CIP White Paper

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Section 1 - Overview

Seattle Public Utilities (SPU) is responsible for maintaining the network of sewer and drainage systems throughout the City of Seattle. These systems include approximately:

- 948 miles of sanitary sewers *
- 477 miles of storm drains
- 472 miles of combined sewers *
- 68 pump stations
- 90 permitted combined sewer overflow outfalls
- 295 storm drain outfalls
- 189 stormwater quality treatment facilities
- 145 flow control facilities
- 38 combined sewer overflow control detention tanks/pipes

* Based on Permitted Use. In past years the statistics for Sanitary Sewers and Combined Sewers were determined based on "Probable Flow", which is a designation used by GIS and engineers for planning purposes and is not a precise classification used for issuing permits. "Permitted Use" is a better measure for statistical data and more accurate because this classification is used by the Department of Planning and Development (DPD) for issuing connection permits.

The Drainage and Wastewater (DWF) CIP is the vehicle for rehabilitating, replacing, improving and expanding this infrastructure, as well as constructing projects that protect, conserve, and enhance our region's environmental resources. Planned spending in the DWF CIP is approximately $525 million over the next six years.

Historically, the DWF CIP has been funded primarily by revenue bonds serviced by ratepayers. However, DWF financial policies adopted in 2003 gradually increase cash contributions from the Utility to fund the CIP. By 2007, 25% of total CIP costs were funded by a cash contribution, with the remaining capital needs being debt financed. Overhead costs for the CIP are budgeted in the SPU operating fund and are reimbursed as CIP expenditures are incurred. DWF rates are currently being reviewed by Council for the three-year period of 2013-2015.

Section 2 - Summary of Upcoming Budget Issues and Challenges

The Drainage and Wastewater CIP must address the challenge of managing large priority projects while still accomplishing Mayoral and Council priorities and complying with U.S. Environmental Protection Agency (EPA), Washington State Department of Ecology (DOE), and the National Pollutant Discharge Elimination System (NPDES) permits - all within the financial limitations of the fund.

The City of Seattle negotiated a consent decree this year between the City, the EPA, and the DOE for compliance with the Clean Water Act and state regulations. This requirement will drive spending in the Combined Sewer Overflows (CSO) Reduction Program over the next several years. Additionally, an NPDES permit for stormwater, granted by the State government in 2007, introduced more prescriptive requirements to help protect local waterways and Puget Sound from damaging pollutants and excessive runoff. This increasing regulatory emphasis on protecting and improving

water quality has resulted in the need for the City of Seattle to make substantial investments in detention, treatment, CSO retrofits and reductions, and green stormwater infrastructure (GSI).

Detention is the storage of stormwater during a rainfall event and can be accomplished through detention ponds, underground tanks or through infiltration into the ground. Detention can be added to the drainage system to offset the impacts of larger storms that overwhelm the conveyance capacity of the combined sewer system and can result in backups of sewage, localized flooding and releases of untreated sewage. Treatment is the removal of pollutants and can be accomplished through infiltration or the use of technology such as specialized media filters. CSO reductions are focused on optimizing the existing collection system using low-cost retrofits and constructing large underground storage facilities to reduce overflows to waterways. GSI is the use of green solutions to help reduce overflows by allowing stormwater to infiltrate slowly into the ground and cutting the volume of stormwater entering the system. GSI includes specific treatments that rely on specialized soils and plants that provide flow control and/or water quality benefits. The use of GSI is required through Seattle's NPDES permit and Stormwater Code.

CIP funding is also needed to improve the existing drainage system so that residents experience less flooding and fewer sewage backups. Sewer backups are prohibited and considered by regulators to be a violation of federal permits. Prudent investment in capital projects and maintenance moves SPU closer to meeting this standard, and this performance level benefits ratepayers by avoiding costly fines and damages.

The Combined Sewer Overflow (CSO) Reduction Program constitutes one of the major investments and challenges for the Drainage and Wastewater Fund in upcoming years. During heavy rains, the combination of stormwater (about 90 percent of the volume) and sewage may exceed the capacity of the combined sewer system and overflow into local waterways, causing a combined sewer overflow. CSOs spill a mixture of raw sewage and stormwater into local waterways at 90 outfalls throughout the City of Seattle. These spills violate water quality standards, create unacceptable risk to public health, contaminate sediment and habitat for endangered species and pollute Puget Sound. CSO spills are illegal and unacceptable under any standard of environmental care.

While annual overflows have been reduced from 30 billion gallons per year in 1970 to less than 100 million gallons per year today, SPU is still not meeting regulatory mandates which limit overflows to one overflow per outfall location per year. SPU is required by state and federal law to achieve control of CSOs by 2025 through a Long Term Control Plan to be completed by 2015. SPU must also achieve significant permit milestones for the control of CSOs to Lake Washington by December 30, 2015. Most recently, the U.S. Department of Justice on behalf of the U.S. Environmental Protection Agency and Washington State Department of Ecology finalized a consent decree describing measures U.S. Justice will require of SPU to remedy violations of the Clean Water Act. The consent decree includes, among other significant requirements, completion of a Long Term Control Plan by 2015 and control of all CSOs by 2025. Continuing investments in CSO control will enable SPU to meet current permit requirements including preparation of a Long Term Control Plan, accomplish required milestones to control CSOs into Lake Washington and achieve compliance with the 2025 goal.

SPU is expected to spend approximately $215 million over the next six years (2013-2018) on CSO reduction projects. The projects will include a combination of underground storage tanks, GSI, system retrofits, and the development of a long-range plan for CSO projects to be constructed from 2016-2025. One of the biggest challenges of the program is siting wastewater facilities in a dense urban environment. SPU is addressing that challenge through an early and active community/stakeholder involvement process on each of its projects. Another challenge revolves around SPU's relationship with King County and maintaining an active partnership to operate the wastewater system and plan for potential joint CSO reduction projects.

The Drainage and Wastewater CIP must also ensure that basic service level programs, such as flooding and system capacity, are not stripped of funding as regulatory requirements continue to grow. The separated drainage and wastewater system is at capacity during storm events at various locations across the City. The impacts range from very serious (basement sewer back-ups) to nuisance (limited street or yard flooding) issues. SPU is moving forward to address the highest priority locations with capital improvements using available funding and staff resources. These highest priority projects include the South Park Pump Station project, the Thornton Confluence Improvement project, and Broadview Sewer and Stormwater Improvements project.

- The South Park Pump Station project will construct a pump station and water quality facility in South Park. The pump station will allow the existing storm drain trunk to meet the level of service adopted in the 2004 Comprehensive Drainage Plan. In turn, this allows for future projects to expand the collection system to address flooding complaints. The water quality facility will treat most stormwater flows from the basin, reducing pollutant loading to the Duwamish River. The project's engineering design is complicated by the tidal flows present in the Duwamish.

- The Thornton Confluence Improvement project will replace the road culvert at 35th Ave NE and restore the floodplain area at the confluence of the north and south forks of Thornton Creek. This will reduce local flooding impacts to roads and private property as well as enhance instream and riparian habitat in a critical segment of the creek.

- The Broadview neighborhood has experienced a long history of capacity-related backups and overflows. The Broadview Sewer and Stormwater Improvements project will test non-traditional solutions to these longstanding issues, with a goal of reducing sewer backups and stormwater flooding in the Broadview basin.

When making investments in capital facilities that will last decades, it makes financial sense to understand and consider incorporating the potential impacts of climate change on local precipitation and sea levels in Puget Sound. There have been three major storms (2006, 2007, and 2010) in recent years that have resulted in serious drainage and wastewater impacts related to capacity. Scientists indicate that there is a potential that storms will become more intense and more frequent in the near future. This variability requires the utility to have a much more in-depth understanding of how the system functions under different weather conditions. The utility will need to forecast impacts to the stormwater and combined systems on a much more localized level. This type of work will require more fully developed system models than in the past.

Section 3 - Thematic Priorities

Projects in the DWF CIP ensure facilities are properly constructed and maintained, and regulatory requirements are met. Projects in the CIP are also guided by various federal regulations, City policies, long-term plan documents, and the SPU Asset Management Committee (AMC) benefit criteria. Many Drainage and Wastewater CIP projects are outlined in the Wastewater System Plan, the Combined Sewer Overflow Reduction Plan, and the Comprehensive Drainage Plan. The Drainage and Wastewater Fund considers three main criteria when prioritizing work: public health and safety, environmental protection/regulatory requirements, and Mayor/Council priorities. Project timing can be influenced by opportunities or requirements to combine construction activity with other projects.

Public Health and Safety: The overriding priority for the Drainage and Wastewater Fund is maintaining public health and safety. This will be accomplished through capital programs and projects including the 14th and Concord Combined Sewer System (CSS) Improvement project, the Localized Flood Control Program, and the South Park Pump Station project. The primary Capital program is the sewer and drainage rehabilitation program. This program is focused on identifying and correcting defective or deteriorating infrastructure, including drainage and wastewater pipes, before failure which could result in sewer backups, roadway collapses or landslides.

Environmental Protection/Regulatory Requirements: The City of Seattle/SPU must meet state and federal regulatory requirements in order to comply with the Clean Water Act (CWA) and the recently negotiated consent decree between the City, the U.S. Environmental Protection Agency, and the Washington State Department of Ecology. The two most significant regulatory drivers associated with the CWA are the NPDES Waste Discharge Permit (aka NPDES CSO Permit) and the NPDES Phase I Municipal Stormwater Permit (NDPES MSW Permit). As required by the NPDES CSO Permit, Seattle developed a 2010 CSO Reduction Plan Amendment to describe the effort to reduce CSOs to the state standard of one overflow per outfall per year. As part of meeting these requirements, SPU will be constructing CSO reduction facilities at Windermere, South Genesee, and South Henderson. DWW is committed to completing this program by 2025 at an estimated cost of $500 million.

As part of the NPDES MSW Permit, Seattle is required to have a Structural Stormwater Control Program to address stormwater impacts that are not adequately controlled through other required permit actions. As part of meeting this requirement, SPU is constructing stormwater quality and flow control facilities including South Park Pump Station, the Capitol Hill Water Quality Facility, and Broadview sewer system improvements.

Mayor/Council Priorities: Projects in the six-year CIP that address Mayor and/or Council priorities include the Venema Natural Drainage System (NDS) and Capitol Hill Water Quality Facility where green stormwater infrastructure will be used to reduce stormwater impacts while contributing to meeting sustainability goals. The Venema NDS project will construct natural drainage elements including large bioretention swales and permeable pavement in alleys. A swale is a specially designed area where stormwater can infiltrate into or through the ground or vegetation, depending on whether it is designed primarily for water quality treatment or flow control. The result will be improved stormwater flow control and water quality treatment in the Venema basin which will improve hydrology and water quality in Venema Creek, a tributary of Piper's Creek.

The Capitol Hill Water Quality project will result in an innovative regional scale stormwater facility. The facility will include vegetated bioswales which will provide stormwater treatment for a portion of the largest sub-basin draining to South Lake Union while providing a vibrant pedestrian-friendly streetscape. This project will be constructed in partnership with an adjacent land developed and includes new sidewalks and road surfaces.

Section 4 - Project Selection Criteria

SPU's capital planners identify candidate CIP projects through an awareness of ongoing planning processes (e.g. comprehensive plans, program plans), external projects and opportunities, and emergencies or other unexpected events that indicate specific investments are possibly recommended. SPU's Asset Management system then provides rigorous analysis of projects, using a business case process that establishes whether a problem or opportunity is timely and important, and whether the proposed solution is superior to alternatives based on a triple bottom line analysis (economic, environmental and social) of life cycle costs and benefits – or is a "must do" project (e.g. required by regulation).

After candidate projects have been identified, SPU prioritizes its projects for inclusion in the CIP based on the following set of criteria:

- **Regulatory Mandates, Legal Agreements:** The degree to which the project is driven by federal, state, and local laws, permit and regulatory requirements, and consent decrees; as well as by legal agreements with public and private parties. Examples of highly ranked projects in this category include the Windermere, South Genesee and South Henderson CSO projects.

- **External Drivers:** SPU's responsiveness to, or engagement with, the projects of other departments or jurisdictions, and the specific mandates of the City Council and Mayor. Examples of highly ranked projects in this category include the Alaskan Way Viaduct and Mercer Corridor projects.

- **Infrastructure:** How a project addresses infrastructure conditions or vulnerabilities. Examples of highly ranked projects in this category include the Point Sewer Pipe Rehabilitation and Emergency Rehabilitation programs.

- **Level of Service:** The importance of the project in providing or improving services to customers. Examples of highly ranked projects in this category include the South Park Pump Station, Localized Flood Control program, Sanitary Sewer Overflow Capacity program, Point Sewer Pipe Rehabilitation, and Emergency Rehabilitation programs.

- **Other Factors:** Other important factors include high net present value or cost-effectiveness, social or environmental benefits not otherwise captured, a project already in progress or near completion, limited time opportunity, demonstration projects, community visibility, and outside funding. Examples of highly ranked projects in this category include the North 107th

and Midvale Drainage project (part of the Densmore Basin Drainage Improvements program) and the Long Term Control Plan.

Every project is rated against each criterion; criteria ratings are then considered in determining an overall project priority ranking, using expert judgment. Priority rankings for the CIP are determined by the leads for each Line of Business, with review by key internal stakeholders. The ranking scheme and criteria are the same for all Lines of Business, and are approved by the SPU Director and Asset Management Committee.

Project priority rankings are used to clarify and document which projects are most important (and why), to help determine which projects at the margin will be included or excluded (or deferred) from the CIP, and which projects should receive priority attention if a staff or financial resource constraint should arise.

Section 5 - Aligning Infrastructure with Planned Growth

The Capitol Hill Water Quality Facility will be located in the South Lake Union Urban Center and leverages the opportunity to team with private development during redevelopment to incorporate a regional stormwater treatment facility while increasing green space in the right of way. For the future, SPU is currently developing a system characterization process that will improve the staff's understanding of growth areas and impacts to the drainage and wastewater system.

Section 6 - Future Projects/What is on the Horizon

The Drainage and Wastewater Fund CIP will increase programs to meet requirements and commitments outlined in the CSO Reduction Plan. The 2013-2018 Proposed CIP includes significant investments for the Windermere, South Genesee, and South Henderson CSO reduction projects. Costs shifted for these projects from 2012 to 2013 and 2014 due to delays.

The six-year CIP also includes funding for the Long Term Control Plan, which will identify all remaining CSO projects throughout the city to achieve the Washington State requirement to reduce CSOs down to an average one untreated CSO per year per outfall. Funding to address those remaining CSO projects will need to be included in future CIP budget submittals. Additionally, water quality requirements for stormwater will likely result in increases in capital investment requirements on both new projects and potential retrofits of the existing system.

The programmatic analysis and prioritization currently being developed in the Flooding, Sewer Back-up, and Landslides business area will result in a comprehensive list of small to large CIP projects to be constructed over the next 15 to 20 years. Projects envisioned will be similar to current projects such as 14th and Concord CSS improvements, Broadview sewer system improvements and the South Park Pump Station.

Additional stormwater and CSO facilities, both structural and green, will require growing levels of operations and maintenance support for inspection and maintenance.

Section 7 - CIP Revenue Sources

SPU's Drainage and Wastewater CIP is funded largely by drainage and sewer ratepayers. SPU issues bonds serviced by ratepayers that cover approximately 75% of the CIP, with the remainder funded by cash. DWF rates are currently being reviewed by Council for the three-year period of 2013-2015. SPU also actively seeks grants and low interest loans. Recently awarded grants include three low-interest loans from the Washington State Department of Ecology's (DOE) Water Pollution Control Revolving Fund. These loans will help fund construction of the Venema Creek Natural Drainage System, Capitol Hill Water Quality, and South Park Pump Station projects. These loans are at a lower interest rate than what SPU can borrow/issue debt and offset the need to draw down extra dollars from the construction fund.

Section 8 - CIP Spending by Major Category

CIP Spending by Major Category
(in '000s)

Drainage and Wastewater Fund	2013	2014	2015	2016	2017	2018	Total
PROTECTION OF BENEFICIAL USES	$5,108	$5,142	$4,323	$5,222	$2,734	$3,083	$25,611
SEDIMENTS	$1,679	$2,050	$1,561	$797	$797	$797	$7,681
COMBINED SEWER OVERFLOWS	$43,834	$49,202	$36,144	$44,210	$18,222	$23,087	$214,699
REHABILITATION	$9,191	$8,770	$9,950	$12,850	$13,224	$13,102	$67,086
FLOODNG, SEWER BACKUP and LANDSLIDES	$16,710	$17,201	$7,173	$16,360	$26,700	$25,660	$109,804
SHARED COST PROJECTS	$10,728	$11,395	$8,179	$12,873	$10,459	$10,415	$64,050
TECHNOLOGY	$8,880	$7,613	$5,154	$4,720	$4,821	$4,942	$36,129
Total	**$96,131**	**$101,373**	**$72,484**	**$97,032**	**$76,956**	**$81,085**	**$525,061**

Protection of Beneficial Uses

This program makes improvements to the City's drainage system to reduce the harmful effects of stormwater runoff on creeks and receiving water bodies by improving water quality and protecting or enhancing creek habitat. The program includes projects to meet regulatory requirements. Funding in 2013 and 2014 will be focused on two cost effective stormwater projects: the Venema Creek Natural Drainage System project and the Capitol Hill Water Quality project. Both of these projects were cancelled in 2009 due to financial constraints, but have since been re-instated. Capital funding is also included to support the Knickerbocker Floodplain Improvement project, which was included in the 2012 2nd Quarter Supplemental.

Decreases in the **Protection of Beneficial Uses BCL** in 2013, compared to amounts adopted in 2012 in the 2012-2017 CIP, are primarily the result of the Venema Creek Natural Drainage System project. In 2012, schedule delays driven by community and design concerns, , shifted project construction costs from 2012-2013 to 2014-2015.

Sediments

The City of Seattle is named as a potentially responsible party (PRP) for the Duwamish River Superfund Site because of alleged contamination of sediments in the river from CSO and storm drain discharges. The City continues to work with the Washington State Department of Ecology, King County, and other PRPs on an assessment of contaminants and sources. The Sediments program provides funding for preliminary studies and analysis for cleanup of contaminated sediment sites in which the City is a participant, for actual cleanup of contaminated sites, for preliminary engineering for future cleanup efforts, and for liability allocation negotiations. Funding is used to develop studies and analyses required by regulatory agencies for determining the boundaries and cleanup requirements for specific action sites. The study phase of sediment remediation projects often requires multiple years before specific cleanup actions are defined. As regulatory agency cleanup requirements become clear, additional individual cleanup projects are included in subsequent CIP proposals.

Decreases in the **Sediments BCL** for 2013, compared to amounts adopted in 2012 in the 2012-2017 CIP, reflect the latest schedule and estimates based on negotiations and agreements between parties for proposed actions needed.

Combined Sewer Overflows

This program consists of projects that are mandated by state and federal regulations to control CSOs into the city's receiving waters. Projects include large infrastructure projects (e.g., storage structures, pipes, tunnels, wet weather treatment plants, stormwater separation, pump stations, etc.), smaller retrofits, construction of green infrastructure for CSO control, and development of regulatory required plans such as the Long-Term Control Plan. Key projects in the 2013 Budget include the Windermere, South Genesee and South Henderson CSO projects. When completed, these projects will result in cutting CSO volumes into Lake Washington by about 14 million gallons per year, a reduction of about 60 percent from current overflows.

Compared to amounts adopted in 2012 in the 2012-2017 CIP, the **Combined Sewer Overflows BCL** is decreasing in 2013 by $9.4 million reflecting revisions primarily due to the cash flow and schedules for the Windermere and S. Genesee CSO projects. Adjustments for Windermere are the result of delayed construction that was planned to start in April 2012, however the project experienced permitting delays that have since been resolved. Construction contracts were signed in July 2012, and construction is starting September 2012. The result is a shift of $7 million out from 2012 based on projected spending compared to the adopted CIP amount, a $7 million decrease compared to the endorsed amount in 2013, followed by a $17 million increase in 2014. Overall project costs have increased 19% due to increased construction costs determined as design progressed and the project became more defined. The original estimates for S. Genesee were based on high-level planning work, and have been refined to reflect the chosen alternative.

Rehabilitation
This program consists of projects to rehabilitate or replace existing drainage and wastewater assets in-kind to maintain the current functionality level of the system. Projects include pump station structures, major mechanical and electrical components, and force mains; drainage and wastewater control structures and appurtenances; and pipes and culverts. Individual projects are defined by the type and method of rehabilitation and/or replacement and include emergency rehabilitation, no-dig pipe and maintenance rehabilitation, point sewer pipe rehabilitation by crews, and point sewer pipe rehabilitation by contract.

Decreases in the **Rehabilitation BCL** for 2013, compared to amounts adopted in 2012 in the 2012-2017 CIP, are driven by the Pump Station and Force Main Improvements program and the Point Sewer Pipe Rehabilitation program. Reductions of $1.3 million in 2013 in the Pump Station and Force Main Improvements program reflect a recent CIP prioritization that cut the project portfolio to only the most critical projects during the proposed 3-year rate period. SPU will prioritize essential pump station and force main improvements that are highest risk or emergencies and make fewer replacements and upgrades. Similarly, reductions to the Point Sewer Pipe Rehabilitation program of $2.8 million in 2013 were driven by the recent CIP prioritization process. SPU will use remaining available funds to rehab those sites with the highest risk scores in addition to non-arterial, less complicated sites (emergencies at the connection, emergencies resulting from void inspections in the ROW, short sections of shallow pipe).

Flooding, Sewer Back-up, and Landslides
This program is responsible for preventing and alleviating flooding and sewer backups in the City of Seattle, with a primary focus on the protection of public health, safety, and property. The program area is focused on planning, design, and construction of channels, pipes, roadside ditches, culverts, detention ponds, and natural drainage systems that control and/or convey storm runoff to receiving bodies. This program also involves protecting SPU drainage and wastewater infrastructure from landslides and providing drainage improvements where surface water generated from the city right-of way is contributing to landslides. Finally, this program includes the Broadview Long Term Plan, which aims to reduce sewer backups and stormwater flooding in the Broadview basin.

Decreased funding for the **Flooding, Sewer Back-up, and Landslides BCL** in 2013 compared with amounts adopted in 2012 in the 2012-2017 CIP will delay two projects. Total decrease in proposed 2013 of $9.6 million is the result of the CIP prioritization to cut back to only the most critical projects between 2013-2015. Approximately $3 million worth of Culvert Replacement projects was moved out of 2013, only leaving funding to finish current projects in 2013. The Localized Flood Control program was reduced in the 2013-2018 Proposed CIP in order to focus on only the highest priority flood control projects. A decrease to 2013-2018 Proposed CIP compared to the 2012-2017 Adopted in the South Park Pump Station project resulted from delays related to the re-evaluation of water quality treatment technology and how it impacts and relates to the integrated plan (coordination with other CSO projects). Additionally, the decision was made to fold the Inflow/Infiltration Control program into the programmatic Sanitary Sewer Overflow (SSO) Capacity program and subsequently push funds into 2014.

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) where costs are "shared," or paid for, by more than one of SPU's utility funds. In 2013, the Shared Cost program includes funding for a number of interdepartmental projects including the Alaskan Way Viaduct and Seawall Replacement, Mercer Corridor and Sound Transit University Link. Funding is also included for SPU's Heavy Equipment Purchases, the Integrated Control Monitoring Program and a number of smaller projects.

Reductions in the **Shared Cost Projects BCL** for 2013, compared to amounts adopted in 2012 in the 2012-2017 CIP, are driven by the DWW Operations Relocation, the Mercer Corridor West Project and the Alaskan Way Viaduct (AWV) programs. The 2013-2018 Proposed CIP for AWV and Mercer Corridor West reflects the latest schedule and more refined cost estimates, which includes construction for the seawall and bored tunnel portals and associated utility relocation. Additionally, the DWW Operations Relocation project was reduced in 2013 because the project was cancelled after an executive decision was made not to relocate the DWW Operations Staff out of the Charles Street Complex due to the construction of the First Hill Streectcar maintenance shed.

Technology
This program category is presented in the separate "Technology CIP" section of SPU's 2013-2018 Proposed CIP. The 2013-2018 Proposed CIP increases the DWF technology CIP spending by $1.5 million as compared to the 2012 Adopted Budget in the 2012-2017 Adopted CIP. The Drainage and Wastewater Utility's share of the overall 2013 Technology CIP increase is 36% or $1.5 million based on the Drainage and Wastewater Utility's share of benefit from these projects. SPU will focus technology spending on the highest priority business needs. These include utility asset management (Maximo Upgrade/Technical Information Management), budget and financial management (Budget Planning and Forecasting, Summit Upgrade), customer contact and billing (Utility Customer Billing System/CCSS)), and science and system performance (Internet-based Supervisory Control and Data Acquisition Information Management System (I-SCADA IMS) Enhancements).

Note: Anticipated Operating Expenses Associated with Capital Facilities Projects

When appropriate, the projects in the Drainage and Wastewater 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 budget submittals. Additional stormwater and CSO facilities, both structural and green, will require growing levels of operations and maintenance support for inspection and maintenance.