

## Overview of Facilities and Programs

Seattle Public Utilities (SPU) operates the City-owned water system serving a population of approximately 1.3 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 immediately adjacent areas, and sells wholesale to 26 suburban water utilities 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 to average of 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 project is essentially complete and the Seattle Parks Department is expanding the Cal Anderson Park over the reservoir. Design work for the replacement of Beacon, Myrtle, West Seattle, and Maple Leaf reservoirs commenced in 2005, and construction begins on the Beacon and Myrtle Reservoir projects in 2006 with completion of the project by the end of 2008. Construction of a new buried reservoir to replace 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 2011 and end in 2013. SPU currently plans to decommission Roosevelt Reservoir, and further evaluate the possibility of decommissioning Volunteer Reservoir as well. 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 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 \$34 million is included in the 2006-2011 Proposed 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 and their 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 facility.

A committee of senior SPU executives, the Asset Management Committee (AMC), reviews each project valued at \$250,000 or more and assures that only projects that meet the benefit criteria move forward. Several projects have been dropped, as their costs were higher than their benefits. Several cost-effective master planning efforts were

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approved to create up-to-date improvement and upgrade plans for several groups of assets. Other projects have been expanded or expedited because their benefits exceeded their costs.

### Program Category Summaries

The Water CIP appropriates \$77 million in 2006 (including Technology projects funded by the Water Fund, displayed in a separate section of this CIP). The CIP is comprised of nine program categories, which are summarized below.

**Bonneville Agreement:** This program includes projects to fund the implementation of Ordinance 121212 related to construction by the Bonneville Power Administration of an electric power transmission line project through the Cedar River Watershed.

**Environmental 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.

**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.

**Infrastructure:** This program category 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.

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

**Shared Cost Projects:** This program includes capital improvement projects that receive funding from multiple SPU funds. In 2006, the program includes funding for the Alaskan Way Viaduct & Seawall, Facility Improvements, the SPU Operations Control Center Upgrade, a Utility Payment Center 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.

**Water Quality:** The major element of this program category is the covering of the open reservoirs discussed in more detail above. Also included is the upgrade to the Supervisory Control and Data Acquisition (SCADA) system that is used to monitor and control the City's water system, and projects to enhance the security of the water system.

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**Water Supply:** This program category repairs and upgrades water transmission pipelines and promotes residential and commercial water conservation. The replacement of the last mile-long segment of the original Tolt Pipeline No. 1 is included in this program. Also included is a new potential project to construct new permanent pump stations and pipelines to increase the reliability of the Cedar supply during severe droughts, although the scope of the project, its costs and benefits are still being evaluated. Finally, regional and Seattle-only conservation programs are included in this category as an alternative to developing new water sources in the future.

### **Anticipated Operating Expenses Associated with Capital Facilities Projects**

For most projects in the Water CIP, there are no new 2006 operations and maintenance costs, or these costs have not been calculated (N/C). In these cases, the cost impacts of the project are either insignificant or are offset by cost savings realized by other projects.