

**Program:** Infrastructure **Start Date:** 2002 2nd Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2004 4th Quarter  
**Location:** **Project ID:** WFNEW380  
 Lake Youngs Reservoir

This project raises the west portion of the Lake Youngs Outlet Dam to match the existing elevation of the east portion of the dam. Existing trees from the uphill and downhill slopes are removed

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	4	91	187	0	0	0	282
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>91</b>	<b>187</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>282</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Lake Youngs Outlet Dam Warning System

**Program:** Infrastructure **Start Date:** 2001 1st Quarter  
**Type:** Improved Facility **End Date:** 2003 4th Quarter  
**Location:** **Project ID:** C101006  
 South of Lake Youngs Reservoir

This project improves the warning system at the Lake Youngs Outlet Dam.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	58	132	134	0	0	0	0	324
<b>TOTAL FUNDS</b>	<b>0</b>	<b>58</b>	<b>132</b>	<b>134</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>324</b>
<i>O&amp;M Costs (Savings)</i>			14	36	36	36	36	36	194

## Lake Youngs Perimeter Drain

**Program:** Water Quality **Start Date:** 1999 2nd Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2002 4th Quarter  
**Location:** **Project ID:** C197013  
 Lake Youngs

This project inspects, cleans and performs required repairs to the catch basin and drainage pipeline on the south and southeast of sides of Lake Youngs.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	6	139	180	0	0	0	0	0	325
<b>TOTAL FUNDS</b>	<b>6</b>	<b>139</b>	<b>180</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>325</b>
<i>O&amp;M Costs (Savings)</i>			0	10	10	10	10	10	50

\*Amounts in thousands of dollars

**Lake Youngs Perimeter Drains Flow Monitoring**

**Program:** Water Quality  
**Type:** New Facility  
**Location:**  
 Lake Youngs Reservoir

**Start Date:** 2002 1st Quarter  
**End Date:** 2003 4th Quarter  
**Project ID:** WFNEW290

This project designs and implements a new monitoring system for Lake Youngs perimeter drains. Work includes flow measurement of four major drain lines behind Lake Youngs dikes with a weather station and automatic rain gauge.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	31	24	0	0	0	0	55
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>55</b>
<i>O&amp;M Costs (Savings)</i>			3	3	2	2	2	2	14

**Landsburg Dam Emergency Spillway Improvement**

**Program:** Infrastructure  
**Type:** Improved Facility  
**Location:**  
 Landsburg Dam

**Start Date:** 2003 1st Quarter  
**End Date:** 2007 1st Quarter  
**Project ID:** WFNEW013

This project involves increasing the flood passage capacity of the Landsburg Dam through construction of a new 40-foot wide emergency spillway on the south side of the dam.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	0	161	385	451	4,625	0	5,622
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>161</b>	<b>385</b>	<b>451</b>	<b>4,625</b>	<b>0</b>	<b>5,622</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Landsburg Dam Safety Improvements**

**Program:** Infrastructure  
**Type:** Improved Facility  
**Location:**  
 At Landsburg Dam on the Cedar River

**Start Date:** 2001 1st Quarter  
**End Date:** 2002 3rd Quarter  
**Project ID:** C198011

This project designs and implements hard wire system to monitor four piezometers and two river level indicators at the Landsburg Dam.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	15	14	0	0	0	0	0	29
<b>TOTAL FUNDS</b>	<b>0</b>	<b>15</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>
<i>O&amp;M Costs (Savings)</i>			2	1	1	1	1	1	7

\*Amounts in thousands of dollars

# SPU - WATER

## Landsburg Fish Passage Improvements

**Program:** Habitat Conservation Program  
**Type:** Improved Facility  
**Location:**  
Cedar River

**Start Date:** 1999 2nd Quarter  
**End Date:** 2004 1st Quarter  
**Project ID:** WFHCP4

This project plans, designs, and constructs the following improvements for fish passage: Landsburg Fish Screens, to prevent entrapment of salmon in the water supply system; an upstream fish ladder, to provide upstream passage of steelhead trout, coho and Chinook salmon; a downstream fish passage, to allow safe passage of migrating juvenile steelhead trout, coho and Chinook salmon; and pipeline fish passage, to minimize the effects of migration blockage from the aqueduct crossing.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	5	701	3,873	3,785	153	0	0	91	8,608
<b>TOTAL FUNDS</b>	<b>5</b>	<b>701</b>	<b>3,873</b>	<b>3,785</b>	<b>153</b>	<b>0</b>	<b>0</b>	<b>91</b>	<b>8,608</b>
<i>O&amp;M Costs (Savings)</i>			0	0	56	56	56	56	224

## Landsburg Improvements - Non-HCP

**Program:** Water Supply/Conservation/ESA  
**Type:** Improved Facility  
**Location:**  
Lake Youngs

**Start Date:** 2001 1st Quarter  
**End Date:** 2004 1st Quarter  
**Project ID:** C199073

This project encompasses the "non-Habitat Conservation Plan" components of the Landsburg Fish Passage Improvements project (WFHCP4). The project scope includes the design, permitting, and construction of stability improvements to the Landsburg Dam (and the Lake Youngs aqueduct crossing), and improvements to Landsburg Park related to mitigation for the construction of a fish ladder in the existing Lake Youngs aqueduct crossing/park area.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	0	356	1,495	1,526	73	0	0	0	3,450
<b>TOTAL FUNDS</b>	<b>0</b>	<b>356</b>	<b>1,495</b>	<b>1,526</b>	<b>73</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,450</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

**Landsburg Treatment Building**

**Program:** Water Quality  
**Type:** Improved Facility  
**Location:**  
 Landsburg Dam

**Start Date:** 2006 1st Quarter  
**End Date:** 2008 4th Quarter  
**Project ID:** WFNEW270

This project provides modifications to the Landsburg Treatment Facility consistent with its new role after ozone facilities are built at Lake Youngs. Possible changes may include enclosure of the chlorine storage area, ventilation improvements, the addition of a chlorine scrubber, fire sprinklers, a new emergency generator, and improvements to local instrumentation and control.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	0	0	0	0	116	0	116
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>116</b>	<b>0</b>	<b>116</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

**Maple Leaf Gatehouse Pipe Refurbishing**

**Program:** Infrastructure  
**Type:** Improved Facility  
**Location:**  
 NE 83RD ST and 12TH AV NE

**Start Date:** 1999 2nd Quarter  
**End Date:** 2003 2nd Quarter  
**Project ID:** C195001

**Urban Village:** Not in an urban village

**Neighborhood District:** East District

This project refurbishes valves and piping to allow water to be pushed from the Tolt system into the areas south of the Ship Canal and to improve circulation in the Maple Leaf Reservoir.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	5	36	382	409	0	0	0	0	832
<b>TOTAL FUNDS</b>	<b>5</b>	<b>36</b>	<b>382</b>	<b>409</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>832</b>
<i>O&amp;M Costs (Savings)</i>			5	5	1	1	1	1	<b>14</b>

\*Amounts in thousands of dollars

# SPU - WATER

## Marine View/Des Moines Creek Transmission Line Relocation

**Program:** Other Agencies **Start Date:** 1997 3rd Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2002 4th Quarter  
**Location:** **Project ID:** C197021  
 MARINE VIEW DR

This project relocates approximately 200 linear feet of 24-inch water transmission line at SR 509 (Marine View Drive) where it crosses Des Moines Creek. This work is in response to a City of Des Moines project to replace an existing box culvert and embankment with a bridge. The transmission line currently passes through the existing embankment and is to be relocated to the new bridge.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	372	278	0	0	0	0	0	0	650
<b>TOTAL FUNDS</b>	<b>372</b>	<b>278</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>650</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Mercer Island 30" Supply Line Improvements

**Program:** Infrastructure **Start Date:** 2005 1st Quarter  
**Type:** Improved Facility **End Date:** 2007 4th Quarter  
**Location:** **Project ID:** WFNEW430  
 n/a

This project replaces the existing section of the existing 30-inch Mercer Island Pipeline that crosses Mercer Slough, identified in a seismic study as one of the weaker components of the system. The pipe and pile supports are improved to reduce vulnerability during an earthquake.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	0	0	0	0	0	113	463	0	576
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>113</b>	<b>463</b>	<b>0</b>	<b>576</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Metering: Demand Metering Improvements

**Program:** Infrastructure **Start Date:** 2001 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2005 4th Quarter  
**Location:** **Project ID:** WFNEW255  
 Outside City Limits

This project plans, designs, and installs ongoing improvements to the demand metering hardware and software.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	0	78	78	32	33	20	0	0	241
<b>TOTAL FUNDS</b>	<b>0</b>	<b>78</b>	<b>78</b>	<b>32</b>	<b>33</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>241</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars



**Metering: Direct Service Meter Replacement**

**Program:** Infrastructure **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Location:** Citywide **Project ID:** C1108

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

This project replaces customer meters that are not performing within the American Water Works Association's standards of accuracy due to obsolescence, incorrect application, or inability to repair. 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.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	5,122	757	1,456	1,563	1,831	1,877	1,924	1,815	16,345
<b>TOTAL FUNDS</b>	<b>5,122</b>	<b>757</b>	<b>1,456</b>	<b>1,563</b>	<b>1,831</b>	<b>1,877</b>	<b>1,924</b>	<b>1,815</b>	<b>16,345</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Metering: New Purveyor Meter Program**

**Program:** Infrastructure **Start Date:** Ongoing  
**Type:** New Facility **End Date:** Ongoing  
**Location:** Various **Project ID:** C1121

This program establishes new metered services for purveyors.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	168	215	215	220	226	231	242	1,517
<b>TOTAL FUNDS</b>	<b>0</b>	<b>168</b>	<b>215</b>	<b>215</b>	<b>220</b>	<b>226</b>	<b>231</b>	<b>242</b>	<b>1,517</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Metering: Purveyor Meter Replacement Program**

**Program:** Infrastructure **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Location:** Various Locations **Project ID:** C1107

This project replaces obsolete, incorrectly applied, or irreparable purveyor meters that are not performing within the American Water Works Association's standards of accuracy.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	434	605	298	344	352	361	370	387	3,151
<b>TOTAL FUNDS</b>	<b>434</b>	<b>605</b>	<b>298</b>	<b>344</b>	<b>352</b>	<b>361</b>	<b>370</b>	<b>387</b>	<b>3,151</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

*\*Amounts in thousands of dollars*

# SPU - WATER

## Metering: System Meter Replacement

**Program:** Infrastructure **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Location:** Regional **Project ID:** C1TT006  
**Urban Village:** In more than one urban village **Neighborhood District:** In more than one district

This is a safety-driven project that modifies and rehabilitates old chambers housing water meters used to operate the water supply system. (These are not billing meters.) The chambers do not meet worker safety requirements and are generally very difficult to access. In some cases, they are very deep (20-25 feet) with only a narrow chimney serving as access. In others, there are stability and traffic concerns. At some older installations, the meters themselves are also replaced.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	151	50	50	107	0	0	0	0	358
<b>TOTAL FUNDS</b>	<b>151</b>	<b>50</b>	<b>50</b>	<b>107</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>358</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Morse Lake Pump Plant - Pipeline Number One Corrosion

**Program:** Water Supply/Conservation/ESA **Start Date:** 2004 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2004 3rd Quarter  
**Location:** Cedar River Watershed **Project ID:** WFNEW265

This project installs anodes on Pipeline Number One to prevent further corrosion. The pipeline is an essential component of the pumping plant facilities at Chester Morse Lake, which provides the City's emergency back-up water supply during periods of water shortage.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	0	0	45	0	0	0	45
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

**N/NE 80th Street Feeder Rehabilitation**

**Program:** Infrastructure **Start Date:** 1996 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2003 2nd Quarter  
**Location:** 12TH AV NE and NE 80TH ST **Project ID:** C196022  
**Urban Village:** Not in an urban village **Neighborhood District:** Northwest

The project sliplines (inserts smaller pipe into an existing one) approximately 9,000 linear feet of existing pipe on N/NE 80th Street from Greenwood Avenue N to 12 Avenue NE. In addition, the project replaces an existing line valve, valve chamber, existing blow-offs and air valves. The existing pipe under the I-5 freeway is not replaced, but connections to it are made on both sides of the freeway.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	52	143	1,364	2,577	0	0	0	0	4,136
<b>TOTAL FUNDS</b>	<b>52</b>	<b>143</b>	<b>1,364</b>	<b>2,577</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,136</b>
<i>O&amp;M Costs (Savings)</i>			0	0	1	1	1	1	4

**North Fork Tolt Diversion**

**Program:** Water Supply/Conservation/ESA **Start Date:** 1993 1st Quarter  
**Type:** Improved Facility **End Date:** Ongoing  
**Location:** North Fork Tolt River **Project ID:** C192004

The North Fork Tolt Diversion project is one of several future water supply options for the Seattle region. The project is currently in the planning phase; final project development occurs when necessary to meet regional water demand. The project constructs a low level run-of-river diversion dam on the North Fork Tolt River, above a series of natural waterfalls that act as barriers for upstream anadromous fish passage. This dam would divert a portion of the streamflow to the existing Tolt Regulating Basin and then to the Tolt Treatment Facility. The Tolt Treatment Facility would have to be expanded to treat North Fork Tolt River water.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	130	3	3	3	3	3	3	0	148
<b>TOTAL FUNDS</b>	<b>130</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>148</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

*\*Amounts in thousands of dollars*

# SPU - WATER

## One Percent a Year Conservation--Seattle & Regional

**Program:** Water Supply/Conservation/ESA **Start Date:** 1999 1st Quarter  
**Type:** Improved Facility **End Date:** Ongoing  
**Location:** Citywide **Project ID:** C199032

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

The City of Seattle's 1% Water Conservation Initiative has the goal of reducing personal and commercial water consumption by 1% per year for ten years. If the Initiative is successful and all of Seattle's wholesale customers participate, it could save approximately 18 million gallons of water per day, equivalent to the demands of 130,000 new households, or the projected level of growth over the next ten years. This enables Seattle to minimize future water diversions from the Tolt and Cedar Rivers. This 1% program bundles all existing conservation projects except water reuse into a single CIP project. The project is projected to run 8-12 years, until saving goals are obtained.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	1,509	3,200	4,050	4,349	4,457	4,569	5,666	6,050	33,850
<b>TOTAL FUNDS</b>	<b>1,509</b>	<b>3,200</b>	<b>4,050</b>	<b>4,349</b>	<b>4,457</b>	<b>4,569</b>	<b>5,666</b>	<b>6,050</b>	<b>33,850</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Other Agency - Multiple Utility Relocation Program

**Program:** Other Agencies **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Location:** Citywide **Project ID:** C1201

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

This program enables SPU to respond to large projects that are conducted by other agencies and that impact Seattle's water system. Impacts include utility conflicts that require relocations, construction impacts, and coordination to minimize impacts to SPU's customers and supply. Often, these agencies reimburse SPU for some or all of the costs incurred.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	5,191	650	650	752	770	846	867	908	10,634
<b>TOTAL FUNDS</b>	<b>5,191</b>	<b>650</b>	<b>650</b>	<b>752</b>	<b>770</b>	<b>846</b>	<b>867</b>	<b>908</b>	<b>10,634</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

**Painting Program: Beverly Park Tank**

<b>Program:</b> Infrastructure	<b>Start Date:</b> 2005 1st Quarter
<b>Type:</b> Rehabilitation or Restoration	<b>End Date:</b> 2006 4th Quarter
<b>Location:</b> 11042 4TH AV SW	<b>Project ID:</b> WFNEW116

The Tank Painting program involves interior and exterior surface preparation and painting, minor structural repairs, and safety modifications on a regular maintenance cycle at the City's various tank sites. The Beverly Park project cleans and overcoats the tank exterior. The lining is completely removed and replaced. Minor safety and operational modifications are made and cathodic protection installed.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	0	0	0	0	0	142	267	0	409
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>142</b>	<b>267</b>	<b>0</b>	<b>409</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Painting Program: Maple Leaf Tank**

<b>Program:</b> Infrastructure	<b>Start Date:</b> 2006 1st Quarter
<b>Type:</b> Rehabilitation or Restoration	<b>End Date:</b> 2007 4th Quarter
<b>Location:</b> 8602 NE 86TH ST and ROOSEVELT WY NE	<b>Project ID:</b> WFNEW117

**Urban Village:** Not in an urban village

**Neighborhood District:** East District

The Tank Painting program involves interior and exterior surface preparation and painting, minor structural repairs, and safety modifications on a regular maintenance cycle at the City's various tank sites. The Maple Leaf project cleans and overcoats the tank exterior. Minor safety and operational modifications are made.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	0	0	0	0	0	0	29	0	29
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>0</b>	<b>29</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

## Painting Program: Myrtle Tank

**Program:** Infrastructure **Start Date:** 2000 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2004 4th Quarter  
**Location:** **Project ID:** WFNEW110  
 3600 SW MYRTLE ST  
**Urban Village:** Not in an urban village **Neighborhood District:** Delridge  
**Neighborhood Plan:** Morgan Junction (MOCA)

The Tank Painting program involves interior and exterior surface preparation and painting, minor structural repairs, and safety modifications on a regular maintenance cycle at the City's various tank sites. Myrtle I and II tank exteriors are to be spot cleaned and receive an overcoat. The lining of Myrtle II is completely removed and replaced. Minor safety and operational modifications are made to both tanks.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	76	0	0	135	265	0	0	0	476
<b>TOTAL FUNDS</b>	<b>76</b>	<b>0</b>	<b>0</b>	<b>135</b>	<b>265</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>476</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

## Painting Program: Richmond Highland I and II

**Program:** Infrastructure **Start Date:** 2003 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2006 4th Quarter  
**Location:** **Project ID:** WFNEW115  
 N 195TH ST and FREMONT AV N

The Tank Painting program involves interior and exterior surface preparation and painting, minor structural repairs, and safety modifications on a regular maintenance cycle at the City's various tank sites. The Richmond Highland project cleans and overcoats the tank exterior. The lining is completely removed and replaced. Minor safety and operational modifications are made and cathodic protection installed.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	0	0	0	109	61	1,411	10	0	1,591
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>109</b>	<b>61</b>	<b>1,411</b>	<b>10</b>	<b>0</b>	<b>1,591</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

\*Amounts in thousands of dollars

**Port of Seattle Terminal 18**

**Program:** Other Agencies  
**Type:** Improved Facility  
**Location:**  
 Harbor Island

**Start Date:** 1997 2nd Quarter  
**End Date:** 2002 4th Quarter  
**Project ID:** C197023

**Urban Village:** Duwamish

**Neighborhood District:** Greater Duwamish

The Terminal 18 Redevelopment Project by the Port of Seattle redevelops most of Harbor Island, located at the confluence of the Duwamish Waterway and Elliott Bay. The Port is constructing new container ship loading facilities and railyards that include new rail facilities, storage areas for shipping containers, queuing areas for trucks, street right-of-ways for new streets, the vacation of several existing streets, new piers and cranes, open space, new utilities (public and private), an overpass structure from the West Seattle Bridge, and cleanup of the Harbor Island Superfund site. Construction is being performed by the Port of Seattle through its tenant, Stevedoring Shipping of America, under a design-build contract. This project reimburses the Port for the new public utilities built by the Terminal 18 Redevelopment Project.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	782	400	10	0	0	0	0	0	1,192
<b>TOTAL FUNDS</b>	<b>782</b>	<b>400</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,192</b>
<i>O&amp;M Costs (Savings)</i>			1	1	1	1	1	10	<b>15</b>

**Pump Station - Maple Leaf #2**

**Program:** Infrastructure  
**Type:** Improved Facility  
**Location:**  
 NE 82ND ST and ROOSEVELT WY NE

**Start Date:** 2006 2nd Quarter  
**End Date:** 2010 1st Quarter  
**Project ID:** C1AA003

**Urban Village:** Not in an urban village

**Neighborhood District:** East District

This project modifies and upgrades the existing Roosevelt Way Pump Station with a booster pump station, in order to accommodate future capacity increases and additional pumps. Distribution system improvements and modifications are also necessary to isolate the low pressure area from the rest of the Maple Leaf distribution system, and to boost the water pressure with the pump station.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	653	0	0	0	0	0	578	0	1,231
<b>TOTAL FUNDS</b>	<b>653</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>578</b>	<b>0</b>	<b>1,231</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	25	<b>25</b>

*\*Amounts in thousands of dollars*

# SPU - WATER

## Pump Station - Phinney Ridge

**Program:** Infrastructure

**Start Date:** 1998 1st Quarter

**Type:** New Facility

**End Date:** 2003 3rd Quarter

**Location:**

**Project ID:** C1AA004

PHINNEY AV N and N 54TH ST

**Urban Village:** Not in an urban village

**Neighborhood District:** Northwest

This project builds a reinforced concrete underground structure with four booster pumps and approximately 15,000 feet of watermain to improve water pressure for 125 acres in the Phinney Ridge neighborhood.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	688	223	2,106	1,287	0	0	0	0	4,304
<b>TOTAL FUNDS</b>	<b>688</b>	<b>223</b>	<b>2,106</b>	<b>1,287</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,304</b>
<i>O&amp;M Costs (Savings)</i>			0	25	25	25	25	0	<b>100</b>

## Pump Station - Queen Anne

**Program:** Infrastructure

**Start Date:** 1996 1st Quarter

**Type:** Improved Facility

**End Date:** 2005 2nd Quarter

**Location:**

**Project ID:** C1AA005

110 LEE ST

**Urban Village:** Queen Anne

**Neighborhood District:** Magnolia/Queen Anne

This project includes installation of a concrete underground booster pump station and improvements and modifications to the distribution system. The distribution system improvements and modifications are necessary to isolate the area of low water pressure so that the water pressure can be boosted using the pump station.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	1,414	0	0	687	2,421	1,128	0	0	5,650
<b>TOTAL FUNDS</b>	<b>1,414</b>	<b>0</b>	<b>0</b>	<b>687</b>	<b>2,421</b>	<b>1,128</b>	<b>0</b>	<b>0</b>	<b>5,650</b>
<i>O&amp;M Costs (Savings)</i>			0	0	25	25	25	25	<b>100</b>

\*Amounts in thousands of dollars



**Pump Station Improvements - Install Station Motors**

**Program:** Infrastructure **Start Date:** 1999 4th Quarter  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Location:** Citywide **Project ID:** C199052  
**Urban Village:** In more than one urban village **Neighborhood District:** In more than one district

This program replaces aging pump station motors throughout the water distribution system with new, more efficient motors. Some of the existing motors were installed 30 or more years ago and are now obsolete, with no replacement parts available.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	92	50	50	54	55	0	0	0	301
<b>TOTAL FUNDS</b>	<b>92</b>	<b>50</b>	<b>50</b>	<b>54</b>	<b>55</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>301</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Renton Franchise/Line Valve along Cedar River Pipeline**

**Program:** Other Agencies **Start Date:** 2001 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2005 4th Quarter  
**Location:** Outside City Limits **Project ID:** WFNEW011

In 1998, the Cities of Seattle and Renton signed an agreement which addresses Renton's request that SPU add line valves east of downtown Renton to reduce flooding in the event of a pipeline failure. This project responds to that agreement. Project components include improvement/relocation of pipeline blow-offs, improvement/relocation of meters to the Boeing Company, and other miscellaneous work.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	103	164	376	440	11	0	0	1,094
<b>TOTAL FUNDS</b>	<b>0</b>	<b>103</b>	<b>164</b>	<b>376</b>	<b>440</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>1,094</b>
<i>O&amp;M Costs (Savings)</i>			0	0	5	5	5	5	20

**Replace Air Valve Chambers**

**Program:** Infrastructure **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Location:** Regional **Project ID:** C199060

This program replaces existing air valve chamber tops and access chimneys with larger diameter tops and chimneys. The project provides SPU staff safer access to valves, and complies with industry safety standards.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	187	64	126	129	132	135	139	145	1,057
<b>TOTAL FUNDS</b>	<b>187</b>	<b>64</b>	<b>126</b>	<b>129</b>	<b>132</b>	<b>135</b>	<b>139</b>	<b>145</b>	<b>1,057</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

# SPU - WATER

## Reservoir Covering: Beacon

**Program:** Water Quality  
**Type:** Improved Facility  
**Location:**  
 S SPOKANE ST and BEACON AV S

**Start Date:** 2005 1st Quarter  
**End Date:** 2006 4th Quarter  
**Project ID:** WFNEW350

**Urban Village:** Beacon Hill

**Neighborhood District:** Greater Duwamish

**Neighborhood Plan:** North Beacon Hill

This project abandons and fills with earth the existing 60-million gallon Beacon North Reservoir. Work includes rehabilitating the 49-million gallon Beacon South Reservoir with a plastic liner on the bottom and a plastic floating cover on top, and installing piping and valving appurtenances.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	0	0	0	0	0	1,749	10,580	0	12,329
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,749</b>	<b>10,580</b>	<b>0</b>	<b>12,329</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	59	59	59	177

## Reservoir Covering: Bitter Lake

**Program:** Water Quality  
**Type:** Improved Facility  
**Location:**  
 N 143RD ST and LINDEN AV N

**Start Date:** 1997 1st Quarter  
**End Date:** 2002 1st Quarter  
**Project ID:** C196010

**Urban Village:** Bitter Lake Village

**Neighborhood District:** Northwest

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

This project installs a tension floating geomembrane cover system for the Bitter Lake Reservoir, lines the existing reservoir with a geomembrane material to eliminate leakage and improve embankment stability, converts the existing disinfecting system from an outlet gas chlorinating system to a re-circulation/re-chlorinating system using sodium hypochlorite, and replaces existing reservoir infrastructure (e.g., valves and meters) as required.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	703	3,167	152	0	0	0	0	0	4,022
<b>TOTAL FUNDS</b>	<b>703</b>	<b>3,167</b>	<b>152</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,022</b>
<i>O&amp;M Costs (Savings)</i>			59	59	59	59	59	59	354

\*Amounts in thousands of dollars

**Reservoir Covering: Lake Forest Park**

<b>Program:</b> Water Quality	<b>Start Date:</b> 1997 1st Quarter
<b>Type:</b> Improved Facility	<b>End Date:</b> 2003 1st Quarter
<b>Location:</b> 4510 4510 NE 195th	<b>Project ID:</b> C196011

This project installs a tension floating geomembrane cover system for the Lake Forest Park reservoir, lines the existing reservoir with geomembrane material to eliminate leakage and improve embankment stability, converts the existing disinfecting system from an outlet gas chlorinating system to a re-circulation/ re-chlorinating system using sodium hypochlorite, and replaces existing reservoir infrastructure (e.g., valves and meters) as required.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	7,124	225	8,741	27	0	0	0	0	16,117
<b>TOTAL FUNDS</b>	<b>7,124</b>	<b>225</b>	<b>8,741</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16,117</b>
<i>O&amp;M Costs (Savings)</i>			0	132	132	132	132	132	<b>660</b>

**Reservoir Covering: Lincoln**

<b>Program:</b> Water Quality	<b>Start Date:</b> 1996 4th Quarter
<b>Type:</b> Improved Facility	<b>End Date:</b> 2002 4th Quarter
<b>Location:</b> NAGLE PL and E DENNY WY to E PINE ST	<b>Project ID:</b> C196012

**Urban Village:** Capitol Hill

**Neighborhood District:** Central

**Neighborhood Plan:** Capitol Hill

This project demolishes and replaces the existing 21-million gallon reservoir with a new concrete cast-in-place 15.5-million gallon reservoir. It also changes out the existing gas chlorinating system to a sodium hypochlorite system, replaces piping valves and appurtenances, and restores elements of the park site.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	4,651	4,842	3,150	0	0	0	0	0	12,643
<b>TOTAL FUNDS</b>	<b>4,651</b>	<b>4,842</b>	<b>3,150</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,643</b>
<i>O&amp;M Costs (Savings)</i>			0	44	44	44	44	44	<b>220</b>

\*Amounts in thousands of dollars

# SPU - WATER

## Reservoir Covering: Myrtle

**Program:** Water Quality  
**Type:** Improved Facility  
**Location:**  
 35TH AV SW

**Start Date:** 2005 1st Quarter  
**End Date:** 2006 4th Quarter  
**Project ID:** WFNEW360

**Urban Village:** Morgan Junction

**Neighborhood District:** Southwest

**Neighborhood Plan:** Morgan Junction (MOCA)

This project places a plastic liner on the bottom and plastic floating cover on top of the Myrtle reservoir. A hypochlorite disinfection system is installed and piping and valving adjustments are made as required.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	0	0	0	0	0	338	1,804	0	2,142
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>338</b>	<b>1,804</b>	<b>0</b>	<b>2,142</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

## Reservoir Covering: Volunteer

**Program:** Water Quality  
**Type:** Improved Facility  
**Location:**  
 12TH AV E and E PROSPECT ST

**Start Date:** 2002 1st Quarter  
**End Date:** 2005 4th Quarter  
**Project ID:** WFNEW355

**Urban Village:** Capitol Hill

**Neighborhood District:** In more than one district

This project demolishes the existing 21-million gallon Volunteer Park reservoir and replaces it with a new concrete underground reservoir. The chlorine gas disinfection system is replaced with hypochlorite system and piping and valving is replaced as required.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	0	0	515	1,074	3,302	6,881	0	0	11,772
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>515</b>	<b>1,074</b>	<b>3,302</b>	<b>6,881</b>	<b>0</b>	<b>0</b>	<b>11,772</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	54	54	<b>108</b>

\*Amounts in thousands of dollars

**Reservoir Fence Improvements: Myrtle-Roosevelt-Maple Leaf**

**Program:** Water Quality **Start Date:** 2002 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2002 4th Quarter  
**Location:** **Project ID:** WFNEW280  
 Maple Leaf, Roosevelt, & Myrtle Reservoir Sites  
**Urban Village:** In more than one urban village **Neighborhood District:** In more than one district  
**Neighborhood Plan:** Morgan Junction (MOCA)

This project replaces the perimeter fence around the Myrtle and Maple Leaf reservoir sites and constructs a concrete mowing strip to keep burrowing animals out and to preserve water quality.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	270	0	0	0	0	0	270
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>270</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>270</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Reservoir Fence Relocation/Replacement: Lake Forest Park**

**Program:** Water Quality **Start Date:** 2002 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2002 4th Quarter  
**Location:** **Project ID:** WFNEW395  
 4510 NE 195th ST, Lake Forest Park

This project includes possible fence relocation along the north and northeast sides of the Lake Forest Park reservoir site to allow open space development by the City of Lake Forest Park. The perimeter fence is replaced around the rest of reservoir site and a concrete mowing strip constructed to keep burrowing animals out and to preserve water quality.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	208	0	0	0	0	0	208
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>208</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>208</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

# SPU - WATER

## Reuse Program

**Program:** Water Supply/Conservation/ESA  
**Type:** New Facility  
**Location:**  
 Regional

**Start Date:** 1999 1st Quarter  
**End Date:** 2003 4th Quarter  
**Project ID:** C192006

**Urban Village:** In more than one urban village

**Neighborhood District:** In more than one district

This project constructs water recycling facilities for large industrial customers. Costs are shared with King County, in purveyor areas outside of Seattle, to construct facilities that reuse treated wastewater and to replace existing drinking water use for any non-potable purpose.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	1,101	50	483	483	0	0	0	0	2,117
<b>TOTAL FUNDS</b>	<b>1,101</b>	<b>50</b>	<b>483</b>	<b>483</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,117</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Road Improvements/Decommissioning

**Program:** Habitat Conservation Program  
**Type:** Rehabilitation or Restoration  
**Location:**  
 Cedar River

**Start Date:** 2001 1st Quarter  
**End Date:** 2050 4th Quarter  
**Project ID:** WFHCP1

Road improvements and decommissioning are identified as part of the Cedar River Habitat Conservation Plan (HCP) measures to protect stream and riparian habitats, and forest ecosystems. These projects are based on analyses and designs for the control of water flowing on, under, or adjacent to forest roads, and the removal of unstable soils within the road prism. Control of water and unstable soils minimizes sediment delivery to streams from roads, and improves drainage patterns. This project makes ongoing repairs to existing roads and decommissions seven of the ten miles per year required under the HCP.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	844	864	775	795	815	605	1,136	5,834
<b>TOTAL FUNDS</b>	<b>0</b>	<b>844</b>	<b>864</b>	<b>775</b>	<b>795</b>	<b>815</b>	<b>605</b>	<b>1,136</b>	<b>5,834</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

**SeaTac Third Runway Pipeline Relocation**

**Program:** Other Agencies **Start Date:** 1999 4th Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2005 1st Quarter  
**Location:** **Project ID:** C199075  
 S 156TH WY and 24TH AV S

This project provides design, design review, and construction support for the relocation of the Bow Lake Pipeline during the Sea-Tac Third Runway project.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	80	94	470	55	91	15	0	0	805
<b>TOTAL FUNDS</b>	<b>80</b>	<b>94</b>	<b>470</b>	<b>55</b>	<b>91</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>805</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Seismic Upgrade and Painting: Barton Standpipe**

**Program:** Infrastructure **Start Date:** 1994 4th Quarter  
**Type:** Improved Facility **End Date:** 2002 3rd Quarter  
**Location:** **Project ID:** C194001  
 9051 38TH AV SW

**Urban Village:** Not in an urban village

**Neighborhood District:** Southwest

This project keeps the Southwest Barton Street Standpipe operational after a major earthquake. Standpipes are critical for drinking water, sanitation, and fighting fires after earthquakes. Additional work includes improving drain lines that do not meet current codes, installing a circulation system to improve water quality, and painting the standpipe's exterior.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	186	20	414	0	0	0	0	0	620
<b>TOTAL FUNDS</b>	<b>186</b>	<b>20</b>	<b>414</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>620</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

# SPU - WATER

## Seismic Upgrade and Painting: Foy Standpipe

**Program:** Infrastructure **Start Date:** 1996 4th Quarter  
**Type:** Improved Facility **End Date:** 2002 4th Quarter  
**Location:** **Project ID:** WFNEW480  
 500 NE 145th ST  
**Urban Village:** Not in an urban village **Neighborhood District:** Northeast

This project keeps the Foy Standpipe operational after a major earthquake. The standpipes are critical for drinking water, sanitation, and fighting fires after earthquakes. Work includes improving drain lines that do not meet current codes, improving the circulation system to improve water quality, and painting the standpipe's exterior.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	207	41	697	5	0	0	0	0	950
<b>TOTAL FUNDS</b>	<b>207</b>	<b>41</b>	<b>697</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>950</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Seismic Upgrade and Painting: Woodland Park

**Program:** Infrastructure **Start Date:** 1994 4th Quarter  
**Type:** Improved Facility **End Date:** 2002 3rd Quarter  
**Location:** **Project ID:** C194002  
 5500 PHINNEY AV N and N 55TH ST  
**Urban Village:** Not in an urban village **Neighborhood District:** Northwest

This project keeps the Woodland Park Standpipe operational after a major earthquake. Standpipes are critical for drinking water, sanitation, and fighting fires after earthquakes. Additional work includes improving drain lines that do not meet current codes, installing a circulation system to improve water quality, and painting the exterior.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	176	36	294	0	0	0	0	0	506
<b>TOTAL FUNDS</b>	<b>176</b>	<b>36</b>	<b>294</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>506</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars



**Seismic Upgrade: Beverly Park Tank**

<b>Program:</b> Infrastructure	<b>Start Date:</b> 1995 3rd Quarter
<b>Type:</b> Improved Facility	<b>End Date:</b> 2006 2nd Quarter
<b>Location:</b> 11042 4TH AV SW	<b>Project ID:</b> C194008

This project keeps the Beverly Park water storage tank operational after a major earthquake. The tank is critical for drinking water, sanitation, and fighting fires after earthquakes.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	143	0	0	65	770	661	12	0	1,651
<b>TOTAL FUNDS</b>	<b>143</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>770</b>	<b>661</b>	<b>12</b>	<b>0</b>	<b>1,651</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Seismic Upgrade: Cedar River Pipeline at Ginger Creek**

<b>Program:</b> Infrastructure	<b>Start Date:</b> 1999 1st Quarter
<b>Type:</b> Improved Facility	<b>End Date:</b> 2003 4th Quarter
<b>Location:</b> Lake Youngs Way SE and Kirkland Way SE	<b>Project ID:</b> WFNEW300

The project designs and retrofits approximately 300 feet of the existing Cedar River Pipelines 1, 2, and 3 with improved foundations near Tiffany Park in southeast Renton. These pipelines are a critical link in the Seattle water system.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	5,267	0	239	406	0	0	0	0	5,912
<b>TOTAL FUNDS</b>	<b>5,267</b>	<b>0</b>	<b>239</b>	<b>406</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,912</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Seismic Upgrade: Landsburg Tank**

<b>Program:</b> Infrastructure	<b>Start Date:</b> 1994 4th Quarter
<b>Type:</b> Improved Facility	<b>End Date:</b> 2008 4th Quarter
<b>Location:</b> 253rd AV SE at Landsburg Road SE	<b>Project ID:</b> C194005

This project keeps the Landsburg water storage tank operational after a major earthquake. The tank is critical for drinking water, sanitation, and fighting fires after earthquakes.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	65	0	0	0	0	11	231	0	307
<b>TOTAL FUNDS</b>	<b>65</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>231</b>	<b>0</b>	<b>307</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

# SPU - WATER

## Seismic Upgrade: Maple Leaf Tank

**Program:** Infrastructure **Start Date:** 1994 4th Quarter  
**Type:** Improved Facility **End Date:** 2004 4th Quarter  
**Location:** **Project ID:** C194007  
 8602 Roosevelt Way South  
**Urban Village:** Not in an urban village **Neighborhood District:** East District

This project keeps the Maple Leaf elevated water storage tank operational after a major earthquake. The tank is critical for drinking water, sanitation, and fighting fires after earthquakes.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	166	0	128	515	11	0	0	0	820
<b>TOTAL FUNDS</b>	<b>166</b>	<b>0</b>	<b>128</b>	<b>515</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>820</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Seismic Upgrade: Myrtle Tanks #1 and #2

**Program:** Infrastructure **Start Date:** 1994 4th Quarter  
**Type:** Improved Facility **End Date:** 2004 4th Quarter  
**Location:** **Project ID:** C194006  
 35TH AV SW and SW MYRTLE ST  
**Urban Village:** Not in an urban village **Neighborhood District:** Southwest  
**Neighborhood Plan:** Morgan Junction (MOCA)

This project keeps the Myrtle elevated water storage tanks operational after a major earthquake. These tanks are critical for drinking water, sanitation, and fighting fires after earthquakes. Additional work includes improving drain lines that do not meet current codes and improving a circulation system to improve water quality.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	2,614	360	1,996	216	0	0	0	0	5,186
<b>TOTAL FUNDS</b>	<b>2,614</b>	<b>360</b>	<b>1,996</b>	<b>216</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,186</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

**Seismic Upgrade: Pipeline Backbone System**

**Program:** Infrastructure **Start Date:** 1998 1st Quarter  
**Type:** Improved Facility **End Date:** Ongoing  
**Location:** Citywide **Project ID:** C1102

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

This ongoing program keeps the essential components of the Pipeline Backbone System's transmission and feeder system operational during and after a major earthquake. These components are critical for drinking water, sanitation, and fighting fires. The project includes the evaluation, design, and upgrade/replacement of transmission and major distribution system feeders that are vulnerable to earthquake damage.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	1,942	735	4,174	537	6,053	564	6,360	0	20,365
<b>TOTAL FUNDS</b>	<b>1,942</b>	<b>735</b>	<b>4,174</b>	<b>537</b>	<b>6,053</b>	<b>564</b>	<b>6,360</b>	<b>0</b>	<b>20,365</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Seismic Upgrade: Pump Station Building 6-B**

**Program:** Infrastructure **Start Date:** 1994 4th Quarter  
**Type:** Improved Facility **End Date:** 2006 4th Quarter  
**Location:** Citywide **Project ID:** C194012

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

This project upgrades the Fairwood, Broadway, Maplewood, and Spokane Street Pump Stations to better withstand earthquakes. Beacon Gatehouse and Volunteer Pump Station are evaluated to determine whether an upgrade is necessary.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	77	0	0	143	366	214	12	0	812
<b>TOTAL FUNDS</b>	<b>77</b>	<b>0</b>	<b>0</b>	<b>143</b>	<b>366</b>	<b>214</b>	<b>12</b>	<b>0</b>	<b>812</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

# SPU - WATER

## Seismic Upgrade: Pump Station Building 6-C

**Program:** Infrastructure **Start Date:** 1995 2nd Quarter  
**Type:** Improved Facility **End Date:** 2007 3rd Quarter  
**Location:** **Project ID:** C194013  
 Tolt Reservoir on South Fork Road

This project upgrades and improves the seismic reliability of existing Tolt buildings that remain in use following completion of the Tolt Filtration plant in 2000.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	47	0	0	0	0	180	488	0	715
<b>TOTAL FUNDS</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>180</b>	<b>488</b>	<b>0</b>	<b>715</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Seismic Upgrade: Queen Anne Replacement #1 and #2

**Program:** Infrastructure **Start Date:** 1994 4th Quarter  
**Type:** New Facility **End Date:** 2003 2nd Quarter  
**Location:** **Project ID:** C194004  
 WARREN AV N and LEE ST  
**Urban Village:** Queen Anne **Neighborhood District:** Magnolia/Queen Anne

This project replaces the existing aging Queen Anne Standpipes with a larger tank in order to improve seismic reliability, increase water storage, provide for worker safety, and improve water quality. The new tank connects to the Queen Anne Pump Station currently being designed, which improves the water pressure in the higher elevation areas of the Queen Anne neighborhood.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	751	157	461	2,829	0	0	0	0	4,198
<b>TOTAL FUNDS</b>	<b>751</b>	<b>157</b>	<b>461</b>	<b>2,829</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,198</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

**Seismic Upgrade: Volunteer Park Standpipe**

**Program:** Infrastructure **Start Date:** 1994 4th Quarter  
**Type:** Improved Facility **End Date:** 2009 3rd Quarter  
**Location:** 1120 E PROSPECT ST **Project ID:** C194009  
**Urban Village:** Capitol Hill **Neighborhood District:** East District

This project improves the seismic reliability of the Volunteer Park Standpipe so that it can remain operational after a major earthquake. Water supply standpipes are critical for drinking water, sanitation, and fighting fires after earthquakes.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	204	0	0	0	0	144	199	0	547
<b>TOTAL FUNDS</b>	<b>204</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>144</b>	<b>199</b>	<b>0</b>	<b>547</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Seismic Upgrade: West Seattle Pipeline**

**Program:** Infrastructure **Start Date:** 1997 4th Quarter  
**Type:** Improved Facility **End Date:** 2002 4th Quarter  
**Location:** 2ND AV SW and SW 102ND ST **Project ID:** C197034  
**Urban Village:** Not in an urban village **Neighborhood District:** Southwest

This project surrounds the 48-inch West Seattle Pipeline with steel and concrete to prevent collapse in a seismic event. This project begins improving the seismic reliability of pipelines so that they remain operational after a major earthquake.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	74	261	266	0	0	0	0	0	601
<b>TOTAL FUNDS</b>	<b>74</b>	<b>261</b>	<b>266</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>601</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

*\*Amounts in thousands of dollars*

# SPU - WATER

## Service Renewals and Retirements Program

**Program:** Infrastructure **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Location:** Citywide **Project ID:** C1109

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

This project replaces water service lines that are substandard, leaking, or have outlived their useful life, and disconnects service lines that are no longer required.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	3,000	3,062	3,088	3,299	3,381	3,466	3,552	4,961	27,809
<b>TOTAL FUNDS</b>	<b>3,000</b>	<b>3,062</b>	<b>3,088</b>	<b>3,299</b>	<b>3,381</b>	<b>3,466</b>	<b>3,552</b>	<b>4,961</b>	<b>27,809</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Service Renewals: Address Customer Requested Renewals

**Program:** Infrastructure **Start Date:** 1999 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Location:** Citywide **Project ID:** C121004

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

This program replaces service lines from the City main to the customer at either the same time or after the customer replaces his/her portion of the service line. The goal is to reduce a 10-year backlog of requests caused by a shortage of staff and resources at Water Operations.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	130	113	114	107	110	113	116	0	803
<b>TOTAL FUNDS</b>	<b>130</b>	<b>113</b>	<b>114</b>	<b>107</b>	<b>110</b>	<b>113</b>	<b>116</b>	<b>0</b>	<b>803</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Snoqualmie River Bank Stabilization

**Program:** Infrastructure **Start Date:** 2000 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2003 4th Quarter  
**Location:** Snoqualmie River near Tolt Pipeline crossing **Project ID:** WFNEW019

This project stabilizes the north bank of the Snoqualmie River, near river-mile 13.5, to minimize further erosion. Work takes place on private property. The King County Water and Land Resource Division of the Department of Natural Resources plans to design and construct the project with funding support from SPU.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	45	15	32	487	0	0	0	0	579
<b>TOTAL FUNDS</b>	<b>45</b>	<b>15</b>	<b>32</b>	<b>487</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>579</b>
<i>O&amp;M Costs (Savings)</i>			0	0	1	1	1	1	4

\*Amounts in thousands of dollars

**Sockeye Mitigation: Non-HCP Interim Hatchery**

**Program:** Water Supply/Conservation/ESA  
**Type:** Improved Facility  
**Location:**  
 Cedar River Watershed

**Start Date:** 1999 1st Quarter  
**End Date:** 2002 2nd Quarter  
**Project ID:** C1AA013

This project is closely tied to the Cedar River Sockeye Hatchery Project and associated Landsburg Mitigation Agreement. The project provided non-Habitat Conservation Plan funding for interim sockeye mitigation work during the first two quarters of 2001, which includes monitoring and research done in conjunction with operation of the existing Interim Sockeye Hatchery. The results of this work are utilized in the planning, design, and construction of the new Sockeye Hatchery. In the third quarter of 2001, funding for continuation of this work was provided within the HCP Program.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	4,971	153	5	0	0	0	0	0	5,129
<b>TOTAL FUNDS</b>	<b>4,971</b>	<b>153</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,129</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Sound Transit - Water System Relocations and Replacements**

**Program:** Other Agencies  
**Type:** Rehabilitation or Restoration  
**Location:**  
 Regional

**Start Date:** 2000 1st Quarter  
**End Date:** 2006 4th Quarter  
**Project ID:** WFNEW119

**Urban Village:** In more than one urban village

**Neighborhood District:** In more than one district

Sound Transit effects the Seattle water system both in Seattle City limits and in King County. This project has a very wide-ranging impact on the Seattle water system. The relocation/replacement of watermains, hydrants, water services, transmission lines, and other facilities is necessary. In addition, many parts of the water system require cathodic protection. Depending on the routes and construction method, modifications of private plumbing systems and building electrical grounding systems are required.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	378	151	604	644	660	564	347	424	3,772
<b>TOTAL FUNDS</b>	<b>378</b>	<b>151</b>	<b>604</b>	<b>644</b>	<b>660</b>	<b>564</b>	<b>347</b>	<b>424</b>	<b>3,772</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

# SPU - WATER

## South Lake Union Combined Sewer Overflow (CSO), Phase II

**Program:** Other Agencies **Start Date:** 1998 4th Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2003 3rd Quarter  
**Location:** **Project ID:** C3WF106

LAKEVIEW BV E

**Urban Village:** South Lake Union

**Neighborhood District:** Lake Union

**Neighborhood Plan:** South Lake Union

VALLEY ST

**Urban Village:** South Lake Union

**Neighborhood District:** Lake Union

**Neighborhood Plan:** South Lake Union

Due to a conflict with the new sewer alignment this project is relocating approximately 300 feet of 20-inch watermain located in Lakeview Blvd. E. In addition, a segment of 24-inch watermain in Valley Street is replaced due to a conflict with the proposed jacking pit for a tunneling machine.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	614	247	0	11	0	0	0	0	872
<b>TOTAL FUNDS</b>	<b>614</b>	<b>247</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>872</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## South Lake Union Neighborhood Improvements

**Program:** Other Agencies **Start Date:** 2000 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2005 4th Quarter  
**Location:** **Project ID:** WFNEW325

various

**Urban Village:** South Lake Union

**Neighborhood District:** Lake Union

**Neighborhood Plan:** South Lake Union

This project is part of Seattle Transportation's project to redevelop streets and intersections in the South Lake Union district. Work includes relocation and replacement of watermains in the vicinity of W Valley Street. Most of the watermain relocation work is funded by Seattle Transportation.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	4	5	0	0	0	0	0	9
<b>TOTAL FUNDS</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars



**Spot Sewer Improvement - Water Utility Impacts**

**Program:** Other Agencies **Start Date:** 2001 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2004 4th Quarter  
**Location:** varies **Project ID:** WFNEW340

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

This project includes coordination, research, design, inspection, and relocation/replacement of water facilities adversely impacted by spot sewer improvements.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	49	50	59	61	0	0	0	219
<b>TOTAL FUNDS</b>	<b>0</b>	<b>49</b>	<b>50</b>	<b>59</b>	<b>61</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>219</b>
<i>O&amp;M Costs (Savings)</i>			0	0	1	1	1	1	4

**Stream and Riparian Restoration**

**Program:** Habitat Conservation Program **Start Date:** 2000 2nd Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2050 4th Quarter  
**Location:** Cedar River **Project ID:** WFHCP2

Stream and Riparian Restoration is a category of projects within the Cedar River Watershed Habitat Conservation Plan (HCP) that involves mitigation related to streams and forests adjacent to streams and other aquatic habitats. Projects include streambank stabilization, streamside revegetation, large woody debris placement, conifer under-planting, restoration thinning, ecological thinning, stream crossing projects to improve flow patterns, and stream crossing improvements to reestablish fish passage.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	699	709	720	737	756	775	980	5,376
<b>TOTAL FUNDS</b>	<b>0</b>	<b>699</b>	<b>709</b>	<b>720</b>	<b>737</b>	<b>756</b>	<b>775</b>	<b>980</b>	<b>5,376</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

# SPU - WATER

## System Dewatering Program

**Program:** Infrastructure **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Location:** Regional **Project ID:** C1105

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

Blowoffs are valves located at low points in water pipelines and are used to drain or flush the line for emergency or maintenance operations. This program improves the configuration and operation of approximately 200 blowoffs. The System Dewatering Program goals include: minimizing flooding damage to downstream private development due to blowoff operations; addressing the discharge of water into sensitive streams; requiring monitoring and treatment for impacts due to chlorine, pH, and turbidity; eliminating possible cross-connections to non-potable water that impact water quality; and addressing improvements to water courses to reduce erosion or other damage caused by blowoff operations.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	847	300	740	794	814	1,272	1,304	1,210	7,281
<b>TOTAL FUNDS</b>	<b>847</b>	<b>300</b>	<b>740</b>	<b>794</b>	<b>814</b>	<b>1,272</b>	<b>1,304</b>	<b>1,210</b>	<b>7,281</b>
<i>O&amp;M Costs (Savings)</i>			2	2	3	4	5	6	22

## Tank Site Remediation Program

**Program:** Infrastructure **Start Date:** 1995 4th Quarter  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Location:** Regional **Project ID:** C1114

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

This program cleans up soil and other contamination at Seattle Public Utilities' steel water tank sites and some adjacent private properties. The contamination is typically due to lead-based paint and arsenic used in prior sand blasting operations.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	681	500	501	537	1,101	1,128	1,156	0	5,604
<b>TOTAL FUNDS</b>	<b>681</b>	<b>500</b>	<b>501</b>	<b>537</b>	<b>1,101</b>	<b>1,128</b>	<b>1,156</b>	<b>0</b>	<b>5,604</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

**Taps Program - New (Installation)**

**Program:** Infrastructure **Start Date:** Ongoing  
**Type:** New Facility **End Date:** Ongoing  
**Location:** Citywide **Project ID:** C1113

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

This program installs new water service lines (taps) from the City watermain to customers' property lines. Taps are usually installed within an average of six weeks following a customer's request.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	15,356	2,798	2,835	2,684	2,751	3,118	3,196	3,344	36,082
<b>TOTAL FUNDS</b>	<b>15,356</b>	<b>2,798</b>	<b>2,835</b>	<b>2,684</b>	<b>2,751</b>	<b>3,118</b>	<b>3,196</b>	<b>3,344</b>	<b>36,082</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Tolt Dam Safety Improvements**

**Program:** Infrastructure **Start Date:** 1998 3rd Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2004 4th Quarter  
**Location:** 12910 Kelly RD NE, Tolt Reservoir **Project ID:** C198002

This project implements corrective measures to dams and associated facilities in the Tolt Watershed as recommended in the November 1997 Independent Consultant Inspection report required by the Federal Energy Regulatory Commission. This work includes: investigating the condition of the 3,700 feet of corrugated metal pipe drains embedded in the Tolt Dam; performing replacements as necessary; replacing the right abutment concrete channel ditch; testing and possibly replacing piezometers; and making improvements to various instruments to meet measurement requirements.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	354	871	317	62	0	0	0	0	1,604
<b>TOTAL FUNDS</b>	<b>354</b>	<b>871</b>	<b>317</b>	<b>62</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,604</b>
<i>O&amp;M Costs (Savings)</i>			27	4	0	0	0	0	31

\*Amounts in thousands of dollars

# SPU - WATER

## Tolt Fisheries Mitigation

**Program:** Water Supply/Conservation/ESA  
**Type:** Rehabilitation or Restoration  
**Location:**  
 South Fork Tolt River

**Start Date:** 2004 1st Quarter  
**End Date:** 2004 4th Quarter  
**Project ID:** WFNEW385

This project improves fish habitat conservation efforts on the South Fork Tolt River based on an agreement between the Tolt Fisheries Advisory Groups and the City of Seattle.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	0	0	111	0	0	0	111
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>111</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>111</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

## Tolt Instrument and Warning System Upgrade

**Program:** Infrastructure  
**Type:** Improved Facility  
**Location:**  
 Tolt Dam

**Start Date:** 1999 1st Quarter  
**End Date:** Ongoing  
**Project ID:** C1AA012

This project replaces outmoded equipment and improves the reliability of the required Tolt Instrument and Warning System.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	1,803	50	25	27	28	28	29	0	1,990
<b>TOTAL FUNDS</b>	<b>1,803</b>	<b>50</b>	<b>25</b>	<b>27</b>	<b>28</b>	<b>28</b>	<b>29</b>	<b>0</b>	<b>1,990</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

## Tolt Pipeline I, Phase IIIB

**Program:** Infrastructure  
**Type:** Rehabilitation or Restoration  
**Location:**  
 Tolt Pipeline

**Start Date:** 1999 1st Quarter  
**End Date:** 2005 4th Quarter  
**Project ID:** C199003

This project is part of a long-term plan to rehabilitate or replace the Tolt Pipeline I. Four sections of the pipeline (about 12 miles) have been slip-lined or replaced to date. Another four sections (approximately 11 miles) remain in the long-term plan. This project rehabilitates one of the remaining four sections, which is about one mile long and crosses the Snoqualmie River Valley.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	25	111	0	0	110	3,666	0	0	3,912
<b>TOTAL FUNDS</b>	<b>25</b>	<b>111</b>	<b>0</b>	<b>0</b>	<b>110</b>	<b>3,666</b>	<b>0</b>	<b>0</b>	<b>3,912</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

\*Amounts in thousands of dollars

**Tolt Pipeline II, Phase IV**

**Program:** Infrastructure  
**Type:** New Facility  
**Location:**  
 Tolt Pipeline Right of Way

**Start Date:** 1995 1st Quarter  
**End Date:** 2002 1st Quarter  
**Project ID:** C194029

Tolt Pipeline II is a 25-mile second regional supply pipeline for the Tolt System, ranging in diameter from 54 to 87 inches. This pipeline improves the reliability of the Tolt system, allows rehabilitation of remaining portions of the Tolt Pipeline I, enhances operational flexibility, and provides increased capacity. Phase IV of this project includes installation of 32,000 feet of pipeline from the Tolt East Side Supply Junction to the Lake Forest Park Reservoir, and installation of a line valve station at 88th Avenue NE.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	8,806	9,454	48	0	0	0	0	0	18,308
<b>TOTAL FUNDS</b>	<b>8,806</b>	<b>9,454</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18,308</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

**Tolt Pipeline II, Phase VI-B**

**Program:** Infrastructure  
**Type:** New Facility  
**Location:**  
 Tolt Pipeline on Kelly Road

**Start Date:** 2003 1st Quarter  
**End Date:** 2007 1st Quarter  
**Project ID:** WFNEW118

This project is either a replacement or installation of pipe parallel to Tolt Pipeline I from the Filtration Plant to the end of the previous Tolt Pipeline I Replacement near Kelly Road. The size and placement are determined during the planning, permitting, and design phase, which begins in 2003. Sudden failure of the existing Tolt Pipeline I could interrupt supply and result in a failure to meet purveyor contract requirements during peak demand periods.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	0	107	550	632	0	0	1,289
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>107</b>	<b>550</b>	<b>632</b>	<b>0</b>	<b>0</b>	<b>1,289</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

\*Amounts in thousands of dollars

# SPU - WATER

## Tolt Pipeline II, Phases II and III

**Program:** Infrastructure **Start Date:** 1987 3rd Quarter  
**Type:** New Facility **End Date:** 2002 3rd Quarter  
**Location:** **Project ID:** C1AA010  
 Tolt Pipeline--160th Ave NE

Tolt Pipeline II is a 25-mile second regional supply pipeline for the Tolt System, ranging in diameter from 54 to 87 inches. This new pipeline improves the reliability of the Tolt system, allows rehabilitation of remaining portions of Tolt Pipeline I, enhances operational flexibility, increases reliability of the system during a major flood, landslide, or earthquake, and provides increased capacity. Phases II and III include installation of eight miles of 60-, 75- and 81-inch diameter steel-welded joint pipeline.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	63,282	1,470	63	0	0	0	0	0	64,815
<b>TOTAL FUNDS</b>	<b>63,282</b>	<b>1,470</b>	<b>63</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>64,815</b>
<i>O&amp;M Costs (Savings)</i>			19	19	19	19	19	19	114

## Tolt River Watershed Bridge Replacement Phase 2

**Program:** Infrastructure **Start Date:** 1997 2nd Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2005 4th Quarter  
**Location:** **Project ID:** C193004  
 Tolt River Watershed

This project replaces the failing wood bridge at Dorothy Creek - 50 Crossing in the South Fork Tolt River Watershed with a concrete bridge designed to allow a six-foot clearance for debris to pass.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	49	0	0	0	0	305	0	0	354
<b>TOTAL FUNDS</b>	<b>49</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>305</b>	<b>0</b>	<b>0</b>	<b>354</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## Tolt River Watershed Bridge Replacement Phase 3

**Program:** Infrastructure **Start Date:** 2005 3rd Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2006 4th Quarter  
**Location:** **Project ID:** C197029  
 Tolt River Watershed

This project replaces two crossings with two concrete bridges or other appropriate structures.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	0	0	0	0	0	90	896	0	986
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>90</b>	<b>896</b>	<b>0</b>	<b>986</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

**Tolt River Watershed Road Improvement Program**

<b>Program:</b> Infrastructure	<b>Start Date:</b> Ongoing
<b>Type:</b> Improved Facility	<b>End Date:</b> Ongoing
<b>Location:</b> Tolt Watershed	<b>Project ID:</b> C196007

This project provides drainage and other road improvements on portions of the 70 miles of forest roads in the South Fork Tolt River Watershed.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	1,188	180	180	215	198	124	0	0	2,085
<b>TOTAL FUNDS</b>	<b>1,188</b>	<b>180</b>	<b>180</b>	<b>215</b>	<b>198</b>	<b>124</b>	<b>0</b>	<b>0</b>	<b>2,085</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

**Tolt Treatment Decommissioning**

<b>Program:</b> Water Quality	<b>Start Date:</b> 2001 3rd Quarter
<b>Type:</b> Rehabilitation or Restoration	<b>End Date:</b> 2003 4th Quarter
<b>Location:</b> Tolt Watershed	<b>Project ID:</b> WFNEW345

Chemical treatment of water in the Tolt System transferred from SPU's 40-year-old facility to the newly built Tolt Treatment Facility in December 2000. Shortly after transferring the treatment point, SPU is salvaging some equipment and material, demolishing the old structure, and restoring the site to match the surrounding area.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	0	187	0	0	0	0	187
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>187</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>187</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

*\*Amounts in thousands of dollars*

# SPU - WATER

## Transmission Pipeline Analysis

**Program:** Infrastructure **Start Date:** 2001 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2011 4th Quarter  
**Location:** various **Project ID:** C101043

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

This project enables pipeline replacement and rehabilitation decisions to be based on improved estimates of the condition and service life of pipelines. The project assesses the condition of transmission pipelines, the environment surrounding them, the total cost of repair, and rehabilitation and maintenance (whole life costs). Condition data along with other parameters are modeled to produce a prioritization for pipeline replacements for the longer-term CIP.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	340	346	301	308	316	324	0	1,935
<b>TOTAL FUNDS</b>	<b>0</b>	<b>340</b>	<b>346</b>	<b>301</b>	<b>308</b>	<b>316</b>	<b>324</b>	<b>0</b>	<b>1,935</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## University Way NE - The Ave

**Program:** Other Agencies **Start Date:** 2000 2nd Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2003 2nd Quarter  
**Location:** UNIVERSITY WY NE and NE CAMPUS PY to NE 45TH ST **Project ID:** C101037

**Urban Village:** University Campus **Neighborhood District:** Northeast

**Neighborhood Plan:** University

Seattle Transportation plans to reconstruct University Way NE from NE Campus Pkwy to NE 45th. The work likely includes new sidewalks, new street surfaces and grades, new trees, street furniture, light poles, and bus zones. SPU's project replaces the watermain, hydrants, and services to avoid utility conflicts, maintain service, reduce damage and claims and reduce the necessity to perform future maintenance that could require pavement opening. This project is being coordinated with the neighborhood, Station Area Planning groups for Sound Transit, Seattle Transportation, University of Washington, and other utilities.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	448	413	11	0	0	0	0	872
<b>TOTAL FUNDS</b>	<b>0</b>	<b>448</b>	<b>413</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>872</b>
<i>O&amp;M Costs (Savings)</i>			0	5	5	5	5	5	25

\*Amounts in thousands of dollars



**Upland Forest Restoration**

**Program:** Habitat Conservation Program  
**Type:** Rehabilitation or Restoration  
**Location:**  
 Cedar River

**Start Date:** 2000 2nd Quarter  
**End Date:** 2050 4th Quarter  
**Project ID:** WFHCP3

Upland Forest Restoration is a category of projects within the Cedar River Habitat Conservation Plan that entails mitigation related to forest not directly associated with aquatic habitats (i.e., upland forest). These projects include restoration planting, restoration thinning, and ecological thinning within previously harvested upland forests. Restoration planting is done in selected areas of forest to promote the development of more natural and diverse ecological communities of vegetation. Restoration thinning reduces the density of trees by cutting to encourage tree growth. Ecological thinning includes thinning and other techniques such as creation of snags by killing trees to accelerate the development of characteristics of mature forests.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	571	672	690	706	725	743	922	5,029
<b>TOTAL FUNDS</b>	<b>0</b>	<b>571</b>	<b>672</b>	<b>690</b>	<b>706</b>	<b>725</b>	<b>743</b>	<b>922</b>	<b>5,029</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Volunteer Gatehouse Re-Roofing and Repairs**

**Program:** Infrastructure  
**Type:** Rehabilitation or Restoration  
**Location:**  
 1120 E PROSPECT ST

**Start Date:** 2006 1st Quarter  
**End Date:** 2007 4th Quarter  
**Project ID:** WFNEW335

**Urban Village:** Capitol Hill

**Neighborhood District:** Not in a district

This project replaces the roofing of the gatehouse, repairs cracks in the concrete walls, re-seals the exterior paint, renovates the interior, and corrects several worker safety problems. Repairs are coordinated and completed as part of the reservoir project. It is likely that the gatehouse building is going to be designated a landmark.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	0	0	0	0	116	0	116
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>116</b>	<b>0</b>	<b>116</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

# SPU - WATER

## Walsh Lake Ditch Phase III

**Program:** Infrastructure **Start Date:** 2000 1st Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2004 4th Quarter  
**Location:** Cedar Watershed **Project ID:** WFNEW206

This project is necessary to maintain the structural stability and water quality of the Walsh Lake Ditch system. Significant potential exists for water quality and water supply degradation from channel and levee failures. The project includes the design of erosion and grade control structures on watershed property west of Landsburg and alternatives analysis for the entire length of the drainage system from Walsh Lake to the Cedar River, including lower Rock Creek. The analysis also includes options for long-term management of the Walsh Lake Ditch levee and channel.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	77	132	133	145	55	0	0	0	542
<b>TOTAL FUNDS</b>	<b>77</b>	<b>132</b>	<b>133</b>	<b>145</b>	<b>55</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>542</b>
<i>O&amp;M Costs (Savings)</i>			0	0	2	2	3	3	<b>10</b>

## Watermain Extension Program

**Program:** Infrastructure **Start Date:** Ongoing  
**Type:** New Facility **End Date:** Ongoing  
**Location:** Citywide **Project ID:** C153000

**Urban Village:** In more than one urban village

**Neighborhood District:** In more than one district

The Watermain Extension Program provides standard watermains and fire hydrants to properties now served by private service lines or non-abutting watermains. Work is partially reimbursed by customers.

<u>Fund Source</u>	<u>LTD</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>Total</u>
SPU Water Fund	4,214	901	833	805	825	846	867	0	9,291
<b>TOTAL FUNDS</b>	<b>4,214</b>	<b>901</b>	<b>833</b>	<b>805</b>	<b>825</b>	<b>846</b>	<b>867</b>	<b>0</b>	<b>9,291</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	<b>0</b>

\*Amounts in thousands of dollars

**Watermain Rehabilitation Planning and Inspection**

<b>Program:</b> Infrastructure	<b>Start Date:</b> Ongoing
<b>Type:</b> Rehabilitation or Restoration	<b>End Date:</b> 2003 4th Quarter
<b>Location:</b> Citywide	<b>Project ID:</b> C115000

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

This project enables watermain replacement and rehabilitation planning based on improved estimates of the service life of watermains. The project assesses the conditions of watermains, the environment surrounding them, and the total cost of repair, rehabilitation, and maintenance. Condition data along with other parameters such as service criticality, location vulnerability, age, and replacement and/or rehabilitation cost is used to prioritize watermain replacements for the distribution system. This prioritization is also to be used as a planning tool for future CIP projects.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	448	497	506	429	0	0	0	0	1,880
<b>TOTAL FUNDS</b>	<b>448</b>	<b>497</b>	<b>506</b>	<b>429</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,880</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

**Watermain Rehabilitation Program**

<b>Program:</b> Infrastructure	<b>Start Date:</b> 2004 1st Quarter
<b>Type:</b> Rehabilitation or Restoration	<b>End Date:</b> Ongoing
<b>Location:</b> Regional	<b>Project ID:</b> WFNEW455

This program's priorities are guided by the Watermain Inspection and Planning Project and the System Deficiencies Analysis currently underway. In some cases, rehabilitation techniques may offer a more cost-effective solution than replacement; therefore, the program evaluates both rehabilitation and replacement as solutions to distribution system performance problems.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	0	0	0	0	4,953	5,076	5,203	5,445	20,677
<b>TOTAL FUNDS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,953</b>	<b>5,076</b>	<b>5,203</b>	<b>5,445</b>	<b>20,677</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars

# SPU - WATER

## Watermain Replacement Program

**Program:** Infrastructure **Start Date:** Ongoing  
**Type:** Rehabilitation or Restoration **End Date:** Ongoing  
**Location:** Citywide **Project ID:** C1104

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

This program systematically replaces older portions of the drinking water distribution system, to reduce leakage and watermain breaks, and improve water quality and fire protection. Targeted watermains are prioritized and scheduled for replacement in groups to maintain a steady volume of work and to facilitate quality design and construction management.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	9,114	1,598	1,614	1,611	0	0	0	0	13,937
<b>TOTAL FUNDS</b>	<b>9,114</b>	<b>1,598</b>	<b>1,614</b>	<b>1,611</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13,937</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

## West Seattle Inlet Pipe Rehabilitation

**Program:** Infrastructure **Start Date:** 1997 2nd Quarter  
**Type:** Rehabilitation or Restoration **End Date:** 2002 2nd Quarter  
**Location:** 8TH AV SW and SW TRENTON ST **Project ID:** C197016

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

This project rehabilitates the large valves in the West Seattle Gate House (WSGH). The WSGH inlet piping and valves leading into the reservoir are repaired to allow remote control of the water flowing into the reservoir. The reservoir bypass valve is replaced with a remote-controlled ball valve to allow for backing off the reservoir and controlling pressure to the West Seattle turbine house. An additional ball valve is installed at the turbine house near Trenton Tanks.

<b>Fund Source</b>	<b>LTD</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>Total</b>
SPU Water Fund	222	310	17	0	0	0	0	0	549
<b>TOTAL FUNDS</b>	<b>222</b>	<b>310</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>549</b>
<i>O&amp;M Costs (Savings)</i>			0	0	0	0	0	0	0

\*Amounts in thousands of dollars