

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 21 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 overarching 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:** Seattle Public Utilities (SPU) is replacing its open finished drinking water reservoirs with underground structures that will improve the quality and security of the water system. The City finished underground replacement work on Magnolia Reservoir in 1995 and Lincoln Reservoir in 2004. Construction of the Beacon and Myrtle Reservoir under-grounding began in 2006 and will be completed in 2008. Construction of a new buried reservoir to replace West Seattle Reservoir began in 2008 and is targeted for completion by the end of 2010. The construction of Maple Leaf Reservoir's replacement is scheduled to begin in 2009 and end in 2011. SPU plans to decommission Roosevelt Reservoir, and further evaluate the possibility of decommissioning Volunteer Reservoir; however, permanent actions at these two reservoirs are not expected to occur until after Maple Leaf Reservoir is completed and the City has had an opportunity to take them off-line for a period of time to observe the water system's performance without them.
- **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 for the Cedar River Watershed. This agreement commits the City to certain projects and management practices to mitigate the environmental impacts 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 projects within the Cedar River HCP Program are the Cedar Sockeye Hatchery, and acquisition of fish habitat lands in the lower Cedar River. Other HCP projects within the municipal watershed include culvert improvements and other stream restoration work, removal of logging roads, and forest restoration. Research and monitoring are also being conducted in association with many of these projects. Approximately \$30.0 million is included in the 2009-2014 Proposed CIP for these projects.

Project Selection Process

SPU has adopted an asset management approach for selecting projects to build. This triple bottom line evaluates projects for their economic, social, and environmental benefits, as well as the ability to meet customer service levels. The approach provides an 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 which minimize life cycle costs and meet triple bottom line 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 master planning efforts were approved to create up-to-date

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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 \$120.2 million in 2009 and \$120.5 million in 2010 (including Technology projects funded by the Water Fund, displayed in a separate section of this CIP).

In the Distribution BCL, the 2009 Proposed Budget is lower than the 2009 planned funding level shown in the 2008-2013 Adopted CIP by \$5.7 million. This reduction is largely due to delaying Watermain Rehabilitation projects and some Seismic Upgrade Pipeline Backbone projects. Cost estimates for the New Taps program, however, are higher to reflect the expectation that demand for taps will continue to be healthy.

In the Habitat Conservation Program BCL, delays to some projects, including the Cedar Sockeye Hatchery, result in lower 2009 estimates relative to the planned funding level.

In the Shared Cost Projects BCL, the 2009 Proposed Budget is higher than the planned funding level by \$12.5 million, largely due to higher estimates for the Bridging the Gap Program and utility relocation for the Alaskan Way Viaduct/Seawall Replacement project. Furthermore, deferral of some costs from 2008 to 2009 results in a larger 2009 budget for the SCADA program.

In the Transmission BCL, the 2009 Proposed Budget exceeds the planned funding level by \$1.5 million, primarily driven by the need to add the Control Works Surge Tank Cover project (under the Transmission Pipeline Rehabilitation Program), as required by the Department of Health.

The Water Quality and Treatment BCL 2009 Proposed Budget is lower than the planned funding level by approximately \$534,000. In 2009 the West Seattle Reservoir Covering project costs were reduced in part because the construction bid was lower than the Engineer's estimate. This resulted in a downward adjustment of the 2009 cost projection. In addition, the Beacon Reservoir Covering project is in a multi-year construction phase and has shifted approximately \$684,000 into 2009. Total project costs for the Beacon Reservoir have not changed.

In the Water Resources BCL, the 2009 Proposed Budget is slightly lower than the planned funding level largely due to shifting project costs for Morse Lake Pumping Plant and Landsburg Flood Passage to later years and reallocation within the BCL to the highest priority projects.

In the Watershed Stewardship BCL, the 2009 Proposed Budget is higher than the planned funding level by \$3.2 million due to increases in the Endangered Species Act (ESA) Tolt Levee Modifications project which provides restoration of approximately 50 acres of natural salmon habitat at the mouth of the Tolt River in Carnation, Washington.

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 Plan: This program category includes projects and programs directly related to implementation of the Cedar River Watershed Habitat Conservation Plan. Projects are grouped into eight categories: road improvements and decommissioning, stream and riparian restoration, upland forest restoration, Landsburg fish passage, Cedar River sockeye hatchery, improvements to the Ballard Locks for fish passage and water conservation, fish habitat protection and restoration in the lower Cedar River below the municipal watershed boundary, and evaluation of Cedar permanent dead storage in Chester Morse Lake.

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Shared Cost Projects: This program includes individual capital improvement projects which typically benefit multiple Lines of Business (e.g., the water line of business and the drainage and wastewater line of business) and whose costs are "shared," or paid for, by more than one of SPU's utility funds. In 2009, Water funded projects include water infrastructure relocations related to the Alaskan Way Viaduct & Seawall Replacement, "Bridging the Gap," and Sound Transit projects, as well as fleet and heavy equipment purchases, improvements to SPU operational facilities, and security and infrastructure control systems.

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.

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

Watershed Stewardship: Projects and programs in this program category provide habitat protection and restoration, sustain the environment, and enhance environmental quality, both locally and regionally. Most of the projects in this program category are located within the Cedar and Tolt River municipal watersheds. Three of these projects are being carried out 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.

