

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. Seattle Public Utilities' Capital Improvement Program (CIP) is the vehicle for upgrading and expanding Water infrastructure as well as constructing projects that protect, conserve, and enhance our 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 (as proposed by the Executive in Fall 2004) 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 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. A new buried reservoir is in the final stages of construction as a replacement for the open Lincoln Reservoir, which has been out of service since late 2002. Design work for the replacement of Beacon, Myrtle, West Seattle, and Maple Leaf reservoirs will commence by the end of 2004, and two of them – Beacon and Myrtle – will proceed into construction in 2006 to be completed by 2008. Construction of a new buried reservoir to replace West Seattle Reservoir will begin in 2008 and be completed in 2010, with construction of Maple Leaf Reservoir's replacement starting in 2011, and ending 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 2010, which falls outside the six-year budgetary period.
- **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 (EIS). Other HCP projects within the municipal watershed include culvert improvements and other stream restoration work, removal of logging roads and restoration of forestlands. Research and monitoring are also being conducted in association with many of these projects. Approximately \$31 million is included in the 2005-2010 CIP for these projects.

Project Selection Process

SPU recently adopted an Asset Management approach for selecting which projects to build. This is an essentially econometric, end-result focused approach in which only projects that provide greater customer benefit (based on adopted service levels) than their respective costs are allowed to proceed. The approach also 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 life cycle costs of any facility.

A committee of senior SPU executives, the Asset Management Committee (AMC), was created to guide the Utility into fully adopting Asset Management, and to assure that only projects that meet the benefit criteria move

Seattle Public Utilities – Water

forward. Existing projects already under construction were allowed to proceed, but all remaining projects were subjected to “business case” review. Several projects have since been dropped, as their costs were higher than their benefits. Several cost-effective master planning efforts were approved to create up-to-date improvement and upgrade plans for several groups of assets.

Program Category Summaries

The Water CIP allocates \$164 million during the next biennium (including Technology projects funded by the Water Fund) including \$83 million in 2005. 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 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 Projects: This program category includes projects that benefit, and are thus paid for by more than one of SPU’s utility funds. Included are the large transportation projects like the Seattle Monorail, the Sound Transit Light Rail, and the potential replacement of the Alaskan Way Viaduct and Seawall.

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.

Seattle Public Utilities – Water

Water Supply: This program category repairs and upgrades water transmission pipelines and promotes residential and commercial water conservation. Included in it is the replacement of the last mile-long segment of the original Tolt Pipeline No. 1 made with pipe that has failed in the past. 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 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 2005 operations and maintenance costs, or they have not been calculated (N/C). In these cases, the cost impacts of the project are either insignificant or are offset by cost savings realized by other projects.

City Council Changes to the CIP

The Council adopted the following two capital budget provisos that limit SPU's spending on the South Lake Union Water Main/Utility Coordination Project (project C104036):

- No more than \$71,000 of the money appropriated for 2005 for SPU's Water Utility Other Agencies Budget Control Level can be spent to pay for the South Lake Union Water Main/Utility Coordination Project.
- None of the money appropriated for 2005 for SPU's Water Utility Other Agencies Budget Control Level can be spent to pay for the South Lake Union Water Main/Utility Coordination Project, until the Seattle Department of Transportation (SDOT) and SPU have signed a Memorandum of Agreement that explicitly requires SDOT to fully reimburse SPU from the funds appropriated in Ordinance 121565 for the expenditures incurred by SPU in support of preliminary design and engineering for the South Lake Union Street Car project.