

Overview of Facilities and Programs

Seattle Public Utilities (SPU) operates the City-owned water system serving a population of approximately 1.45 million people in a 450-square-mile area. The system extends from Edmonds to Des Moines and from Puget Sound to Lake Joy near Duvall. SPU retails water in Seattle and adjacent areas, and sells wholesale to 20 suburban water utilities and one interlocal association for distribution of water to their customers. SPU's Capital Improvement Program (CIP) is the vehicle for upgrading and expanding water infrastructure as well as constructing projects that protect, conserve, and enhance the region's environmental resources. The overriding goal of the CIP is to assure that the water system is properly upgraded and expanded to reliably deliver high-quality, safe drinking water to customers, protect the environment, and comply with regulations.

The Utility's financial policies (adopted in 2005) call for cash contributions to the CIP averaging 20% of total CIP costs over any given rate period. The remaining portion of the CIP is bond funded. Overhead costs for the CIP are budgeted in the SPU operating fund and are reimbursed as CIP expenditures are incurred.

Highlights

- **Open Distribution System Reservoirs:** To comply with water quality regulations and to enhance water system security, the City plans to cover all of its drinking-water reservoirs over the next several years. Two reservoirs, Bitter Lake and Lake Forest Park, have already been covered with floating covers. The Lincoln Reservoir/Cal Anderson Park project is complete. Design work for the replacement of Beacon, Myrtle, West Seattle, and Maple Leaf reservoirs commenced in 2005, and construction began on the Beacon and Myrtle Reservoir projects in 2006 with projected project completion at the end of 2008. Construction of a new buried reservoir to replace the West Seattle Reservoir will begin in 2008 with completion of the project by the end of 2010. The construction of Maple Leaf Reservoir's replacement is scheduled to begin in 2009 and end in 2011. SPU currently plans to decommission the Roosevelt Reservoir, and further evaluate the possibility of decommissioning the Volunteer Reservoir; however, specific actions at these two reservoirs are expected to occur after 2011.
- **Cedar River Watershed Habitat Conservation Plan (HCP):** In 2000, after seven years of intensive study and negotiation with state, federal, and tribal authorities, the City entered into a 50-year habitat conservation plan on the Cedar River Watershed. This agreement commits the City to certain projects and management practices to mitigate the environmental impact of drinking water diversions. Major HCP components include investments in fisheries enhancement projects such as the Landsburg Fish Passage Improvements, which was completed in 2004. The remaining large fisheries enhancement project within the Cedar HCP Program is the Cedar Sockeye Hatchery, which has been delayed at least a year as it undergoes an appeal of its Environmental Impact Statement. Other HCP projects within the municipal watershed include culvert improvements and other stream restoration work, removal of logging roads, and restoration of forest and lands. Research and monitoring are also being conducted in association with many of these projects. Approximately \$31 million is included in the 2008-2013 Adopted CIP for these projects.

Project Selection Process

SPU has adopted an Asset Management approach for selecting projects to build. This is a triple bottom line approach in which projects are evaluated on their economic, social, and environmental benefits, as well as the ability to meet customer service levels. The approach provides an elaborate analytical and modeling framework to find the most economical balance between capital investments and operation and maintenance expenditures so as to minimize the life cycle costs of any capital asset.

The Asset Management Committee (AMC), a committee of senior SPU executives, reviews each project valued at \$250,000 or more and assures that only projects that meet the benefit criteria move forward. As a result of this analysis, several projects have been dropped due to the costs far exceeding the benefits. Several cost-effective

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master planning efforts were approved to create up-to-date improvement and/or upgrade plans for several groups of assets. Other projects have been expanded or expedited because the benefits exceed the costs.

Program Category Summaries

The Proposed Water CIP totals approximately \$83.9 million in 2008 (including Technology projects funded by the Water Fund, displayed in a separate section of this CIP), or \$7.6 million higher than the 2008 Endorsed Budget. In the Distribution BCL, the higher demand for taps results in an increase of \$4.3 million for that program. The Watermain Rehabilitation program increases slightly in order to fund specific projects that will in turn reduce maintenance costs. Likewise, the Transmission Pipeline Rehabilitation program, in the Transmission BCL, sees an increase to initiate new projects that will save maintenance costs. The 2008 budget for the Water Quality and Treatment BCL increases by \$2.76 million due to the following: inflationary costs for the West Seattle Reservoir Covering project, acceleration of the Maple Leaf Reservoir Covering project, and an adjustment to the cash flow for the Beacon Reservoir Covering project, without affecting overall costs. In the Water Resources BCL, a few projects result in increases: acceleration of the Morse Lake Pumping Plant project, increased site condition costs for the Cedar Moraine Improvements project, and a delay with the Landsburg Flood Passage Improvements project. In the Watershed Stewardship BCL, the budget increases by \$1.52 million largely due to implementation of the Muckleshoot Indian Tribe Agreement and expanding the scope for the Endangered Species Act Chinook Research and Monitoring Project.

The Water CIP is comprised of eight program categories, which are summarized below.

Distribution: Projects and programs in this program category relate to repairs and upgrades to the City's water lines, pump stations, and other facilities that are part of the distribution system (serving only retail customers).

Habitat Conservation Program: This program category includes projects and programs directly related to implementation of 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 evaluations.

Shared Cost Projects: This program includes capital improvement projects that receive funding from multiple SPU funds. In 2008, the program includes funding for utility relocation due to the Alaskan Way Tunnel & Seawall Project, Operational Facility Improvements, the Operations Control Center Upgrade, Security Improvements, and Sound Transit Light Rail.

Technology: This program category makes use of recent technology advances to increase efficiency and productivity. Water-supported technology projects are shown grouped with technology projects supported by SPU's other fund sources.

Transmission: The purpose of this program category is to repair and upgrade the City's large transmission pipelines that bring untreated water to the treatment facilities, and convey water from the treatment facilities to Seattle and its suburban wholesale customers' distribution systems.

Water Quality & Treatment: The purpose of this program category is to design, construct, and repair water treatment facilities, and remaining open water reservoirs. This program also manages the delivery of drinking water quality and treatment services to meet customer and environmental service levels and to comply with state and federal drinking water regulations.

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Water Resources: The purpose of this program category is to plan for and produce untreated water to meet anticipated demands at our supply reliability standard, and promote residential and commercial water conservation.

Watershed Stewardship: Projects and programs in this program category provide environmental protection, sustain the environment, and enhance environmental quality, both locally and regionally. Several of the projects are implemented in response to the listing of the Chinook salmon as a threatened species under the Endangered Species Act.

Anticipated Operating Expenses Associated with Capital Facilities Projects

When appropriate, the projects in the Water Fund CIP include operations and maintenance cost estimates. These estimates will be refined after project completion and will be included as part of SPU's future O&M Proposed Budget submittals.

