



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Environmental Stewardship Initiative (“ESI”)		Proposal Number: 040.06NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Sheida Sahandy, x6168		One-Time/On-Going: On-Going
Fund: General	Attachments: Yes	Enter CIP Plan #:
List Parent/Dependent Proposal(s): “Parent” to Integrated and Sustainable Capital Investments (No. 040.07NN) Dependant on the City Manager’s Office (“CMO”) proposal (No. 040.04NN)		

Section 2: Executive Summary

This proposal supports the continuation of the Environmental Stewardship Initiative (“ESI”), a cross-departmental effort established by the CM to coordinate and leverage all of the City’s environmental actions. The ESI Strategic Plan guides implementation of Natural Assets, Built Environment, Climate and Energy, and Water and Material Lifecycle activities, aligned across departments, to achieve target goals ([Attachment A](#)). ESI staff continually scan international trends to match existing and emerging city needs/gaps with opportunities for external funding and partnership. Rationales for continuing ESI are: (1) it results in net monetary savings; (2) we are in a window of unprecedented federal funding opportunity for cities demonstrating a commitment to sustainability; and (3) damage to environmental systems can be irreparable - prevention is a more efficient and effective strategy.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$62,765	\$56,708
Other	214,550	126,650
	\$277,315	\$183,358

Supporting Revenue	2011	2012
	\$211,100	\$102,000

LTE/FTE	2011	2012
FTE	0.7	0.6
LTE	0.0	0.0
Total Count	0.7	0.6

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Cost savings: To cut costs (\$145,000), the Green Infrastructure Master Plan is not being proposed for continuation. Current ESI efforts are expected to save the City, residents, and local businesses nearly **\$3 million in the next three years** ([Attachment B](#)). Additionally, in the long-term, significant infrastructure investments can be avoided by maintaining healthy ecosystems. For example, Bellevue’s canopy currently provides \$123.3m in storm water services and \$1.6m per year of air pollution removal services (Urban Ecosystem Analysis).

Innovation: Sustainability is a key driver of innovation, resulting in *rapidly changing* best practices. ESI’s focus on continuous learning promotes innovation by providing staff knowledge and tools to advance the state of the art (e.g. on green building, clean mobility, clean energy, low impact development, integrated transportation and land use planning, facilities maintenance, fleet, etc.).

Partnerships: The Eastside Business Sustainability Partnership ([Attachment C](#)) and the Regional Environmental Web Portal ([Attachment D](#)) are both regional efforts and key focus areas for ESI for the next biennium.

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Collaboration: ESI was *founded* on One City principles, with this proposal coming from the CMO, Planning, DSD, Civic Services, ITD, Parks, Transportation, and Utilities. ESI is tasked with issues whose solutions require a broader perspective than any housed in a single department or workgroup - so collaboration is *necessary*.

Section 5: Budget Proposal Description

This proposal enables the ESI programs to provide the community and the organization the following services:

1. Strategic leadership for Citywide environmental efforts. Continue implementation and performance management of: the Citywide ESI Strategic Plan, the Municipal Greenhouse Gas (“GHG”) Emissions Action Plan, and the Community GHG emissions reduction strategies.
2. Represent Bellevue in State and Regional Sustainability Efforts. ESI serves as the liaison to the community as well as state and federal legislators. Current efforts include developing tri-state electric vehicle (“EV”) infrastructure (with WADOT, the Governor’s office, PSRC and the regional EV committee), clean mobility hubs, and sustainable communities initiative (with EPA, DOE, and DOT).
3. Work with the Office of Economic Development on building a “clean energy” sector strategy. Create incentives to draw and incubate “clean energy” businesses to Bellevue.
4. Directly support Residents and Businesses. ESI makes information and tools on sustainability available to residents and businesses, who are increasingly *expecting* these services from their municipality.

It is anticipated that the Assistant to the City Manager would continue to manage this effort (per Proposal 40.04NN), with continued support from the 0.6 FTE described in this proposal.

Section 6: Mandates and Contractual Agreements

Federal: Contract with Dept. of Energy for the implementation of projects funded by \$1.2m Energy Efficiency and Conservation Block Grant (“EECBG”) funds (project period extends through 2012);

State: SB 1481 requires Cities to be ready for Electric Vehicles, RCW 70.235.070 requires cities to have GHG measures in place to receive certain state funds; E.O. 09-05 and RCW 70.235.020 regarding State GHG targets. (Attachment E)

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

ESI serves both a Strategic Leadership function (addressed below) as well as the following programmatic functions that advance multiple HSE purchasing strategies: The GHG work responds to both the **Clean Air** and the **Conservation** purchasing strategies by reducing the amount of Greenhouse Gasses¹, as well as harmful particulates, going into the air. ESI deploys **energy conservation** as well as carbon sequestration (increasing **vegetation** to “capture” and store harmful CO₂) strategies. This proposal continues implementation of ESI’s energy conservation strategies, which include procuring funding for, or implementing, numerous programs in the organization. For example, “Buildings, Fleet and Water” comprised 70% of our municipal GHG emissions in 2006. Building energy usage rose from 42,820 million Btu (at a cost of \$652,915) in 2001, to 70,300 million Btu in 2006 (at a cost of \$1,306,707). ESI helped procure the Resource Conservations Manager, who is focused on **reducing municipal energy and water use**. That program generally results in a saving of 10-15% over a 3 year period.² In the first year, we have realized savings of \$109,975. Home Energy Reports, which deliver **residential energy savings**, were found in pilot studies to result in 1.5 to 3.5% decrease in home energy use (Opower.com).

¹ For health co-benefits of air pollution reduction, see www.healthcanada.gc.ca/ca, www.c-ciarn.ca/health, <http://www.pscleanair.org/airq/basics/health.aspx>, <http://www.epa.gov/air/ecosystem.html>

² www.pse.com/SiteCollectionDocuments/business/3462_RCMBrochure_0210.pdf

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As a complement to the conservation strategy, ESI works with the Parks Dept. to increase the carbon sequestration capacity of the City by increasing greenery and the improving the health of standing groves. The tree canopy lost between 1996 and 2006 alone provided 14,527 tons of carbon storage and 113 tons of sequestration annually. Maintaining vegetation and greenery is responsive to the **Water Resources, Clean Living Environment** and the **Nature Space strategies**. Continuing to procure funds to “green” our fleet over the course of the next few years will reduce organizational **resource consumption and cost**. Similarly, efforts to bring electric vehicle (EV) infrastructure to the region will have an impact on **clean air, clean water, and public health**³, as transportation is the single largest source of CO₂ in the region (43% of the total CO₂ in Bellevue in 2006 came from transportation). An average vehicle emits 11,450 lbs. of CO₂ per year; EVs produce *zero* tailpipe emissions. The “Green Building” effort was initiated and funded by ESI. That will **reduce GHG emissions, improve energy efficiency, increase use of renewable materials, reduce material consumption, and lessen environmental impacts**. In 2006, residential and commercial electricity usage comprised 23.3% and 32.0%, respectively, of Bellevue’s GHG emissions. According to the US Green Building Council, green buildings aim to reduce emissions by 25-50% in new buildings. **Education** is responsive to the **Water Resources, Clean Living Environment, Nature Space, Clean Air and Conservation strategies**. The Regional Environmental Web Portal will provide education and tools that will help advance every factor articulated in the HSE framework.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Responsive Government- Strategic Leadership: ESI provides internal alignment, integration and communication. ESI’s **Strategic Planning process was driven by the Community Vision and values** (96% of Bellevue residents surveyed indicated that Clean Air is a very important aspect of their quality of life, 86% and 81% indicated that environmental stewardship will result in an increase in their quality of life, and the city’s economic vitality, respectively; environmental stewardship was selected by residents as their third highest budget priority). By working cross-departmentally, redundancies are reduced (**Exceptional Service**) and the community gets better value for dollars spent.

Economic Growth and Competitiveness: The Clean Energy Sector presents economic opportunities for Bellevue. Between 1998 and 2007, clean energy jobs in the U.S. grew by 9.1 % while total jobs grew by only 3.7%.⁴ Commitment to environment/quality of life is also a competitive advantage for drawing businesses.

Improved Mobility: ESI’s support of alternative modes of travel (electric vehicles, pedestrian and bike infrastructure, etc.) are responsive to the **Existing & Future Infrastructure** (safe infrastructure for all users) and **Travel Options** (ensure full range of travel choices are integrated into planning) strategies. The regional Electric Vehicle work is focused on larger scale connections, responsive to the **Increase local and/or regional Connectivity** strategy.

Innovative, Vibrant & Caring Community: ESI’s involvement in the development of clean mobility hubs and transit oriented development help to bring resources to the City’s integrated planning efforts, supporting the creation of well designed, compact and environmentally sustainable communities. This work is responsive to the **Community Design, Housing Options, and Planning strategies** of the Built Environment strategy.

Quality Neighborhoods: Enhanced green spaces support the **Facilities and Amenities** strategy. **Public Health** is closely tied to environmental health, as noted above. Lastly, sustainable communities reduce reliance on cars and provide easy local access to goods and services, which are both responsive to the **Mobility** strategy.

Citywide strategies: Best practices in environmental sustainability are focused on integration and systems thinking, which are key ESI outcomes. Secretaries LaHood (HUD) and Donovan (DOT) stated on May 6 that forthcoming federal funding would be designed to **“encourage regions and local jurisdictions to build their**

³ <http://www.pscleanair.org/programs/climate/cleancars/faq.aspx>,

⁴ http://www.pewcenteronthestates.org/uploadedFiles/Clean_Economy_Report_Web.pdf;
<http://www.prosperitypartnership.org/strategy/res.pdf>;
<http://www.cleandedge.com/reports/pdf/CarbonFreeProsperity2025.pdf>

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capacity to plan for the integration of economic development, land use, transportation, and water infrastructure investments..." In 2007, the ICMA membership adopted a Resolution on Sustainability, committing the organization and its members to building more sustainable communities.⁵ Similarly, 1,026 cities across the country, are now implementing local climate actions plans. (www.usmayors.org/climateprotection). Of the 11 cities against which Bellevue benchmarks, only one does not have a sustainability effort. ESI **promotes stewardship** and **enhances Bellevue's image**. ESI actively **leverages partnerships** with outside organizations.

C. Short- and long-term benefits of this proposal:

Short-term benefits include: Financial savings; Competitiveness for sustainability grants; Meeting community expectations; Implementing grant funded projects; Serving as a One City model for the rest of the organization. Long-term benefits include: Protecting the public health and wellbeing for future generations; Risk mitigation against future costs associated with local impacts of climate change.⁶

D. Performance metrics/benchmarks and targets for this proposal:

Municipal GHG Reductions: 7% below 1990 levels by 2012 for municipality (Council adopted targets via Resolutions 7517 and 7614); Community GHG Emissions Strategies: Eastside Business Sustainability Partnership: Launch by or Before June 30, 2011; Regional Environmental Web Portal: Launch by or before December 31, 2011; Minimum of 10 Electric Vehicle Charge spots installed City Wide by 2012. ESI Strategic Plan: Progress towards performance targets articulated in the plan.

E. Describe why the level of service being proposed is the appropriate level:

This proposal prevents back-sliding, with resources going to strategically identified scalable actions. It also allows us to leverage existing grant funding and pursue new funding opportunities.

Section 8: Provide a Description of Supporting Revenue

\$1.2 m grant dollars have been previously allocated to efforts throughout the organization.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: Failure to qualify for certain state grants (per RCW 70.235.070); Failure to be adequately prepared for, and/or gain most value from, climate legislation.
2. Customer Impact: Not adequately safeguarding community assets for future generations; failure to work toward Council directed GHG target; failure to reflect citizen values in budget decisions
3. Economic: Missed opportunities for savings/grants; Increased costs in future to undo preventable damage; failure to establish Bellevue as a "Clean Energy" hub.

B. Consequence of funding at a lower level:

Depending on level, it could result in back-sliding or just slower progress toward ESI goals, which could result in greater lag time and cost if and when the city decides to invest in sustainability in the future.

⁵ http://icma.org/en/results/research_and_development/sustainable_communities/

⁶ Available upon request, Dr. M. Kitchell's work about the **public health risks** of climate change; On risk mitigation, see <http://cses.washington.edu/cig/>, <http://climlead.uoregon.edu/publications>, *Sterns Review: Economics of Climate Change*.



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Section 1: Proposal Descriptors

Proposal Title: Resource Conservation Manager Program		Proposal Number: 045.14NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Enhancing an Existing Service
Staff Contact: Frank Pinney, x6049		One-Time/On-Going: Both
Fund: Facilities Services	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): 045.08PA Facilities Maintenance & Operations		

Section 2: Executive Summary

The Resource Conservation Manager program is an interdepartmental effort to implement cost-effective projects to reduce energy and fresh water consumption in City facilities. A grant from Puget Sound Energy will partially fund the Resource Conservation Manager (RCM) position through April 2012. The RCM will create a system to measure and report on progress, and lead an interdepartmental Resource Conservation Team to help implement resource conservation throughout the organization. The position will result in the following outcomes:

- Reduce municipal greenhouse gas emissions by over 1,050 metric tons of CO₂; and
- Reduce the City's energy costs by 13%, saving more than \$219,000 from March 2009-December 2012.

This proposal also extends the RCM position through December 2012. In addition to sustaining the internally-focused effort during this period, the program will also help the City's vendors and contractors adopt more sustainable practices and conserve resources.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$82,367	\$86,894
Other	0	0
	<u>\$82,367</u>	<u>\$86,894</u>

Supporting Revenue		
PSE Grant	\$28,000	\$28,000

LTE/FTE		
FTE	0.00	0.00
LTE	1.00	1.00
Total Count	<u>1.00</u>	<u>1.00</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

The City funded the RCM position in 2009 based on the premise that there are opportunities to conserve energy and resources throughout the organization. The RCM position provides the following cost savings and operational efficiencies:



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- **Provides meaningful data to departments.** Utility bills are typically paid and reviewed by staff who are not necessarily the users and operators of the facilities, making it difficult to associate utility costs with behavior and operations. Without the tools provided by the RCM, it is almost impossible to see consumption trends over time or on an aggregated organizational level.
- **Saves on utility bills.** The RCM program will save a projected average \$80,000+ per year, equivalent to approximately 665,000 kWh (equiv. to electricity used by 51 houses/yr) and 14,615 gas therms (equiv. gas used by 27 houses/yr). These savings can be ongoing and permanent if conservation behavior and operations are maintained by the organization.
- **Assistance with energy efficiency grants and rebates.** Departments currently pursue grant and rebates in addition to their current work loads. This creates significant time delays as many departments have limited capacity to navigate grant and rebate processes, both internally and externally. Utilities, Fire, and Parks all have proposed lighting upgrades but have been delayed in moving forward because of a lack of staff capacity.
- **Collaboration and collective learning.** The RCM program works in partnership with Facilities, Fire, Parks, Utilities, and Police expert staff to gather information about how buildings are being operated, improve operations and comfort, and implement conservation ideas. Additionally, the Resource Conservation Manager oversees a Resource Conservation Team which includes staff from ITD, Fire, Finance, the City Manager's office, Utilities, Service First, and Development Services. The Resource Conservation Manager also reports progress to the Environmental Stewardship Initiative's Core Team.
- **Other.** This proposal is funded from a PSE grant as well as operating funds within the Facility Fund proposal 045.08PA. Just released 1st Quarter energy saving for 2010, indicate that the conservation program will save enough in energy to more than pay for the program. Projected savings for 2010 are now in excess of \$100,000 for all City Facilities. These savings are anticipated to increase in 2011 & 2012 as the program progresses.

Section 5: Budget Proposal Description

This proposal will fund a full-time LTE to manage resource conservation programs and projects through the end of 2012. The Resource Conservation Manager (RCM) program is implemented through a grant from Puget Sound Energy which partially funds staff costs of the program until April 15, 2012. This proposal extends the LTE position through the end of 2012, and will:

- **Maintain Resource Conservation Manager program**, including database maintenance, preparing quarterly and annual reports on energy and water use, implementing Resource Conservation Plan, and identifying conservation opportunities at City of Bellevue facilities. (0.5 LTE)
- **Implement Resource Conservation programs and projects**, including implementing energy conservation project ideas identified in 75 facility action plans, coordinating grant and rebate applications to PSE and Cascade Water Alliance on the request of departments, and promoting resource conservation within the organization. (0.4 LTE)
- **Identify and promote additional energy conservation opportunities with City suppliers and contractors**, including working with purchasing and contracting staff and promoting best practices. (0.1 LTE)

Section 6: Mandates and Contractual Agreements

N/A, except for performance obligations in PSE grant.

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Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

The Resource Conservation Manager program addresses Healthy and Sustainable Environment:

- **Water Resources, Reliable Water Supply**, by reducing demand for potable water.
- **Conservation, Being green**, by conserving water and energy, and reducing material consumption of City facilities and programs.
- **Conservation, Greenhouse gases**, by reducing our municipal greenhouse gas emissions.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Overall, this proposal achieves purchasing strategies such as efficiency/cost-savings, leveraging collaboration, considers best practices, and ensure sound management of resources and business practices. In addition, the Resource Conservation Manager program addresses the following Responsive Government outcomes:

- **Engaged Workforce, Empowered**, by providing tools for facility operators to reduce costs and adapt use of the building based on information provided by analysis tools.
- **Exceptional Service, Efficient and Effective Delivery**, by fostering efficient use of resources in our buildings.
- **Stewards of the Public Trust, Results, Measurement, and Accountability**, by creating an effective process to communicate progress and managing power consumption information in Utility Manager Pro (a database).
- **Stewards of the Public Trust, Management of Risk and Liability**, by reducing our greenhouse gas emissions, we reduce our liability for future climate change impacts in the community.

C. Short- and long-term benefits of this proposal:

The City of Bellevue has made a public commitment to reduce greenhouse gas emissions, along with most peer cities in Washington (over 1,000 Mayors nationwide have signed on to the US Mayor's Climate Protection Agreement—including Bellevue. See www.usmayors.org/climateprotection/agreement.htm)

The RCM helps the City meet its goal of reducing greenhouse gas emissions by 7% below 1990 levels. The RCM program is expected to contribute about 1,050 Metric Tons in CO₂ reductions. Maintaining or increasing CO₂ emission levels globally will effect a variety of natural and human systems including weather, water resources, plant/animal species survival, disease transmission, human displacement, flooding/drought, and food production.

A federally or state-imposed carbon tax or quantity 'cap' will likely be placed on greenhouse gases in the future, making energy more expensive. Reducing emissions now is a good way to reduce the potential cost of emissions in the future.

D. Performance metrics/benchmarks and targets for this proposal:

This program will achieve a 13% reduction in energy use over three years, as required by PSE grant.

E. Describe why the level of service being proposed is the appropriate level:

The City of Bellevue is not currently on track to meet its municipal greenhouse gas emission goals; City of Bellevue must reduce emissions by 7,606 Metric Tons of CO₂ to reach the goal of producing only 11,485 Metric Tons of CO₂ by 2012. If the City reduces effort to reduce emissions by cutting programs such as the RCM, these goals are unlikely to be met.

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Section 8: Provide a Description of Supporting Revenue

The City Council signed an agreement with Puget Sound Energy to implement the RCM program (Ordinance 5863, April 6, 2009). PSE will provide an \$86,000 performance-based grant to the City if the City achieves 13% reduction in energy use over three years.

A 13% reduction in energy use for the City of Bellevue saves approximately \$80,000+ per year. Additional water consumption reduction will also add to cost savings but have not yet been calculated. Such savings grow as electricity and natural gas rates increase over the long term.

The RCM will also provide additional savings to the City by facilitating efforts such as:

- Paper use reduction: if can reduce printing by 5%, we can save up to \$50,000/yr
- Switching from 30% recycled content paper to 100% recycled content paper: 140 Metric Tons of CO₂ per year
- Ordering re-manufactured cartridges: we can save between \$11,000 and \$26,000/yr
- Implementing sleep mode settings: we can save up to \$25,000/yr

Cost saving will be accounted for and used to offset the remaining funding for this proposal.

Section 9: Consequences of Not Funding the Proposal

Without the RCM position:

- City employee behavior change is not sustained and the City may lose ground on the more than \$80,000 in savings per year achieved in the RCM program.
- Greenhouse gas emissions stay the same or increase (currently 18,423 Metric Tons of CO₂) and City's emission target is not met.
- Each department manages their own grant process to PSE, facility managers may not have good sense of priorities/savings projections. Due to staff workloads, there may be missed opportunities and delays for financing resource conservation projects.
- There will be no Utility Management reporting or trend reporting.

Investment/Costs already incurred: The City Council signed an agreement with Puget Sound Energy to implement the RCM program (Ordinance 5863, April 6, 2009). If the City does not retain the RCM position through April 15, 2012, PSE will terminate the contract and the City will not be reimbursed for the position's expenses.

Consequence of funding at a lower level: Fewer energy savings opportunities will be implemented if the position is reduced; and grant obligations require 1.0 LTE through April 2012.



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Section 1: Proposal Descriptors

Proposal Title: Nature Parks, Rangers & Visitor Centers		Proposal Number: 100.36NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Reduction of Service
Staff Contact: Geoff Bradley, x2740		One-Time/On-Going: On-Going
Fund: General	Attachments: Yes	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

The program provides funding for the ongoing management, operation, landscape maintenance and staffing for (4) park visitor centers: Mercer Slough Environmental Education Center, Lake Hills Greenbelt Ranger Station, Lewis Creek Visitor Center and the FW Winters House. It also provides for Park Rangers who provide overall facility supervision and coordination, visitor information about COB services, environmental education, interpretive programming, community stewardship activities, partnership and volunteer coordination, community special events, and facility rentals for visitor center sites. The original proposal reflected a 5% budget reduction from the 2010 Parks General Fund budget. In addition, the Well KEPT program will be reduced an additional \$25,000 per year based on the recommendations of the Budget One process, which will reduce summer employment opportunities for Bellevue youth to be involved in park stewardship activities.

Section 3: Required Resource

OPERATING

Expenditure	2011	2012
Personnel	\$362,422	\$381,995
Other	380,224	\$386,023
	\$742,646	\$768,018

Supporting Revenue

	\$97,729	\$97,876
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LTE/FTE

FTE	4.0	4.0
LTE	0.0	0.0
Total Count	4.0	4.0

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Avoidance

- The program provides site maintenance and inspections to preserve wildlife habitat and maintain nature parks and visitor center lands at a high service level to avoid costs associated with potential increased injuries and claims.
- The program increases citizen knowledge which leads to changes in attitudes and behavior that help reduce costs associated with resource degradation.

Efficiencies/Innovations

- The Summer Assistant Park Ranger Program serves the community by supporting the efforts of year-round ranger staff during busy summer months to serve more citizens at a lower cost. It also provides internship opportunities with practical experience for college students pursuing degrees in environmental fields.
- Volunteers serve the program over 12,000 hours annually, providing \$244,215 in value added community stewardship services.

Partnerships/Collaboration

- A partnership with the Pacific Science Center (PSC) delivers environmental education programs for youth and families at MSEEC. PSC uses a staff of 13 employees to deliver nearly 300 programs per year.
- A partnership with the Master Gardeners Foundation (MG) delivers over 70 year-round workshops, clinics

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and events at the demonstration garden in the Lake Hills Greenbelt. A partnership with Eastside Heritage Center (EHC) helps staff the F.W. Winters House Visitor Center, deliver year-round historical programs, perform research, and host the community Strawberry Festival each year, which celebrates our City's farming heritage and reaches approximately 40,000 each year.

- The program collaborates with dozens of local, state and federal agencies and businesses to deliver special community events that promote volunteerism and environmental stewardship.
- The program collaborates with Bellevue Utilities to deliver community environmental education programs.

Section 5: Budget Proposal Description

The Nature Parks and Visitor Center program is a holistic community outreach program that incorporates environmental education and citizen involvement in the management of Parks open space lands. This program delivers services through 1.0 FTE Program Supervisor and 3.0 FTE Park Rangers to perform all the necessary site management and administrative activities for the City's nature parks and visitor centers located at the Mercer Slough Nature Park, Lewis Creek Park and the Lake Hills Greenbelt. The program facilitates the stewardship of park resources by providing meaningful, memorable visitor experiences through hands-on education and community stewardship activities. The program helps enhance visitor experiences, reduce user conflicts, increase citizen safety, protect water quality, provide recreational opportunities, preserve wildlife habitat, buffer land uses, and positively influence citizen attitudes and behaviors regarding natural resource preservation, conservation and restoration. Ecosystems are dependent, interconnected webs of land, water and life that cannot be managed in isolation of each other. Since 90% of Bellevue's land base is privately owned, increasing citizen understanding and knowledge of natural systems is essential in building stable environments that can support healthy living for current and future generations.

The offer provides the following services to the community:

- **Park Visitor Centers:** Oversees daily operations of 4 Park Visitor Centers: Mercer Slough Environmental Education Center, F.W. Winters House, LHGB Ranger Station and Lewis Creek Visitor Center which provide environmental education programs, interpretive education exhibits, and community gathering space.
- **Park Ranger Program:** Park Rangers providing staffing, administration, program development, and site management. They are community ambassadors who help ensure safe and enjoyable experiences for Park users. Rangers answer questions, inform users of Park rules, deliver education programs, develop interpretive materials, walk/inspect trail and sites, perform minor maintenance tasks, lock park gates and restrooms, and coordinate with other enforcement agencies regarding violations of Park Code. In addition to three FTE Park Rangers, six seasonal Rangers are on duty seven days per week, 16 hours per day, May – September, during the busiest summer Park season.
- **Environmental Education/Interpretive Program:** Designs and delivers public environmental education programs and develops interpretive kiosks, wayside signage and brochures throughout the Parks system.
- **Well KEPT (Kids Environmental Project Training) Program:** Coordinates summer employment opportunities for Bellevue youth to be involved in park stewardship activities. The Well KEPT Program combines on-the-job work experience, environmental education, and career development training to instill strong self-esteem, good work habits, and sound environmental ethics.
- **Volunteer Program:** Administers a comprehensive community involvement program for citizens of all ages and skill levels to be involved in hands-on park stewardship activities. Includes Stewardship Saturdays, Park Stewards/Master Naturalists Program, and community partnerships with organizations that share similar mission and goals.
- **Community Events:** Develops and implements natural resource community involvement special events such as Arbor Day/Earth Day, Natural Resource Week, and the Lake to Lake Walk to raise community awareness and appreciation of the importance of urban natural areas in creating sustainable environments to live, work, and play.

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- **P-Patches Program:** Provides 86 community garden plots at the Lake Hills Greenbelt and Crossroads Park. Garden plots provide opportunities for citizens who live in apartments and condos, to work with soil to grow produce, providing a connection to the land and access to healthy food.
- **Backyard Wildlife Habitat Gardens:** Provides 1-acre urban demonstration garden with interpretive signage and programming that promotes the use of native vegetation in urban residential landscapes to help improve wildlife habitat, reduce water use, and decrease the use of pesticides throughout the city.
- **Nature Park Landscape Maintenance:** Provides landscape maintenance associated with the visitor centers. Management activities include turf maintenance, bed maintenance, tree and shrub pruning, hard and soft surface maintenance and Integrated Pest Management (IPM).

Section 6: Mandates and Contractual Agreements

- Lake Hills Greenbelt Ranger position is mandated by City Resolution No. 4776 which adopted the Phantom Lake Management Plan.
- **RCW 17.10 Noxious Weed Control:** Primary noxious weed law and it holds landowners, including state and county land agencies, responsible for controlling noxious weeds on their property.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Water Resources

- Management of large wetlands provide pollution abatement, flood control, and wildlife habitat.
- Maintenance activities use an IPM approach to reduce pesticide use to maintain water quality.
- Community outreach efforts teach important water resource protection and conservation practices.
- Visitor Centers available for other departments to connect with citizens and promote environmental goals.

Clean Living Environment

- Maintenance and restoration efforts use Best Management Practices to reduce erosion and sedimentation.
- Master Gardener Demonstration Garden provides yard waste composting workshops.
- Visitor Centers recycle waste and offer programs about sustainable living.

Nature Space

- Extensive trail systems support health and well being of citizens, wildlife, and vegetation.
- Interpretive signage program allows visitors to learn information at their leisure.
- Structured programming immerses participants in the surrounding ecosystem.
- Backyard Wildlife Habitat Gardens educate citizens about using native plants to support natural ecosystems.
- Landscaping practices at all sites emphasize the use of native vegetation to support healthy habitat.

Clean Air

- Bike racks at all facilities help reduce greenhouse emission and promote a healthy lifestyle.
- Parking at the MSEEC is limited to encourage carpooling and other alternative modes of transportation.
- Extensive stewardship tree plantings help remove carbon dioxide and pollutants from the air.

Conservation

- Programming promotes the use of native plants in landscaping for water conservation.
- Interpretation is focused on sustainable living to reduce, recycle, and reuse materials to reduce waste and environmental stewardship practices are shared with homeowners who often incorporate these at home.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Safe Community

- Proactive landscape maintenance increases safety and reduces latent environmental risks.
- Facilities provide potential emergency shelters. Parks had the lead responsibility for shelter management and staff are trained in emergency management and shelter protocols.
- Rangers interact with citizen on a daily basis to listen to citizen concerns and enforce rules.

Innovative, Vibrant & Caring Community

- Programs connect citizens to the land, building bonds between citizens, nature and community.
- Most programs are free to reduce economic barriers of entry. (Some have low cost fees.)

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- Visitor Centers help reflect Bellevue's "City in a Park" character (i.e. all facilities incorporate green roofs, landscaping uses native plants, and they act as trailheads to provide extensive trail system connections).

Quality Neighborhoods

- Community stewardship activities strengthen involvement, and neighborhood and community bonds.
- Sites and facilities provide community gathering spots offering opportunities for celebrations, meetings, picnicking, farmers markets, recreation, and educational activities for all ages.
- Sites support school science curriculums providing opportunities for field trips and stewardship projects.

C. Short- and long-term benefits of this proposal:

Short-term: Programs provide a broad range of environmental education and community involvement opportunities, community partnership opportunities, and neighborhood and community facilities.

Long-term: More environmentally enlightened and engaged community, improved air and water quality, improved fish and wildlife habitat, neighborhood livability, lower crime rates, enhanced quality of life, and increased property values.

D. Performance metrics/benchmarks and targets for this proposal:

The Nature Parks and Visitor Center Program uses nationally recognized International City Manager's Association (ICMA) performance measurements as indicators for outcome success. Our objective is to meet or exceed the following 2010 targeted effectiveness and efficiency measures:

- \$0.18 maintenance cost per square foot of developed park
- 75 % citizens surveyed rating the safety of Bellevue Parks and park facilities as good or excellent
- 85% citizens surveyed rating appearance of Bellevue Parks and park facilities as good or excellent
- 93% of structured program participants rating programs and facilities as good or above

E. Describe why the level of service being proposed is the appropriate level:

This proposal will fund the program to preserve access to environmental stewardship and community involvement programs and activities, manage and maintain the sites at current levels, and provide for a safe and healthy community. The level of services being proposed is the best level of service to adequately reduce liability exposures and receive program benefits at the lowest cost.

Section 8: Provide Description of Supporting Revenue

Supporting revenues include blueberry farm sales, program fees, and P-patch rental fees.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: See legal mandates specified in Section 6.
2. Customer Impact: elimination of environmental education and stewardship programs, closure of park visitor centers, loss of community involvement and stewardship opportunities, reduced citizen safety, deterioration of park landscapes, increased environmental degradation, no response to park code violations, and reduced public interaction.
3. Investment/Costs already incurred: visitor center facilities, landscaping improvements, P-patches and community garden infrastructure, program development, tools and equipment, interpretive kiosks and signage, partnerships and community goodwill. Nature Parks and Visitor Center Program support park use throughout the city and without this program, many other programs would not operate effectively. It is integral to CARPA Accreditation, Tree City USA status, Environmental Stewardship Initiative and Bellevue's "City in a Park" image.
4. Other: N/A

B. Consequence of funding at a lower level:

Reduction in environmental education outreach programs, reduced community stewardship activities, less informed citizens, increased liability exposure, possible dissolution of non-profit partnerships, increased degradation of land and water resources, and closure of park facilities.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Greenways & Trails		Proposal Number: 100.37NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Dan DeWald, x6048; Kevin Husemann, x4154		One-Time/On-Going: On-Going
Fund: General	Attachments: Yes	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): The ability to execute this program and maintain service levels relates to funding in the Capital Investment Program – RFR # 100.78NA.		

Section 2: Executive Summary

This proposal funds the maintenance of over 80 miles of greenways and trails that provide access to nature spaces including wetlands, forests, streams, and lakes, and connect people with parks, neighborhoods, schools and businesses. This program will ensure a safe trail system for the community, provide access to nature space while preserving fish and wildlife habitat, construct and maintain interpretive signage/kiosks that help enrich the nature experience, provide outdoor recreation for physical and mental health, and improve community mobility. Bellevue’s greenways and trail system provides opportunities for environmental stewardship and personal health and well being, that supports the quality of life for today and for future generations.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$492,941	\$518,998
Other	215,597	\$218,084
	\$708,538	\$737,082

Supporting Revenue	2011	2012
	\$0	\$0

LTE/FTE	2011	2012
FTE	6.0	6.0
LTE	0.0	0.0
Total Count	6.0	6.0

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Cost Savings

This proposal reflects cost savings of 12.5% (\$105,500 annually) from 2010 budget levels and is achieved through combining Proposals 100.37NA and 100.37NB, with savings achieved through the hiring of 1 full-time lead worker and one 9-month temporary worker to perform maintenance that is now being performed by contractors. Cost savings is a result of WA State Labor and Industry minimum prevailing wage rates for contractors being raised from \$17.87 per hour in 2009, to \$40.03 per hour in 2010 for this classification of work. Additional savings are achieved through reduced temporary labor, reduced inventory of building materials and supplies and reduced frequency of trail re-surfacing and bark mulch applications at trail heads.

Efficiencies

A full-time position improves response to citizens and citizen relations, has higher technical skill, improves our ability to recruit and work with volunteers, increases vested interest in project success, increases flexibility, and saves time and money by eliminating the need for contractor change orders.



2011-2012 Budget Proposal

Partnerships/Collaboration

The Greenways and Trails program works cooperatively with neighborhoods and Home Owners Associations (HOA) throughout Bellevue regarding trail design, maintenance, resurfacing, planting and other volunteer based activities, including Stewardship Saturday volunteer events and special events such as Earth Day/Arbor Day. Community organizations involved include Whispering Heights, Collingswood, Silverleaf, Westwood Highlands, Weowna Park neighbors, Woodridge Community, Wilburton Hill Neighborhood, Forest Park, Forest Park Meadows HOA, Forest Glen East, Lakemont Highlands, Lakemont 41.5 HOA, Jubilee Reach, Mountains to Sound Greenway Trust, Starbucks, Well KEPT Program, Neighborhood Enhancement Program, King County Noxious Weed Control Program, Boy Scouts of America, Girl Scouts of America, Rabanco and Allied Waste.

Section 5: Budget Proposal Description

This proposal responds to the Council endorsed outcome of a Healthy and Sustainable Environment RFR by providing comprehensive management and maintenance of Bellevue's Greenways and Trails to standards and practices identified in the City's Environmental Best Management Practices and Design Manual. This program provides planning, management and maintenance of the park system trails located on City Park and Open Space property and City right-of-way. Trail maintenance is for over 80 miles of City-owned hard and soft surface trails, located throughout the community, with an improved value of \$21,120,000. Trails include the Lake to Lake Greenway and Trail system that connects Lake Washington and the Mercer Slough to Wilburton Hill, Kelsey Creek, Lake Hills Greenbelt, Phantom Lake Loop to Weowna Park and Lake Sammamish. Other significant trail systems include the South Bellevue Greenway system, Bellevue's segment of the Mountains to Sound Greenway, Coal Creek Natural Area, Bridle Trails pathways on 134th and 140th, Ardmore Park and Tam O'Shanter Park and streetscape trail connections that link these parks together.

Management and maintenance of Bellevue's trail system is achieved through the efforts of 1 Operations Supervisor, 2 Lead Workers, 3 Skilled Workers combined with seasonal and temporary help. Bellevue's in-house crew provides expertise in environmentally sensitive trail layout and design, trail construction using low impact techniques, bridge and boardwalk construction, hazard tree assessment, erosion control, noxious weed identification and control, environmental and volunteer stewardship projects, landscape construction, project management, Neighborhood Enhancement Program implementation and contract management and administration.

Maintenance activities include safety inspections, trail head maintenance, noxious weed removal, litter and debris removal, kiosk and way finding sign maintenance, trail structure inspection and repair, vegetation maintenance, tree and shrub pruning, mowing, graffiti removal, site hazard abatement and response to weather events such as snow and ice removal, windstorm and flood response.

This proposal responds to policies for **Bellevue Parks & Open Space System Plan-Environmental and Urban Design Elements of the City Comprehensive Plan (Attachments)**

PA-1: Establish a coordinated and connected system of open space and greenways throughout the city that provides multiple benefits including preserving natural systems, protecting wildlife habitat and corridors, and providing land for recreation.

PA-13: Develop pedestrian and bicycle linkages between neighborhoods and major natural areas, recreation facilities, and education centers.

PA-21: Coordinate with other jurisdictions, including state agencies, and the Port of Seattle, in the planning and development of regional greenways, parks, cultural, and recreational facilities, including the Burlington Northern Santa Fe (BNSF) trail system.

PA-22: Encourage the linkage and access of private facilities with those in the public system.

PA-30: Design, construct, operate, and maintain parklands and facilities to preserve the ecology of natural systems on parklands.

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PB-4: Secure public non-motorized easements or land dedications through the development review process, donation, tax deduction or exemption programs, or legal acquisition when the need is identified or supported by the Plan and involves close coordination with affected property owners. Consider each facility on a case by case basis, factoring in system connectivity, whether the facility is needed to fill a gap or complete a link within the overall system, and neighborhood notice and input prior to the design process.

PB-8: Install way-finding and route signs and provide maps and internet-based information to guide users through the pedestrian and bicycle systems.

Section 6: Mandates and Contractual Agreements

- Under the **Growth Management Act**, Bellevue has a statutory obligation to protect the functions and values of critical areas, and to give special consideration to conservation and protection measures to preserve or enhance anadromous fisheries.
- **Federal Americans with Disabilities Act (ADA):** Protects the civil rights of disabled citizens to have unobstructed access to public facilities.
- **RCW 39.12 Washington State Prevailing Wage Statute for Public Works:** Per RCW 39.12, the City of Bellevue is required to pay prevailing wages for contracted public works and maintenance contracts.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

The City of Bellevue Greenways and Trails are an integral part of the park and open space system. The 2009 Gilmore survey indicated that trails through forests, wetlands and natural areas are Bellevue residents' highest priority and 74% used trails, wetlands and natural areas, with over 400,000 visitor use days per year. Trails contribute to quality of life by providing recreational opportunities for walking, bicycling, jogging, hiking, horseback riding, bird watching and other interpretive activities. 97% said the parks and recreational opportunities contribute to quality of life. Trails physically connect parkland, neighborhoods, schools, and businesses, and provide for a community that helps define Bellevue as a "City in a Park". They encourage people to enjoy the outdoors, provide opportunities for mental and physical rejuvenation, and provide for increased mobility for pedestrians and bicycles for recreation and commuting alternatives. In addition to its recreational, connectivity and mobility opportunities, greenways and trails provide habitat for wildlife and natural buffer zones to protect streams, rivers, and lakes from pollution run-off.

Best Practices

Maintenance and Operations: COB Parks & Community Services Environmental Best Practices & Design Standards Manual (2006), COB ESI Strategic Plan (2009-2012), COB DSD Critical Areas Handouts, particularly those that pertain to Wetlands (LUC 20.25H.095), NRPA maintenance standards.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Greenways and Trails contribute to:

Quality Neighborhoods: by providing connections to parks, neighborhoods, schools, businesses and nature.

Innovative, Vibrant & Caring Community: linking the parks and nature space results in a "City in a Park."

Improved Mobility: by providing transportation options that accommodate growth and improve how people live, work and play.

Economic Growth: by improving Bellevue's living environment and adding value to the quality of life.

C. Short- and long-term benefits of this proposal:

Short-term:

Short-term benefits include a safe and accessible inter-connected system of pedestrian and bicycle trails that increase opportunities for healthy living for citizens of all ages.

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Long-term:

Long term benefits include safety, accessibility, affordable recreation and mobility alternatives, opportunities to experience nature, and the preservation and improvement of a greenway system that that improves the quality of life for residents of all ages both for current and future generations.

D. Performance metrics/benchmarks and targets for this proposal:

The Greenways and Trails Program uses nationally recognized International City Manager's Association (ICMA) performance measurements as indicators for outcome success. Our objective is to meet or exceed the following 2009 effectiveness and efficiency measures:

- 75 % of citizens rating overall satisfaction with Bellevue Parks as good or excellent
- 85% of households have visited a Bellevue Park or Park facility in the last year
- 85% of citizens rating the appearance of parks and park facilities as good or excellent

E. Describe why the level of service being proposed is the appropriate level:

This proposal will fund the management, construction/renovation and maintenance of the trails and greenway system at a level that ensures safety and accessibility to a wide spectrum of visitors at a level that meets citizen expectations.

Section 8: Provide Description of Supporting Revenue

N/A

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

Not funding this proposal would eliminate resources that are required to design, construct, manage and maintain the City's Greenways and Trails Program. This would lead to the degradation and eventual elimination of the greenways and trails system which serves as a vital link connecting people to parks, neighborhoods, schools and businesses. This would result in the loss of the comprehensive set of benefits that trails provide.

1. Legal: Increased liability exposure. Not funding this proposal would eliminate the ability of staff to effectively manage risk. This increased exposure to risk would lead to increased occurrences of personal injury and potential lawsuits.
2. Customer Impact: Trails and natural areas are routinely ranked very high in citizen surveys. Trails receive over 400,000 visitor use days per year and not funding this program would negatively impact citizen expectations, increase possibility of injury, reduce opportunity for health and fitness and lose connectivity the trail system provides to neighborhoods, schools, parks, businesses, and also to nature.
3. Investment/Costs already incurred: The City has invested in the acquisition and development of Bellevue's trail system for over 40 years, with over 80 miles of trails, boardwalks, bridges, stairways, kiosks and signage that has an improved value in excess of \$21,000,000.
4. Other: Not funding this proposal would lead to the eventual degradation of the trail system, a highly visible and valued asset to the City of Bellevue.

B. Consequence of funding at a lower level:

A further reduction in funding would lead to the deterioration of trails, decreased year-round use, increased liability exposure and personal injury, increases in customer complaints, additional degradation of Bellevue's trail system and would deprive the community of the environmental, social and economic benefits that healthy trails and natural areas provide for current and future generations.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Nature Space & Forest Management		Proposal Number: 100.38NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Dan DeWald, x6048; Jim Bennett, x4321		One-Time/On-Going: On-Going
Fund: General	Attachments: Yes	Enter CIP Plan #:
List Parent/Dependent Proposal(s): The ability to execute this program and maintain service levels relates to funding in the Capital Investment Program – RFR # 100.78NA		

Section 2: Executive Summary

This proposal funds the maintenance of 1900 acres of park and nature space property for tree and forest canopy, fish and wildlife habitat, soil protection, erosion control, land use buffering, storm water retention, improved air and water quality, greenhouse gas reduction, trails and outdoor recreation, community involvement in environmental stewardship and environmental education for citizens of all ages. Urban nature spaces must be maintained with the same commitment as other vital community resources in order to ensure the preservation of their environmental values and benefits. Tree canopy has significant ecological, social and environmental benefits and is a key element of our community, preserving the quality of life that residents and businesses look for when selecting a community to reside in now and in the future.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$489,224	\$514,926
Other	170,561	\$169,866
	\$659,785	\$684,792

Supporting Revenue

	\$0	\$0
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LTE/FTE

FTE	5.0	5.0
LTE	0.0	0.0
Total Count	5.0	5.0

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Cost Savings

The proposal reflects a cost savings of 13% (\$113,330 annually) from 2010 budget levels and is achieved through combining Proposals 100.38NA and 100.37NB, with savings achieved through the hiring of 2 full-time skilled workers to perform maintenance that is now being performed by contractors. Cost savings is a result of WA State Labor and Industry minimum prevailing wage rates for contractors being raised from \$17.87 per hour in 2009, to \$40.03 per hour in 2010 for this classification of public work. Additional savings is achieved through reduced temporary and seasonal labor staffing.

Efficiencies

Full-time employees improve response to citizens and citizen relations, have higher technical skills, improve our ability to recruit and work with volunteers, increases workload and program flexibility, increases vested interest in project success, and saves time and money by eliminating the need for contractor change orders.

Partnerships/Collaboration

Natural Area and Forest Management provides stewardship of Native Growth Protection Areas located

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throughout Bellevue and works cooperatively with neighborhoods, Home Owner Associations (HOA) and business partners to provide stewardship, community education and community involvement in forest enhancement and restoration. Collaborating organizations include Whispering Heights, Collingswood, Silverleaf, Westwood Highlands, Weowna Park neighbors, Woodridge Community, Wilburton Hill Neighborhood, Forest Park, Forest Park Meadows HOA, Forest Glen East, Lakemont Highlands, Lakemont HOA, 41.5 HOA, Jubilee Reach, Mountains to Sound Greenway Trust, Starbucks, Master Gardeners, Rabanco, Allied Waste, WA Dept of Natural Resources, PSE, Eastlake Washington Audubon Society, WA Dept of Parks and Recreation, National Arbor Day Foundation (Tree City USA Award recipient for 19 years), and United States Forest Service.

Section 5: Budget Proposal Description

The ongoing proactive management and maintenance of the City's natural area sites, ranging from sensitive riparian corridors and wetlands to native forest sites located on over 1,900 acres of Park property with a King County Assessed value of over \$157 million. Service delivery is achieved through the efforts of 1 Natural Resource Manager, 1 Program Supervisor, 1 Senior Forest Technician, 2 Skilled Workers combined with seasonal, temporary help and volunteers. Park natural areas are managed and maintained through a comprehensive land stewardship program that involves individual site-specific analysis and evaluation of tree health, soil types, degree of slope, site aspect, recreational opportunities, adjacent land uses, and fish and wildlife habitat. This information is analyzed to develop site-specific plans and actions that ensure public safety, healthy trees and plants, quality fish and wildlife habitat, preservation of water and air quality, erosion control, buffering of land uses, and an interconnected greenway and park system that connects neighborhoods to neighborhoods, parks and businesses. The proactive management of this community resource contributes to the ecological, social and economic health of Bellevue and sustains and improves quality of life for current and future generations. Management and service delivery functions include:

- Physical inspection of over 100 miles of public-private property boundaries to assess tree and site conditions, and identify and address potential liability issues. Inspection work includes mapping and classifying trees, vegetation, forest condition, identifying/resolving noxious weed issues, and identifying site-appropriate plantings of native trees and shrubs.
- Development, permitting and implementation of vegetation and habitat management plans that improve the health and condition of the City's nature spaces including upland forest, stream corridors, lake shorelines and wetlands. In the last 20 years, the City's Forest Management program has planted about 10,000 native trees and plants each year.
- Inter- and intra-departmental coordination including critical areas code compliance, environmental stewardship initiative strategies, Utilities Stream Team and Stewardship Saturday volunteer projects.
- Hazardous tree identification and mitigation protecting the health, safety and welfare of Bellevue's citizens
- Respond to illegal dumping, encroachment issues, and illegal tree cutting on city property.
- Site inspection of contract maintenance sites to for contract compliance and to monitor soil moisture and weed control to ensure survival of new environmental enhancement plantings.
- Responding to citizen requests for assistance with tree pruning, property line identification, storm damage, surface water problems and nuisance wildlife issues.
- Implementation of Neighborhood Enhancement Program projects.

Section 6: Mandates and Contractual Agreements

Under the Growth Management Act, Bellevue has a statutory obligation to protect the functions and values of critical areas, and to give special consideration to conservation and protection measures to preserve or enhance anadromous fisheries; RCW 36.70A.060: Natural resource lands and critical areas regulations; Federal Clean Water Act; Endangered Species Act; Bellevue Code 20.25H, Critical Areas Overlay District; Washington State Noxious Weed Law; RCW 39.12 Washington State Prevailing Wage Statute for Public Works – Per RCW 39.12

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Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Protecting and conserving a healthy natural environment is a deeply held value for Bellevue as a community. Bellevue's residents care about environmental stewardship and conservation of natural areas for fish, wildlife and people. Bellevue's trees and forest stretch from the shores of Lake Washington and Lake Sammamish to the foothills of the Cascade Mountains. This outstanding attribute is what makes Bellevue special. It attracts and retains exceptional people and businesses to our community and is why Bellevue is "a City in a Park."

This proposal responds to policies for **Bellevue Parks & Open Space System Plan-Environmental and Urban Design Elements of the City Comprehensive Plan (Attachments)**. The 2009 Parks & Open Space System Plan Survey states:

- 97% say the parks and recreational opportunities contribute to the quality of life.
- Approximately 70,000 residents use trails through Natural Areas six times or more per year.
- When asked, "What should Parks & Community Services place a high priority on" – 76% (2nd highest) said to improve the health and ecological function of forest, wetlands, lakes and streams.
- Park Use – 74% (2nd highest) use trails, wetlands and natural areas at least twice in the past year.
- Purpose of Use – 72% (highest rating) of residents state "to enjoy nature and open space".

In 2008, the City of Bellevue contracted with American Forests (AF) to conduct an ecological audit of Bellevue's Tree Canopy. AF utilized satellite imagery and computer modeling to analyze Bellevue's Tree Canopy.

Major findings include:

- From 1986 to 1996, Bellevue lost 12% of its tree canopy. From 1996 to 2006, Bellevue lost another 9%.
- This loss of tree canopy translates to a lost ability to remove 90,000 lbs. of air pollutants.
- City Parks & Open Space and public Right-of-Way trees provide 16.7 million cubic feet of stormwater retention services, valued at \$33 million. Bellevue's tree canopy slows stormwater runoff, decreasing the amount of stormwater storage needed. As trees absorb runoff, they also act as filters to help remove pollutants and provide cleaner water.
- AF recommends a 40% tree canopy for a healthy community. Bellevue's tree canopy Citywide is 36%.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Nature Space & Forest Management contributes to:

Quality Neighborhoods

Healthy and sustainable nature spaces provide economic, ecological, health and social benefits. Tree canopy and nature spaces help preserve the character of neighborhoods, and nature spaces provide serene community gathering and recreation spaces. In addition, volunteer stewardship of these areas increases community involvement and helps build neighborhood cohesion.

Innovative, Vibrant & Caring Community

Bellevue's natural space is a key element to people feeling Bellevue is a "City in A Park." Bellevue residents actively participate in the preservation and enhancement of Bellevue's natural areas through community and neighborhood volunteer events, providing opportunities for social interaction.

Responsive Government

76% of Bellevue residents stated in the 2009 Park survey that Bellevue Parks place a high priority on (2nd highest rating) on improving the health and ecological function of forest, wetlands, lakes and streams – and we have consistently listened and responded through the purchase, protection and management of these areas. 74% of Bellevue's residents (over 400,000 annual visits) use Bellevue's the trails that are built through our natural areas. Many of these trails were constructed through Neighborhood Enhancement Funding.

Economic Growth & Competitiveness

Protecting Bellevue's natural spaces has created a "City in a Park" and protects areas that attract people and businesses to the Pacific Northwest to live, work, and play.



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C. Short- and long-term benefits of this proposal:

Short-term: Preservation and enhancement of Bellevue's nature spaces for public health, enjoyment and safety.

Long-term: Improves air quality, controls storm water runoff and filters pollutants before they enter our streams, reduces the heat island effect, improves fish and wildlife habitat, provides natural beauty, enhances neighborhood livability, lowers crime rates, improves quality of life, and increases property values.

D. Performance metrics/benchmarks and targets for this proposal:

The Natural Area and Forest Management Program uses nationally recognized International City Manager's Association (ICMA) performance measurements as indicators for outcome success. Our objective is to meet or exceed the 2009 effectiveness and efficiency measures:

- 75% of citizens surveyed rating the safety of Bellevue Parks and facilities as good or excellent.
- 85% of citizens surveyed rating appearance of Bellevue Parks and facilities as good or excellent.
- Cost per square foot of developed parks and streetscapes and the tree and plant establishment success rate for forest management restoration and enhancement projects.

E. Describe why the level of service being proposed is the appropriate level:

This proposal will fund management and maintenance at a level that provides for safe and healthy natural areas, healthy tree canopy, and satisfy citizen expectations. Citizens routinely request and support the proactive stewardship of our nature spaces, wetlands, riparian areas and urban forest properties. Management and maintenance of natural areas at the proposed service level improves the values and benefits that these areas were set aside for, and reduces the level of degradation. A higher level of service would increase the amount of degraded natural area restored and provide a higher level of value and benefit in a shorter period of time.

Section 8: Provide a Description of Supporting Revenue

N/A

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. **Legal:** Increased risk and liability exposure to the City (See Section 6 Mandates.)
2. **Customer Impact:** Not funding this proposal will result in the degradation of Bellevue's Nature Space/Natural Areas by further reducing tree canopy and wildlife habitat, increasing pollutants to air and water, depriving the community of the environmental, social and economic benefits that healthy-sustainable natural areas provide.
3. **Investment/Costs already incurred:** The City's investment in natural area property has a King County assessed value of over \$157 million, not including the value of improvements made over the last 57 years. Hundreds of thousands of trees and plants have been planted on our public forests providing significant public investment.
4. **Other:** N/A

B. Consequence of funding at a lower level:

A reduction in funding would result in additional degradation of Bellevue's Nature Space/Natural Areas, depriving the community of the environmental, social and economic benefits that healthy-sustainable natural areas provide.

2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Community Alliances & Partnerships		Proposal Number: 100.41NN
Outcome: Healthy and Sustainable Environment		Proposal Type: New Service
Staff Contact: Dan DeWald, x6048; Geoff Bradley, x2740		One-Time/On-Going: On-Going
Fund: General	Attachments: Yes	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

This proposal will provide funding to establish and manage alternative work models to help maintain nature spaces throughout the Parks system. The Parks Work Program will provide cost effective labor, alternatives to jail, and rehabilitative services by utilizing misdemeanor offenders to assist with Park maintenance and operations. Volunteer management through Non-Profit Services Contracts will help support non-profit organization, expand community outreach efforts, and increase citizen involvement on environmental stewardship projects throughout the City.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$84,602	\$89,265
Other	201,020	\$118,020
	\$285,622	\$207,285

Supporting Revenue

	\$6,300	\$6,300
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LTE/FTE

FTE	1.0	1.0
LTE	0.0	0.0
Total Count	1.0	1.0

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Avoidance

- Creates partnerships with non-profit organizations to assist with expanded community involvement efforts.
- Helps maintain sites at high level to avoid potential liability exposure and claims.
- Increases citizen knowledge which leads to changes in attitudes and behaviors that help reduce costs associated with resource degradation.

Efficiencies/Innovations

- Provides non-salaried labor to provide maintenance activities on City nature space sites.
- Expected to increase jail fee savings by \$243,100 by reducing the number of offenders sentenced to jail.

Partnerships/Collaboration

- Works cooperatively with courts to provide alternative community service in lieu of jail and/or fines.
- Partnerships with non-profits (i.e., Jubilee Reach, Mountains to Sound Greenway, Earth Corps, etc.) provide expanded opportunities for community volunteer involvement.

Section 5: Budget Proposal Description

The Parks Work Program will provide an opportunity for the City to benefit from misdemeanor offender work crews working on Parks, and perhaps Utilities, nature space sites including the Mercer Slough and Larsen Lake Blueberry Farms and Coal Creek Natural Area. Rather than serving jail time and/or paying fines that offenders

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cannot afford, the Parks Work Program will allow the City to provide an additional alternative to jail that is expected to result in \$243,100 in jail fee cost savings (\$85/day x 11 workers x 260 working days). This cost savings will help reduce impacts on the City's general fund. The program could also charge a onetime \$35 per person application fee for \$6,300 in supporting revenue (based on 180 annual participants). It will result in a healthier, more livable City and provide offenders with an opportunity to "repay" the community by converting unproductive jail time to productive work improving Bellevue nature space. It will provide offenders with opportunities to learn environmental ethics, new skills and productive work habits, while assisting them in transitioning from offending behavior to more law-abiding behavior. Rather than incur costs for offender jail time, the program will provide additional nature space maintenance activities that are currently not provided because of insufficient funding and staffing. The Parks Work Program crews will not supplant current City maintenance tasks. Due to the nature of the work, project locations, and types of participants the Parks Work Program will require an additional FTE to perform screening, project coordination, supervision, evaluation and other administration and project management tasks necessary to safely manage the program and ensure adherence to court ordered mandates.

Non-Profit Service Contracts would be designed to help support private non-profit organizations that would provide volunteerism management activities to increase community participation in environmental stewardship projects throughout the City. Many private, non-profits depend on volunteer labor as a way of delivering service. Through these creative contracts, the City can harness these volunteer resources to provide mutually beneficial community services. The proper management of community volunteers requires considerable time and effort. Volunteers must be recruited, screened, interviewed, placed, trained, supervised and recognized. Volunteer management also includes project management, recording keeping, reporting, and performance evaluation. Contracting these services to organizations already performing these tasks to expand environmental stewardship maintenance tasks can be an efficient and effective method of service delivery.

Section 6: Mandates and Contractual Agreements

N/A

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

See Attachment A for Comprehensive Plan policy language that supports this proposal.

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

The proposal supports several elements for a **Healthy & Sustainable Environment:**

Water Resources

- Implementing cultural practices with an augmented labor force reduces the need for pesticide use and improves water quality.
- Environmental education as a component of programs will increase opportunities for environmental water resource protection and conservation.

Clean Living Environment

- Additional program maintenance tasks will assist in maintaining a cleaner, healthier environment.
- Education about clean living practices as a component of program will help change deviant behaviors.

Nature Space

- Preservation and maintenance of parks supports health and well being of citizens and wildlife habitat.
- Proposal will provide nature space education as a component of programs.
- Physical work on nature spaces promotes healthy living.

Clean Air

- Transportation of the Alternative Services Work Program crews will utilize a 12-passenger van to reduce carbon emissions.
- Forest restoration activities help remove carbon dioxide and pollutants from the air.

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Conservation

- Restoration activities help protect and enhance nature spaces and preserve habitat for wildlife.
- Tasks associated with organic farming promote sustainable cultural practices.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Innovative, Vibrant & Caring Community

Support Services

- Increases awareness of, and access to, services provided by the City.
- Supports diverse community programs and facilities.
- Allows for healthy interactions within the community and promote community involvement.

Opportunities for Interaction

- Creates visionary programs that utilize free labor to reduce maintenance costs and enhance resources.
- Engages diverse cross sections of the community, providing opportunities for interaction in helping care for Park resources.
- Provides a support service by accepting and organizing in-kind labor in lieu of fines for offenders.

Built Environment

- Supporting programs that serve diverse populations

Quality Neighborhoods

Sense of Community

- Community stewardship activities organized by non-profit contracts will increase citizen participation and strengthen neighborhood and community bonds.
- Work provided will maintain Park resources to at a high level that promotes safe community use.

Facilities and Amenities

- Develops, maintains, and enhances trails, parks, and open spaces and facilities
- Promote active, clean, and safe gathering places

Public Health and Safety

- Services delivered help provide for a better maintained, safer, and more attractive neighborhoods.

Safe Community

Prevention

- Inspection and maintenance addressing the need for clean public spaces to include infrastructure both public and private.
- Rehabilitative services associated with Parks Work Program will promote responsible citizen behavior to help deter future deviant behavior.

Community Engagement

- Promotes partnerships, volunteerism, and neighborhood involvement

C. Short- and long-term benefits of this proposal

Short-term: Provides expanded alternatives for offenders to repay community, reduces use of limited and expensive jail space, recovery, through service, of otherwise uncollectible fines, cost-effective conversion of jail time to productive work, establishment of collaborative non-profits partnerships, increased opportunities for environmental education, and increased citizen involvement in the care of park resources.

Long-term: More environmentally enlightened and engaged community, improved air and water quality, improved fish and wildlife habitat, neighborhood livability, lower crime rates, and enhanced quality of life.

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D. Performance metrics/benchmarks and targets for this proposal

The Community Alliances and Partnerships proposal will use nationally recognized International City Manager's Association (ICMA) performance measurements as indicators for outcome success. Our objective is to meet or exceed the following 2010 targeted effectiveness and efficiency measures:

- \$0.18 maintenance cost per square foot of developed park
- 75% citizens surveyed rating the safety of Bellevue Parks and park facilities as good or excellent
- 85% citizens surveyed rating appearance of Bellevue Parks and park facilities as good or excellent

E. Describe why the level of service being proposed is the appropriate level

This proposal will fund the program at a minimal level of service to run one work crew comprised of 11 individuals, and provide \$75,000 in professional service contracts to non-profit agencies to manage volunteer environmental stewardship projects.

Section 8: Provide Description of Supporting Revenue

Supporting revenue includes a one-time user fee to participate in the Parks Work Crew program.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: N/A
2. Customer Impact: Continued ineffective court sentencing procedures and current levels of volunteer involvement.
3. Investment/Costs already incurred: N/A
4. Other: N/A

B. Consequence of funding at a lower level:

Reduction in outreach programs, elimination and/or reduction in size of either the Parks Work Program or Non-Profit Contracts, less informed citizens, reduced community environmental stewardship activities.



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Section 1: Proposal Descriptors

Proposal Title: Water Conservation & Irrigation Program		Proposal Number: 100.53NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Tom Kuykendall, x7924; Rick Bailey, x6031		One-Time/On-Going: On-Going
Fund: General	Attachments: Yes	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): The ability to execute this program and maintain service levels relates to funding in the Capital Investment Program (RFR# 100.78NA)and the following operating proposals: Community Parks Program (RFR# 100.24NN); Neighborhood Parks Program (RFR# 100.25NN); Waterfront Parks Program (RFR# 100.26NN); City Sport Field Program (RFR# 100.34NN); Bellevue Botanical Garden (RFR# 100.35NN); BSD Sport Field Program (RFR# 100.51NN) Street Trees; Arterial Landscape, Roadside Vegetation (RFR# 100.39NA)		

Section 2: Executive Summary

This program will provide ongoing comprehensive management and maintenance of irrigation water resource usage for 921 acres of City-owned community parks, neighborhood parks, waterfront parks, sports fields, streetscapes and civic facilities. Responsible and efficient use of water must be practiced both for the preservation of urban landscapes and the potential impact on limited regional water resources. Funding of this proposal will provide resources that will allow the City to efficiently utilize water resources that are vital to surrounding natural resource components, such as urban lakes and streams, while at the same time preserving and protecting the City’s investment in trees and landscape assets that enhance the quality of life for citizens who live, work, and play in Bellevue.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$168,870	\$177,643
Other	\$465,079	\$471,954
	\$633,949	\$649,597

Supporting Revenue	2011	2012
	\$0	\$0

LTE/FTE	2011	2012
FTE	2.0	2.0
LTE	0.0	0.0
Total Count	2.0	2.0

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Efficiencies/Innovations/Cost Savings

- The use of irrigation water is necessary for the vitality of City invested turf and landscaped areas within the parks and open space system. This saves the City substantial costs in replacing trees, shrubs and turf areas that would perish if not adequately irrigated.
- As an efficiency, Bellevue Parks & Community Services proposes to manage this program with the addition of one new FTE Lead Worker teamed with an existing Technical Specialist to perform the same work that has traditionally been accomplished through contracted labor and temporary 9-month seasonal help. With an additional FTE resource, this program would produce an annual cost savings of \$46,000 and enhance service delivery for the preservation of water resources in the following ways:
 - Irrigation dollars will be removed from maintenance contracts and be reallocated to in-house staffing resources for routine site inspections on contracted sites. Non-routine irrigation repair work will be conducted using in-house staff, which will reduce contracted expenditures and costs associated with

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administering purchase orders and contracts, managing and holding contractors accountable and paying contractor mark-ups on supplies and materials.

- There will be increased institutional knowledge and vested interest regarding how each individual streetscape irrigation system operates which will lead to more efficient use of water. In-house staff will be more proactive in seeking methods of renovating older, dilapidated systems to promote more efficient use of water resources. More frequent and reliable monitoring will lead to less waste, which will reduce utility expenditures and save the City significant costs in the long-term.
 - In-house staff will be more readily available, compared to contractors, to respond quickly and efficiently to repair broken irrigation systems, reducing water waste and plant mortality.
3. This proposal seeks to combine the irrigation resources from multiple City program areas into one unified program to improve efficiency and use of existing resources. A combined program will place the City in a unique position to provide local and regional leadership in the effective and efficient use of water resources. A collaborative program will have greater potential to obtain irrigation efficiency grants and rebates.
 4. This program will expand the use of Maxicom computer software which allows for Citywide irrigation systems to be programmed and managed at a central location which significantly reduces labor costs. This software uses real time weather data and conditions to proactively adjust irrigation programming to minimize water waste.
 5. This program will continue upgrading older irrigation systems with new technologies, such as more efficient spray nozzles and solar power equipment, to increase efficiencies in resource usage.
 6. This program will allow Parks & Community Services to continue utilizing previously acquired water rights to pump water from Lake Washington to provide irrigation to various waterfront parks. This will save \$12,000 annually that would otherwise be used to purchase potable water Utilities Department.

Partnerships/Collaboration

1. This program will continue to collaborate closely with the Utilities, Water Quality and the Developmental Services Departments developing water budgets and performing water audits for new and/or renovated irrigation systems.
2. This program will collaborate with the Cascade Water Alliance (CWA) exploring grant and rebate opportunities to upgrade existing irrigation systems to increase water use efficiencies.
3. This program will collaborate with the Bellevue School District (BSD) to optimize water usage at various district sports fields that are operated by the City.
4. This program will provide plan review and construction inspection for multiple departments to ensure irrigation best management practices are utilized.
5. This program will collaborate closely with the Transportation Department to develop water wise landscapes associated with roadway improvement projects.

Section 5: Budget Proposal Description

This program focuses on the management of water utility budgets, irrigation equipment/software and the enhancement of existing irrigation systems to meet efficiency goals for water resources to provide irrigation to developed turf and landscaped assets owned by the City. Funding of this proposal will provide resources to manage and improve irrigation water efficiencies for the City's community parks, neighborhood parks, waterfront parks, sports field parks, street and arterial landscapes and civic facilities. These assets encompass 921 acres of land with a combined King County assessed and improved value totaling \$1.014BIL.

Management functions include technical knowledge of irrigation design, Maxicom software, wiring and programming, maintaining pumps, replacing defective parts, winterizations and startups, troubleshooting problems, performing field maintenance and inspecting each system on a regular schedule to ensure that water use is being optimized. The design and management of irrigation systems is complex. It requires technical

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knowledge of implementing effective hydro-zoning, understanding basic hydraulics, understanding site and cultural conditions such as soil, slopes, specific water requirements of trees and shrubs and sufficient knowledge of irrigation tools to optimize management of water resources. Because of seasonally dry summer months, the urban heat island affect and high levels of programming, efficient management of water resources for irrigation is necessary to preserve the vitality of City owned vegetative assets. The services of one Technical Specialist, one Lead Worker and appropriate levels of seasonal help and contracted services are required to manage this program.

Section 6: Mandates and Contractual Agreements

- Under the **Growth Management Act**, Bellevue has a statutory obligation to protect the functions and values of critical areas, and to give special consideration to conservation and protection measures to preserve or enhance anadromous fisheries.
- **Bellevue Water Utility Code 24.02.190 - Cross Connection Abatement and Control:** The City's Water Utilities Department requires that all irrigation Double Check Valve Assemblies (DCVA's) that connect to the City's potable water system be tested annually to ensure proper functioning.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

- **Services within this program provide leadership in environmental stewardship and best management practices for a Healthy & Sustainable Environment.**

Parks & Community Services has developed the Environmental Best Management Practices & Design Standards Manual which guides irrigation water management in all the City's parks, sport fields, streetscapes and civic facilities. These adopted standards effectively communicate the operational practices of the City to the public and respond to regional, state and federal environmental issues. The combination of using best management practices and innovative technologies to optimize the efficient use of water resources sends a strong message of environmental stewardship to Bellevue residents and the eastside region.

- **Effective management of irrigation water protects and preserves City investments in parks, sport fields, streetscapes and civic facilities.**

Over the years, the City has invested millions of capital dollars renovating and/or constructing new parks, sport fields, streetscapes and civic facilities. These developments encompass hundreds of acres of ornamental landscape and turf areas that carry a high environmental and monetary value which enhance the quality of life in Bellevue. These valuable vegetative assets would not be viable without the efficient use of irrigation water.

- **Services within this program preserve water for the benefit of surrounding natural resources and wildlife habitats.**

Responsible use of water must be practiced both for the preservation of landscape assets and the potential impact on the broader watershed. An efficient irrigation program makes the best use of available resources by minimizing waste and preserving water that is vital to other natural resource components, such as urban lakes, streams, riparian habitats and associated fish and wildlife, while at the same time preserving and protecting the City's investment in landscaped assets.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Innovative Vibrant & Caring Community

- **The comprehensive management of water resources plays a significant role in the City's ability to successfully develop and manage parks, sport fields and streetscapes.**

The efficient use of irrigation water allows the City to effectively manage park trees, street trees, shrubs, flowers, formal and informal landscape beds, turf and natural areas that are all key components of an enhanced visual setting that contributes to a community's health, well-being and quality of life. These assets enhance the City's visual character by perpetuating the "City in a Park" image.

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C. Short- and long-term benefits of this proposal:

Short-term: The City's ability to manage water resources effectively to promote a pleasant and safe experience for park and open space users, while preserving water that is vital to surrounding ecologically sensitive habitats.

Long-term: Managing water resources at consistent levels for cost-effective expenditures and maintaining the infrastructure at a level that meets the expectations of Bellevue citizens while preserving water that is vital to other natural resource components.

D. Performance metrics/benchmarks and targets for this proposal:

In addition to the City's required annual testing for all irrigation Double Check Valve Assemblies (DCVA's) that connect to the City's potable water system, this program will perform water audits on each of the City's irrigation systems every five years to insure that systems are operating efficiently. As funding permits, the goal will be to renovate at least two existing older systems per year to promote more efficient use of water resources.

E. Describe why the level of service being proposed is the appropriate level:

This proposal will fund management operations at a level that will provide for efficient use of water resources and satisfy citizen expectations for providing safe and attractive parks, sports fields, streetscapes and civic facilities. The proposed level of service delivery will adequately address public safety issues, promote responsible environmental stewardship and provide a high level of aesthetics that citizens will be satisfied with, while demonstrating stewardship of taxpayer dollars.

Section 8: Provide Description of Supporting Revenue

N/A

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. **Legal:** Not funding this proposal would inevitably lead to the degradation of parks, sports field, streetscape and civic facility grounds (pot holes in turf, dead trees, etc.). This would hinder the ability of staff to implement effective risk management. This will lead to greater occurrences of bodily injury increasing the City's liability and susceptibility to claims and potential lawsuits.
2. **Customer Impact:** The resulting degradation of vegetative assets would have a negative impact on the visual character of City parks, open space and streetscapes, and would result in decreased aesthetics and neighborhood property values. This would also likely result in less frequent park visits.
3. **Investments/Costs already incurred:** Over the past several years, the City has invested significant resources in acquiring land and developing the City's parks, sports fields, streetscapes and civic facilities. Currently, these assets encompass a total land mass of 921 acres with a combined assessed and improved value totaling \$1,014,582,125.

B. Consequence of funding at a lower level:

A reduction in the proposed resources that are required to effectively manage the City's water resources will lead to a reduction in service-levels that would subsequently degrade the City's vegetative assets. The City would experience a higher rate of mortality in ornamental trees, shrubs, annuals and turf. This would inevitably lead to public dissatisfaction and would tarnish the "City in a Park" image that is presently a great sense of pride for many residents and City leaders.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Transportation Drainage Billing		Proposal Number: 130.06NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Judy Johnson, x4891		One-Time/On-Going: On-Going
Fund: General Fund	Attachments: No	Enter CIP Plan #:
List Parent/Dependent Proposal(s):		

Section 2: Executive Summary

This proposal is for funds for the Transportation Department to pay for storm drainage from Bellevue's roadways to the City's Stormwater Utility. This system manages runoff from impervious surfaces to prevent flooding, and to preserve existing streams and wetlands, keeping them free from pollutants. Transportation owns 117,365,202 sq ft of impervious streets. Transportation is billed for 26.5% of the surface as lightly developed (medians, plantings, etc). The other 73.5% is billed as heavily developed. Heavily developed properties have much greater runoff and are charged at a higher rate. These calculations have been determined to take credit for detention systems into account.

Section 3: Required Resources

as of 5/26/10

OPERATING		
Expenditure	2011	2012
Personnel	-	-
Other	2,964,625	3,142,502
	2,964,625	3,142,502
Supporting Revenue		
	\$0	\$0
LTE/FTE		
FTE	0.0	0.0
LTE	0.0	0.0
Total Count	0.0	0.0

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/collaboration: N/A

Cost Savings/Innovation:

Section 5: Budget Proposal Description

As property owners, the City must pay the same types of fees that homeowners and businesses pay, measured in the same way. Storm and Surface Water charges serve to maintain and improve the entire city's stormwater system. These charges are based on the size of the property and the percentage of impervious surface. Impervious surfaces are mainly constructed surfaces such as, sidewalks and roads which are covered by materials which do not allow water to pass through; such as asphalt, concrete, brick and stone. These materials seal surfaces, repel water and prevent it from infiltrating soils. The higher the percentage of impervious surface,

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the higher the classification for billing purposes. The range of classifications runs from "wetlands" to "very heavily developed." Transportation owns 117,365,202 sq ft of impervious street surfaces and walkways. Transportation is billed for 26.5% of the surface as lightly developed(medians, plantings, etc). The other 73.5% is billed as heavily developed. Heavily developed properties have much greater runoff and are charged at a higher rate.

Section 6: Mandates and Contractual Agreements

Utility Billing Customer: as a customer of Utilities, Transportation is required to pay this utility bill.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

How will this Proposal achieve a Healthy and Sustainable Environment (HSE)?

The City of Bellevue currently provides a highly functional drainage system that serves all customers within the City. This system is critical to the prevention of flooding, and erosion; and traps debris, oils, silts, and other contaminants that would otherwise end up in the City's lakes and streams. Storm drainage is able to remove these contaminants and dispose of them properly.

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome; Healthy and Sustainable Environment.

Factor 1 – Water Resources

- Education - To increase awareness about pollution in waterways, Bellevue is part of a regional campaign called "Puget Sound Starts Here," made up of more than 300 Puget Sound organizations that support the message that the Sound's pollution problems start in our own backyards.
- Reduced Pollutants - To protect water quality, Bellevue manages stormwater runoff in a number of ways. The city follows "best management" practices and operates under a National Pollutant Discharge Elimination System Phase II Municipal Stormwater Permit issued by the state Department of Ecology in January 2007. This permit is a requirement of the Federal Clean Water Act.

Factor 2 – Clean Living Environment

- As water from rainfall flows over rooftops, streets and yards, it picks up and carries pollutants such as fertilizers, soap, oil, dirt, metals and solvents. This pollution flows directly into Bellevue's storm drains and ends up harming streams, lakes and wetlands. Proper maintenance of the Storm Drainage system keeps our waterways free of pollution.
- Streams, lakes and wetlands are critical areas protected from development, and constitute a natural part of Bellevue's drainage system.

Factor 3 – Nature Space

- People in Bellevue enjoy the city's streams, lakes and wetlands for their beauty and for recreation. These waterways are also home to salmon and many other types of fish and wildlife.

Factor 5 – Conservation of Natural Resources

- Flooding can cause streambank erosion, destroy salmon eggs and cause property damage.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Safe Community and Improved Mobility - Flood Prevention Bellevue's drainage system—composed of streams, lakes, wetlands, food detention sites, pipes and ditches—has been designed to hold and carry water during storms to prevent flooding. This improves safety because it reduces the possibility of flooding in businesses and residences. It also improves mobility because a properly maintained drainage system reduces roadway flooding and the resulting impacts on mobility.



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Responsive Government Factor 5: Management of Risk and Liability. Utilities ensures that the City complies with contract and regulatory requirements (National Pollutant Discharge Elimination System and Endangered Species Act). This also reduces the likelihood of claims due to roadway runoff that has overflowed the roadway and entered private properties.

Economic Growth and Competitiveness Factor 3: Infrastructure. A robust and strategic drainage infrastructure forms the foundation for the City's economic competitiveness and advances the standard of living in the community.

C. Short- and long-term benefits of this proposal:

Short-term: Aside from the City's responsibility to pay its Utility bills as a property owner, the benefits of this proposal are a Transportation System which is maintained to drain quickly in all but the heaviest storm conditions, preventing flooding and erosion.

Long-term: Work funded by these fees prevents sediments and contaminants from entering the City's streams and lakes.

D. Performance metrics/benchmarks and targets for this proposal:

N/A

E. Describe why the level of service being proposed is the appropriate level:

An exception to an alternative level of services has been granted for this proposal. The recommended level of services meets the criteria for proposing efficiencies in the existing services while still meeting the intended outcome. Additional levels of service describing the impacts to operations may still be requested.

Section 8: Provide a Description of Supporting Revenue

n/a

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all

1. Legal: We are obligated to pay our Utility Bills as are all property owners.
2. Customer Impact:
3. Investment/Costs already incurred:
4. Other:

B. Consequence of funding at a lower level:

Not paying the bill is not an option, this proposal is not scalable.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Street Cleaning (Sweeping) Program		Proposal Number: 130.26NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Judy Johnson, x4891		One-Time/On-Going: On-Going
Fund: General	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s):		

Section 2: Executive Summary Gravel, debris, silts, automotive fluids, leaves, and glass in road and bicycle lanes contribute to accidents, injuries, street flooding, and pollutant discharge into the drainage system that flows to Bellevue’s streams and lakes. The Street Sweeping Program cleans bicycle lanes, arterial roadways, neighborhood streets, and removes traction sand applied during snow and ice response. Street Sweeping, particularly following snow and ice events, is critical to the health and beauty of natural waterways such as Phantom Lake, Lewis Creek, and Coal Creek. This work is required by the National Pollutant Discharge Elimination System (NPDES) Permit.

Section 3: Required Resources

9/16/2010

OPERATING		
Expenditure	2011	2012
Personnel	\$223,721	\$235,558
Other	72,684	72,756
	\$296,405	\$308,314
Supporting Revenue		
LTE/FTE		
FTE	2.85	2.85
LTE	0.00	0.00
Total Count	2.85	2.85

This proposal represents the current (2010) service level:

- Bike Lane Sweeping twice a month.
- Arterial Sweeping once a month.
- Neighborhood sweeping 2 – 3 times a year.

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/collaboration: Transportation, Utilities, Fleet, Washington State Dept. of Transportation, King County and adjacent Cities.

Cost Savings: City of Bellevue Street Sweeping service levels are achieved with minimum resources compared to other area agencies. We hold the program to a route-based approach rather than a response-based approach only making exceptions for emergencies such as accident response and spills.

Innovation: Positive displacement vacuum system sweepers are used that vacuum as well as sweep streets to reduce dust and fines left to flow into the drainage system more than conventional sweepers. The sweeping is scheduled based on established routes rather than call or inspection based and has proven to be the most efficient service delivery model.

Section 5: Budget Proposal Description

This program is mandated by the NPDES permit because it reduces silts, sand and other organic and non organic materials from entering the drainage system and the City’s water courses. Street cleaning also reduces flooding

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caused by blocked or clogged drainage structures provided to drain runoff from street surfaces. This is especially critical in the fall when leaves often plug grates causing roadway flooding. . Street sweeping helps prevent loose materials such as leaves, gravel or sand, from decreasing the friction between the car and bicycle tires and the roadway surface that can negatively impact the safe use of the transportation system. The proposed service levels include sweeping bicycle lanes twice a month, arterial streets monthly, and neighborhoods 2 – 3 times a year, and cleaning up traction sand as soon as possible after snow response. The motion of the larger vehicles pushes the loose materials toward the curb line, so unswept pavements are especially dangerous for bicyclists. As such this proposal provides roadway and bicycle lane cleaning Citywide. By removing leaves, dirt, glass, gravel, and debris vehicle and cycle tires are less likely to slip on the pavement.

Section 6: Mandates and Contractual Agreements

The NPDES permit requires street cleaning, but does not specify a service level. RCW 80.50.150 (2) states that willful violation of any provision of this chapter shall be a gross misdemeanor and shall carry penalties to enforce compliance.

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factors in the Healthy and Sustainable Environment outcome:

- **Factor 1: Reduced Pollutants:** Street Cleaning removes organic debris and other pollutants from roadway surfaces, keeping them from entering the storm drains and Bellevue's lakes and streams.
- **Factor 2: Clean Living Environment.** The program also provides citizens with a cleaner and healthier living environment.

B. Other Factors/Purchasing strategies addressed by this proposal:

Factors in other outcomes:

- **Improved Mobility Factor 1: Existing and Future Infrastructure.** Street Cleaning removes debris from roadways, allowing streets and bike lanes to perform to their intended capacity.
- **Improved Mobility Factor 2: Traffic Flow.** Clean roadways increase the efficiency of traffic flow by removing obstacles to motorists and bicyclists and enhancing the safe use of the system. Street sweeping enhances traffic flow by minimizing tire skidding due to friction loss and reducing the likelihood of traffic accidents caused by motorists or bicycles swerving to avoid debris.
- **Improved Mobility Factor 3: Built Environment.** The park-like character of Bellevue increases the potential for high volumes of roadside debris. The presence of trees, shrubs and other species of ground cover contribute to large amounts of organic material that end up on city streets. Street Cleaning allows for the natural character of the city to remain intact while still providing a functional transportation system.
- **Improved Mobility Factor 4: Travel Options.** Users of the Bellevue transportation system should expect city streets that provide a number of travel options, and that these facilities will be maintained to a safe and reasonable standard. Clean roadways and bikeways allow for the optimal use of the transportation system.
- **Safe Community, Factor 1: Prevention – Priority #1.** Street Cleaning reduces the likelihood of traffic accidents and bicycle mishaps by preventing unsafe "high risk" behavior such as swerving around roadside debris into adjacent lanes. Street cleaning helps to prevent leaves and debris from clogging catch basins, reducing street flooding impacts on traffic flow. Material removed before entering the underground surface water system minimizes the likelihood of flood damage to homes and businesses.
- **Safe Community, Factors 2&3: Response/Planning and Preparation – Priority #2&3.** Maintenance resources are called upon to assist emergency response personnel to clean up following traffic accidents, landslides and material spills. These resources are also called upon to respond to weather events by cleaning up debris from wind storms, flooding, and traction sand applied during ice and snow response.

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- **Quality Neighborhoods, Factor 1: Sense of Community.** Street sweeping enhances the character of our city by reducing roadside debris, keeping our streets and neighborhoods clean and appealing.
- **Quality Neighborhoods, Factors 2 - 4: Facilities & Amenities, Public Health and Safety, Mobility.** Proactive maintenance of the roadway system promotes use of amenities by providing safe access to facilities, goods, and services.
- **Economic Growth and Competitiveness, Factor 4: Quality of Community.** Clean streets enhance the quality of life by making City neighborhoods and businesses safer and a cleaner place to live, work, and play.
- **Responsive Government, Factor 4 - 5: Exceptional Service, Efficient and Effective Delivery / Stewards of the Public Trust, Achieve Results.** Bellevue citizens and business owners expect that the City's streets and roadways will be maintained in a clean and functional manner to minimize commute delays and disruptions to traffic and drainage systems. Regular review of street cleaning practices assures that services are delivered in the most efficient way, providing the best value for the dollar.

Improved Mobility purchasing strategies:

- **Maximize efficiency and value of existing and future infrastructure investments.** Street cleaning enhances the effectiveness of the roadway drainage system. By removing debris, surface water catch basins work more effectively removing surface water from Bellevue streets during rain storms thus reducing the probability of flooding.
- **Focus on more than just cars (think "multi-modal").** The Bellevue transportation system provides links to bus routes, bicycle facilities, park and ride lots, multi-modal trail systems, and eventually light rail. These alternate travel options are enhanced by the safety and reliability of the roadways and bikeways which connect them. Roadside debris collects into bike lanes and pedestrian crossings making them more difficult to use. Street cleaning provides for safe, clean connections between facilities.

Citywide purchasing strategies:

- **Provide for gains in efficiency and/or cost savings and ensure that services are "right sized" and Consider best practices.** This program is made more efficient by utilizing a route-based approach rather than response to calls except in response to accidents, spills, and weather events. Route-based street cleaning allows the transportation system to receive service in a systematic manner. Streets are prioritized and service levels are established based on type of use, volume of traffic and tree cover which affects the volume of organic debris.
- **Promote environmental stewardship.** Street cleaning enhances the environment by removing fine sand particles and other pollutants from roadways before they are introduced into Bellevue's streams, lakes, and wetlands.
- **Considers short and long-term financial impacts.** *See subsection C below.*
- **Ensures sound management of resources and business practices.** By prioritizing routes and adjusting service levels based on type of use, program resources deliver service where and when it is needed most.

C. Short- and long-term benefits of this proposal:

- **Short-term:** Street cleaning benefits safe travel, the environment, and citizen satisfaction.
- **Long term:** Street cleaning benefits safe travel, environment, and citizen satisfaction on a continuous basis. Resource levels per service mile have been compared with other agencies and are low by comparison.

D. Performance metrics/benchmarks and targets for this proposal:

Evidence and logic supporting this proposal: Each area designated for street cleaning has a legitimate need for the service, and no one type of roadway can be eliminated from the program without negative impacts and noncompliance with the NPDES permit. This proposal provides service to arterial roadways, bike lanes and neighborhoods based on the type of use and impact to traffic and environment. Bike lanes will be swept twice a month, arterial roadways will be swept monthly and neighborhoods will be swept 2-3 times a year.



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Performance measures:

	2009	2009
• Customer Satisfaction rating for clean streets:	Target 95%	Actual 90%
• Number of routine sweeping requests (per 1000 customers):	Target 0.50	Actual *1.11
• Number of street miles swept	Target (**new)	Actual 2,385
* Traction sand pickup from 2008 storms delayed neighborhood services in 2009. This drove increase in customer calls.		
** Beginning in early 2009 a new method of measurement for street sweeping was adopted.		

E. Describe why the level of service being proposed is the appropriate level:

The program and its resources have been compared with comparable agencies, and the satisfaction rating has remained at or above 90% with less resources per service mile than comparable agencies use.

Section 8: Provide Description of Supporting Revenue

Activities are funded by the Transportation General Fund operating budget.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. **Legal:** The National Pollutant Discharge Elimination System Permit mandates street cleaning; however the level of service is not specified. In case law, Keller vs. City of Spokane, in 2002, the WA State Supreme Court has held that "a municipality owes a duty to all persons, *whether negligent or fault-free*, to build and maintain its roadways in a condition that is reasonably safe for ordinary travel."
2. **Customer Impact:** (1) Potential for increased traffic or bicycle accidents and claims; (2) A lower Customer Satisfaction level for clean streets; (3) Potential for increased street flooding; (4) Increased customer complaints; and (5) Increased silts and materials in the drainage system, streams, and lakes.
3. **Investment/Costs already incurred:** N/A

B. Consequence of funding at a lower level:

Similar to those described above.



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Section 1: Proposal Descriptors

Proposal Title: Capital Project Delivery		Proposal Number: 140.01NA
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Regan Sidie, x6857		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Capital Project Delivery develops and implements cost-effective capital investment projects necessary to accomplish the City's \$161 million 2011-2017 Utility Capital Investment Program (CIP) and is necessary to continue to provide utility services to Bellevue's citizens including providing drinking water, removing sewage, managing surface water runoff, and eliminating impacts on the health of Bellevue's streams, lakes, wetlands, plants, and wildlife.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$2,301,396	\$2,430,948
Other	172,786	172,957
	<u>\$2,474,182</u>	<u>\$2,603,905</u>

Supporting Revenue

	\$2,474,182	\$2,603,905
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LTE/FTE

FTE	19.86	20.86
LTE	2.00	0.00
Total Count	<u>21.86</u>	<u>20.86</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Cost Savings: Since the economic recession that began in late 2008, contractor bid prices for Bellevue Utilities projects have fallen dramatically due to the lack of competing construction projects. Projects have been awarded at 25% to 50% below Utilities engineer's estimates and are continuing to trend downward in 2010. Utilities has accelerated project delivery as much as possible to take advantage of the current bidding climate.

Partnerships/Collaboration: *Internal:* Transportation coordinates roadway projects to assure utility needs are addressed prior to roadway work; Parks looks for opportunities for joint use facilities, i.e. Cherry Crest Reservoir incorporated into a neighborhood park. *External:* King County/Metro: Utilities is currently doing a joint sewer transmission project that is expected to result in significant savings for each agency; WSDOT: Coordinating utility relocations with freeway improvements.

Efficiencies/Innovations: To improve flexibility and efficiency, and reduce costs:

- Staff are cross-trained to work on all three utilities.
- Engineering standards allow more efficient development of contract documents by reducing redundant specifications.
- Projects are sized and packaged to attract as many contractors as possible to obtain better bids.
- Developing a programmatic SEPA covering multiple projects to shave several months of permit review for each project.



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Cost Avoidance:

- Financial cost of paying higher bid prices if projects are delayed and bid during a construction boom period
- Economic cost of having to delay development projects awaiting system capacity
- Financial and environmental costs associated with sewage overflows and flooding
- Financial costs from property damage claims associated with water main breaks and other system failures

Section 5: Budget Proposal Description

This proposal includes staff and resources needed to develop, manage, design, and construct projects that accomplish the \$161 million 2011-2017 CIP (average \$23 million per year).

CIP Management (2.42 FTE): CIP management develops the CIP for council adoption. The process includes stakeholder review of CIP project criteria; capital program and project recommendations; opportunity for public input and Environmental Services Commission evaluation; monitoring CIP status as it is implemented; and assessment of the program's cost effectiveness.

CIP Design (10.75 FTE/2011 – 8.75 FTE/2012): CIP design involves selecting best project alternatives based on a decision model that includes economic, social, and environmental impacts. Engineering drawings, specifications, and cost estimates are developed along with securing required permits and property rights if needed. Quality Control and Assurance is provided throughout design. The design process uses a collaborative approach for decision making that includes staff from throughout Utilities and other stakeholder departments. With the CIP expanding to address replacement of aging infrastructure, capacity for growth, and mandates, an additional design FTE in 2011 is identified in this budget to maintain the current level of service. The total number of design FTEs is reduced in 2012 due to the end of two LTE positions in 2011.

CIP Inspection (6.45 FTE/2011 – 7.45 FTE/2012): CIP Inspection Services manages and inspects construction contracts to assure that bidding procedures are followed; that facilities are constructed in accordance with approved drawings and specifications and all permit conditions are met; that construction impacts on residents and businesses are minimized and the health and safety of the public is protected during construction; and that project costs are reviewed and accurately accounted for. To meet inspection needs for the expanding CIP noted above in CIP Design, an additional inspection FTE is identified in 2012 to maintain the current level of service.

Design/Construction Support (2.25 FTE): The Operations and Maintenance (O&M) Division performs plan review and field verification during development of plans and specifications for CIP projects. O&M staff also perform field operations supporting CIP projects under construction, including pre-construction meetings, coordination with contractors, providing site access to contractors, and performing water main shut-downs.

Section 6: Mandates and Contractual Agreements

- **Safe Drinking Water Act and Clean Water Act** federal regulations regarding safe drinking water and environmental protection.
- **State Environmental Policy Act (SEPA), Washington Department of Fish and Wildlife Hydraulic Project Approval (HPA), Endangered Species Act (ESA), Occupational Safety and Health Administration (OSHA), Washington Industrial Safety and Health Act (WISHA), and Americans with Disabilities Act (ADA)** federal and state regulations and permit conditions affecting implementation of capital projects.
- **Western Washington Phase II Municipal Stormwater Permit** regulating surface water quality.
- **RCW 39.04** regarding public works contract regulations.
- **WSDOT relocation permit and agreement requirements** that legally obligate Bellevue to relocate or modify utility facilities within highway rights-of-way, to accommodate state highway projects.
- **BCC Title 24 Utility Codes and Engineering Standards** for utility system requirements to maintain safe, reliable drinking water, safely collect wastewater, minimize flood potential, and protect the environment.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. **Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:**

- **Factor 1: Water Resources:** CIP programs and projects ensure a continued supply of clean drinking water; reliable, safe wastewater removal; and that surface water run-off from rain and storms is controlled to

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minimize the impacts of high flows and flooding on people, property, and the environment.

- **Factor 3: Nature Space.** Implementation of the CIP ensures that lakes, streams, and wetlands will be protected from sewer overflows. Improved native landscaping provided by stream restoration projects helps manage water runoff and can also reduce urban heat. The enhanced nature space provided by stream projects works hand in hand with parks and trails to promote healthy activities.
- **Factor 4: Clean Air and Factor 5: Conservation.** Enhanced landscaping and increased tree coverage provided by stream restoration projects help to cool and clean the air. Periodic rehabilitation of water and wastewater pump stations improves pump and motor efficiencies, thereby conserving energy and reducing consumption of electricity. Seismic retrofit of our water reservoirs and pump stations is a proactive means of preserving and protecting our resources from damage by earthquake hazards.

Purchasing strategies in the Healthy and Sustainable Environment outcome:

- **Water resources:** CIP implementation ensures that water resources are managed and protected. The maintenance and management of infrastructure ensures a safe, reliable supply of drinking water and sewage removal. Natural water resources are protected by programs that prevent pollution of surface water, and promote water conservation to preserve existing resources. Water quality is further protected by programs to control erosion and flooding. This natural water environment is essential to providing a suitable environment for plants and wildlife, and the recreational needs of the community.
- **Clean living environment:** Construction site sweeping and other erosion control and pollution prevention measures keep the living environment clean and free of waste, debris, and toxic materials.
- **Nature space and Clean Air:** Many CIP projects manage, maintain, preserve, and restore nature space and habitat. These projects conserve natural resources through restoration of streams and adjacent green spaces, and remove or prevent release of pollutants that degrade the natural environment. Also, stream restoration projects reduce air pollution by planting landscaping that filter pollutants.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

- **Safe Communities** require reliable water, wastewater, and storm water systems. **Quality Neighborhoods** benefit from amenities related to stream restoration projects, including planting new trees and plants to restore and enhance attractive natural settings. Hiking trails are often located alongside these stream projects to provide affordable recreational activities that contribute to an **Innovative, Vibrant, and Caring Community**.
- Economic growth and thriving business districts critical to **Economic Growth and Competitiveness** rely on robust utility systems, and **Improved Mobility** is aided by providing reliable, and functioning utility pipelines. Utility main breaks can damage streets and subsequent repair work can block or impair traffic. Storm drainage pipelines carry surface water from roadways to ensure that flooding does not impede traffic flow. Utility WSDOT relocations help to improve the transportation systems that bring people to and from Bellevue.

Citywide purchasing strategies addressed by this proposal:

- **Provide the best value in meeting community needs:** Preferred CIP project alternatives are based on a triple bottom line decision model that includes economic, social, and environmental impacts.
- **Provide for gains in efficiency and cost savings and ensure that capital project delivery is "right-sized.":** Cost-effective and efficient management, design, and inspection of Utilities CIP projects use the triple bottom line decision model to ensure that projects are appropriately sized.
- **Leverage collaboration with other City departments and external organizations:** Projects such as the joint sewer transmission project with King County/Metro are expected to save significant costs for each agency.
- **Eliminate low value-added activities:** Biennial review of CIP projects gives the opportunity to prioritize expenditures. By determining where capital investment is needed most, low value-added activities are identified and removed from the CIP.

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- **Promote environmental stewardship:** The CIP supports stream restoration and landscaping projects, restores streams and green space, and protects the natural environment from polluted water runoff.
- **Consider short-term and long-term financial impacts:** In the short term, quarterly monitoring of CIP status is performed to assess the program's cost effectiveness. Long-term (75+year) planning assures that utility pipelines and facilities continue to function and that funding will be available to replace these systems as they reach the end of their useful life.
- **Ensure sound management of resources and business practices:** Optimum management of resources is ensured through use of the triple bottom line decision model and asset management program.

C. Short- and long-term benefits of this proposal:

Short-term benefits: This proposal assures that appropriate budget is available, and that cost-effective design and construction of CIP projects ensures that utility services are maintained or improved, that utility lifeline systems (pipelines, pump stations, reservoirs) continue to operate consistent with state and federal regulations, and that sufficient capacity for growth is provided. As described in Section 7.A above, these outcomes all support a healthy and sustainable environment for Bellevue's citizens.

Long-term benefits: The existing utility infrastructure is valued at over \$3 billion. These assets need to be designed and constructed to provide service life for 75 to 100+ years. Maximizing asset quality and lifespan provides for good stewardship of both fiscal and natural resources, in addition to a sustainable utility infrastructure that provides customers with reliable service.

D. Performance metrics/benchmarks and targets for this proposal:

Percent of CIP expended vs. budgeted CIP	>80%
Percent of CIP projects completed on schedule	>80%
Percent of CIP projects completed within budget	>80%
Percent of contracts requiring warranty repair	< 5%
Percent of contracts completed under 105% of the bid amount	>90%

E. Describe why the level of service being proposed is the appropriate level:

The current level of service is designed to accomplish the Council-approved CIP on schedule and within budget. The proposed annual investment for the CIP is based on Asset Management Program (Proposal 140.11NN) recommendations to minimize the lifecycle cost of ownership/operation of the water, sewer, and storm drainage systems, and to assure we don't prematurely replace assets that should be repaired and maintained. This practice manages infrastructure assets at the lowest practicable lifecycle cost while meeting service levels expected by customers and required by state and federal regulations, at an acceptable risk level. Underfunding this capital investment will increase the total cost of system maintenance and replacement over time.

Section 8: Provide a Description of Supporting Revenue

Utility Capital Project Delivery activities are supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: Lawsuits and state/federal fines and penalties due to failure to meet mandated levels of service
2. Customer Impact: Increased property and environmental damage due to increased frequency and severity of system failures; Increased water and air pollution due to lack of environmental preservation projects
3. Investment/Costs already incurred: Increased maintenance costs to repair and operate equipment in utility facilities (such as pump stations).
4. Other: Ultimate failure of utility infrastructure would severely degrade public health and safety and radically alter the public's standard of living due to loss of water for fighting fires, lack of safe drinking water delivery, and lack of means to dispose of human waste.

B. Consequence of funding at a lower level: See alternate proposal 140.01NB.



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Section 1: Proposal Descriptors

Proposal Title: Utility Comprehensive Planning		Proposal Number: 140.09NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Pamela Maloney, x4625		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: Yes	Enter CIP Plan #: NA
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Comprehensive planning looks ahead 20 years to forecast required changes in water, sewer, and stormwater system management and operation. Demands and expectations of utility systems change over time based on population and employment growth, changes to service area boundaries, and changes in regulatory requirements. Utility Comprehensive Planning assures Bellevue will be prepared for those changes.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$509,284	\$508,905
Other	79,471	79,505
	\$588,755	\$588,410

Supporting Revenue	2011	2012
	\$588,755	\$588,410

LTE/FTE	2011	2012
FTE	3.75	3.75
LTE	0.50	0.00
Total Count	4.25	3.75

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/Collaboration. *Internal:* Planning & Community Development (PCD) Dept. to forecast population growth and timing, and study land use changes that impact utility systems. *External:* Coordinate with Issaquah, Newcastle, Kirkland, Redmond and King Co. to assure successful stormwater basin planning. Water and sewer services are provided to other jurisdictions, requiring collaboration to plan for system needs. Forecasts for water and sewer requirements are developed cooperatively with regional agencies: Cascade and King Co. Metro.

Efficiencies/Innovations: Technical staff that support this proposal bring highly specialized expertise specific to certain utilities, but are also cross-trained to understand all three utility systems so they can support each other. We maintain lean core staffing levels because this cross-training provides flexibility to continue other planning activities while developing the major comprehensive plans (which take about two years each, and are ideally scheduled for different years.) When major efforts overlap, LTE staff supplement in-house and consulting resources. Engineering student interns provide highly cost-effective temporary staffing. Comprehensive planning positions the Utility to take advantage of opportunities for joint projects with adjacent agencies, for cost savings and reduced customer impact.

Cost Avoidance: Planning avoids delaying development projects while awaiting system capacity projects - the state can impose development moratoriums. Planning avoids the financial and environmental costs associated with sewage overflows and flooding - the state can mandate capital projects to address recurring overflows. Maintaining CRS level 5 results in 20% premium savings for Bellevue customers who purchase federally-backed flood insurance.

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Section 5: Budget Proposal Description

Bellevue's utility systems include over \$3.5 billion of pipelines, water reservoirs, water and sewer pump stations, valves, culverts, detention ponds and other facilities to deliver clean drinking water, collect and remove sewage, and collect, hold, and convey stormwater runoff. Management of Bellevue's three utility systems requires planning today to assure they will be ready to meet tomorrow's needs. Proactive planning is vital to responsible stewardship of fiscal and natural resources, and sustainable management of infrastructure to deliver reliable municipal utility services.

Utility Comprehensive Planning consists of ongoing and episodic (every 6-10 years) forecasting activities specific to each utility using a 20-year planning horizon. Formal comprehensive plan updates are done as necessary to analyze changes in conditions, regulations, and anticipated demand, and to meet minimum state requirements. The work, ultimately adopted by Council and submitted to state resource agencies, includes:

- Reviewing and updating utility system operational policies;
- Analyzing current and anticipated regulatory requirements and developing plans to assure continued compliance;
- Identifying improved operational or changed maintenance practices to optimize system performance;
- Evaluating available system capacity, analyzing future capacity needs, and recommending improvements;
- Incorporating system renewal and replacement (R&R) needs developed by the Asset Mgmt. Program;
- Identifying capital projects for growth, regulations, or system R&R so they can be constructed in a timely, cost effective, and environmentally sensitive manner; and
- Verifying and documenting utility financial viability in the future, considering resources that will be needed.

Attachment 140.09NN_Attach1_Comp_Planning_Assets_and_Analysis illustrates how Comprehensive Planning is related to Asset Management and Systems Analysis.

This proposal also includes (1) management of Bellevue's floodplains by implementing the minimum requirements of the National Flood Insurance Program (NFIP), and promoting uses for floodplains that minimize damage to people, property, and the environment; and (2) stream-specific basin studies to analyze, predict, and respond to flooding, stream instability, water quality, fish passage, and aquatic habitat issues.

Planning provides utility-specific information in support of City or Dept. initiatives, such as updates to the City's Comprehensive or Shoreline Management Plans, Land Use or Utility Codes, or the Environmental Stewardship Initiative. Planning is particularly important when utility service area boundaries or land uses change. This proposal includes engineers who specialize in the evaluation of piped utility systems and streams; an environmental biologist; as well as engineering technicians, administrative and management support. Staff are supported by a (temp) student intern and professional services.

Section 6: Mandates and Contractual Agreements

- **WAC 246-290-200** requires Water Comp. Plan updates every 6 years
- **WAC 173-240-050** requires the City maintain an up-to-date Wastewater Comp. Plan every 6-10 yrs
- **Ordinance 2645** directs Bellevue to participate in the National Flood Insurance Program (NFIP)
- NFIP minimum requirements as outlined in the **Code of Federal Regulations: 44 CFR Chapter 1, subpart B**

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factor 1, Water Resources, Factor 3, Nature Space, and Factor 5: Conservation. Utility comprehensive planning assures safe, sufficient drinking water essential for the health of today's and tomorrow's customers. It forecasts how much water is needed, and assures water is available for supply interruptions or fire emergencies. Planning assures sufficient pipe and pumping capacity to remove sewage from homes and businesses for delivery to the regional collection and treatment system. It predicts where rain runoff might lead to flooding or environmental damage, so capital, regulatory, and operational changes can be made to minimize that potential. Stormwater planning identifies opportunities for stream restoration, providing recreation as well as a healthy and

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sustainable environment. Opportunities for regional stormwater storage and treatment facilities, reduced likelihood of sewer overflows to surface waters, encouraging or requiring natural drainage practices that result in less runoff - all improve Bellevue's Nature Space. Planning includes documentation of conservation efforts and outcomes, and forecasts consumption demands with and without further conservation. This allows analysis of the costs and benefits of conservation alternatives and policies that support reduced water consumption.

Purchasing Strategies in the Healthy and Sustainable Environment outcome: Comprehensive planning ensures that water resources are effectively managed to meet environmental needs now and into the future. It ensures the safe, reliable supply of drinking water; ensures surface water quality and quantity can sustain a suitable environment for plants and wildlife and meet the community's recreational needs; and ensures that stormwater runoff is controlled to minimize erosion and flooding. Planning is proactive and results in efficient, effective long term capital investment and system operation. Protecting streams and floodplains is integral to stormwater basin planning, improving nature space for citizens. Planning identifies opportunities for low impact development through natural drainage practices.

B. *Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s)* Planned water resources result in clean drinking water, effective stormwater control that minimizes flooding, and safe sewage removal (even during emergencies). Each is integral to public health and safety and foundational to Quality Neighborhoods, Vibrant and Caring Communities, and Safe Communities. Utility planning assures system capacity to accommodate planned population and employment growth and development, supporting Economic Growth and Competitiveness.

Citywide purchasing strategies addressed by this proposal:

- Consider long and short term financial impacts and provide best value and sound resource management: System deficiencies are analyzed holistically, leading to recommended solutions that resolve the cause of problem (capacity, erosion, flooding, etc) rather than just treating the symptom. In the long run, this is much more cost effective.
- Provide efficiency gains or cost savings and ensure services are right-sized. Planning results in right-sized utility systems designed to accommodate the demands (water consumption, sewer flows, flood flows) that occur now and in the future. Without planning, systems could be built larger than needed (and more expensive), or too small, resulting in a need for replacement before the facility (reservoir, pipe, or pump station) has reached the end of its functional life.
- Leverage collaboration or partnerships with others (see also Section 4). Utility comprehensive planning is a collaborative effort. PCD provides population and jobs growth estimates and timing so utility system demands can be forecast, and plans made for construction of sufficient capacity available in time. When the City considers land use changes that increase density or annexing areas to Bellevue, planning quantifies the cost consequences of those changes.
- Consider best practices. Comprehensive Planning is considered a best practice for utilities management, promoting a proactive rather than reactive approach to identifying and resolving issues.
- Promote environmental stewardship. Utility planning is vital to ensure water resource delivery to customers while minimizing detrimental environmental impacts.

C. *Short- and long-term benefits of this proposal:*

Short-term benefits: Comprehensive planning quantifies what's needed so customers have sufficient clean and safe drinking water; sewage is safely removed from homes and businesses, and delivered to regional conveyance and treatment facilities; surface water quality and quantity are adequate to provide a suitable environment for wildlife and to meet recreational needs and runoff is controlled to minimize flooding and erosion to people, property, and the environment.

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Long-term benefits: A 20-year plan allows development of proactive strategies for reliably and sustainably meeting the community's water resource needs. Comprehensive plans and targeted studies identify, quantify, and recommend solutions to current and anticipated problems. Recommendations from these analyses are incorporated into rate forecasts, the Utilities Capital Investment Program, and advise system operations.

D. Performance metrics/benchmarks and targets for this proposal:

- % of single family homes with at least 1,000 gpm available fireflow: Target = 100% by 2020 (95.6% in 2009).
- % of service area with minimum water system pressures ≥ 30 psi (normal operations): Target = 100% (100% in 2009)
- # of water, sewer, or storm capital projects proposed too late to avoid unacceptable customer or environmental impact: Target = 0 (0 in 2009).
- # of development proposals delayed due to insufficient utility system capacity: Target = 0 (0 in 2009).
- National Flood Insurance Program community rating classification: Target = Class 5 (Class 5 in 2009).

E. Describe why the level of service being proposed is the appropriate level:

This proposal maintains the current level of service.

Utility comprehensive plans are updated at the minimum frequency required to comply with state law, and to plan proactively for regulatory changes, land use changes, changes in forecast or timing of population growth, and other circumstances that affect the forecast demands on utility systems.

- The proposed level of basin planning is the minimum viable level. Targeted basin studies are completed every 1-3 years with the proposed budget. The need for these studies is identified through comprehensive planning, normal system operations, or specific City initiatives.

Section 8: Provide a Description of Supporting Revenue

The proposal costs are entirely supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: Bellevue would not comply with state regulations for periodic water and wastewater comprehensive plan updates, eventually resulting in state-imposed development moratoriums; unanticipated regulatory changes would result in fines, state-mandated capital projects, and mandated operational changes.
2. Customer Impact: Customers would experience unanticipated rate spikes, and significant unexpected utility service interruptions and flooding would increase over time. Bellevue would be ineligible to participate in the NFIP, meaning Bellevue citizens could not purchase federally-backed flood insurance.
3. Investment/Costs already incurred: Wastewater and Stormwater Comp. Plan updates will be about 75% complete at the beginning of 2011.
4. Other: Recurring sewage overflows could lead to state-mandated capital improvement projects. Without basin studies, flooding, water quality, or aquatic habitat problems could not be addressed proactively. Opportunities for environmental improvement would be reduced with a site-specific rather than holistic approach. (For example, CIP resources might be used to build larger culverts to alleviate flooding, when the real problem is sedimentation from unstable stream banks clogging existing culverts and choking stream habitat.)

B. Consequence of funding at a lower level: Consequences would be similar to A, but to a lesser degree.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Utility Asset Management Program		Proposal Number: 140.11NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Bill Heubach, x2067		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: Yes	Enter CIP Plan #: NA
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Asset management means managing infrastructure assets at the lowest practicable life cycle cost while meeting service levels expected by customers and required by state and federal regulations, at an acceptable level of risk. Most of Bellevue's over \$3.5 Billion of utility assets are more than halfway through their useful life. Maintenance, repair costs, and failures are increasing. A comprehensive asset management program (AMP) ensures the resources needed to operate, maintain, repair, renew, and eventually replace utility systems will be available and used cost-effectively.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$539,914	\$531,045
Other	164,391	50,902
	\$704,305	\$581,947

Supporting Revenue

	\$704,305	\$581,947
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LTE/FTE

FTE	4.64	4.64
LTE	1.00	0.00
Total Count	5.64	4.64

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Cost Avoidance: Asset Management is a proactive, strategic program for utility renewal and replacement that is far less costly than running to failure. A robust AMP minimizes the cost to manage utility systems at acceptable service levels.

Partnerships/Collaboration: *Internal:* Condition assessment of water, wastewater, and stormwater pipes is coordinated with Transportation's overlay program, so defects in critical pipes can be replaced or repaired prior to street resurfacing, reducing neighborhood disruption and street restoration costs. Transportation and Parks are interested in using Maximo Linear to manage assets such as trails, sidewalks, and roads, so the assessment of a Maximo Linear Assets pilot will be in collaboration with those departments.

Efficiencies/Innovations: The AMP continually improves Bellevue's ability to manage utility systems cost effectively while maintaining customer service. Improved data access and analysis makes us continually smarter about which facilities pose the most risk; how long they will last at reasonable risk; and how much resource will be required to repair/replace them.

AMP provides the data to right-size Utility Renewal and Replacement accounts, putting Bellevue in the enviable position of having competitive rates now, and becoming even more competitive later, when other water and sewer service providers around the country are expected to double to quadruple rates over the next 20 years (US Mayor's Report, March 2010).

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Section 5: Budget Proposal Description

Asset management involves managing over \$3.5 billion worth of water, sewer, and stormwater infrastructure assets by optimizing the cost of acquiring, operating, maintaining, renewing, and replacing assets WHILE meeting the service levels expected by the community and required by state and federal regulations, all at an acceptable level of risk. We do this by:

- Developing accurate, readily accessible asset information;
- Monitoring and evaluating asset condition, performance, criticality and costs; and
- Using life cycle analyses that incorporate triple bottom line principles (economic, environmental, and social costs and benefits) to make capital and maintenance decisions.

Formal asset management is a best management practice adopted by the U.S. EPA for utility providers. Bellevue follows the EPA's asset management program framework. See attachment 140.09NN_Attach1, *Comprehensive Planning, Asset Management, and System Analysis* illustrating the relationship between Asset Management, Comprehensive Planning, and Systems Analysis.

Most of Bellevue's utility assets such as buried pipes pump stations and drinking water storage tanks are more than halfway through their useful life. Maintenance, repair costs, and failures are increasing. This ongoing program (AMP) is needed to make sure the resources needed to operate, maintain, repair, renew, and eventually replace Utilities' aging assets are available and used cost-effectively.

Records drawing management is a significant portion of this investment. This critical work produces accurate maps of the utility systems in an easy-to-read, accessible format and organizes system information into databases. The information is then 'pushed' to enterprise computer systems (Maximo for asset management; Mapster for easy data access to customers). Record drawings require continuous updates to incorporate new facilities added through development or CIP projects; to maintain accurate system attribute information (e.g. size, pipe material, date installed); to correct drawings based on information from Utilities' maintenance staff; and to archive drawings and records per state requirements.

Staff who support this proposal include engineers responsible for AMP program management, development, and implementation including technical data analysis; engineering techs assigned to managing records drawings (asset inventory); and an LTE computer programmer for systems automation support. The proposal also includes:

- Consulting services to evaluate alternative business practices for record drawing management. Current processes work well but will require more staff as the utility CIP grows with increasing need for R&R. This investment will investigate other models for managing drawings, including potential process efficiencies; selecting a preferred model; and develop an implementation roadmap, including resource requirements.
- Consulting services to identify enterprise software and implementation strategies for asset data management; estimate resource requirements and develop an implementation plan. This is the next step toward making all utility data (condition, attribute, age, location) available at the touch of one button to any user, so that optimal decisions can be made quickly and consistently. The selected system could have application in other departments as well for development of a data integration plan. Utility system data is currently stored in multiple databases (Maximo, Mapster, AutoCAD, and Oracle.) Enterprise software can integrate various data types and sources, for improved access and asset management decisions.
- Software acquisition and licensing for a pilot project (5 licenses for Utilities and 5 licenses for Parks) to assess the viability of Maximo Linear Assets Module (maintenance management software developed specifically for linear assets such as pipes and trails).

Section 6: Mandates and Contractual Agreements

- **WAC 246-290 Group A Public Water Supplies; RCW 90.48 Water Pollution Control; Title 33, USC 1251 et seq., and Fed. Water Pollution Control Act** establishes minimum utility service levels for water quality, water pressures, and stormwater discharges.

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- **Bellevue’s Municipal Stormwater (NPDES) Permit** requires mapping and management of certain stormwater assets.
- Accurate system drawings and record archival must be documented per **Local Government General Records Retention Schedule (LGRRS) p. 154, Version 5.1 (Jan 2010)**.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factor 1: Water Resources, Factor 2, and Factor 5: Conservation. Utilities AMP supports a reliable supply of safe drinking water and safe, efficient removal of sewage. Minimizing system failures means reduced environmental damage that results from structure and property flooding, sewage backups that pollute surface waters, or stream erosion.

Purchasing Strategies in the Healthy and Sustainable Environment outcome: AMP supports continued delivery of water, sewer, and stormwater services in an environmentally sensitive and sustainable way by minimizing the cost of service over the life of assets, while maintaining expected service delivery. It assures that assets that should be repaired and maintained aren’t prematurely replaced. It is proactive system management, rather than responding after systems fail. It is future-focused, with a 75-year forecast of resources needed for system replacement, considering inter-generational cost equity, and precluding sharp rate increases. AMP reduces the chance of failure and minimizes the likelihood of large damage claims. Reliable utility systems mean less impact to the environment from flooding and erosion. The AMP assures accurate utility maps are available so citizens can make good decisions about how to develop or redevelop their properties, and reduces the likelihood of unintended ‘dig ups’ of City facilities during construction. Maximizing asset component life means efficient system replacement and avoids wasting materials.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Quality Neighborhoods, Safe Communities, and Innovative, Vibrant and Caring Communities all require reliable, safe, and affordable basic services of clean drinking water, sewage removal, and managed flood control and stormwater runoff. A high quality infrastructure with reliable service delivery supports Economic Growth and Competitiveness.

Citywide purchasing strategies addressed by this proposal:

- Provide best value; consider short- and long-term financial impacts; and ensure sound resource management and business practices. Evaluation of asset condition leads to cost-effective management strategies for maintenance and replacement. Core to the AMP is Life cycle cost analysis, considering ALL costs, including planning, design, construction, operations, maintenance, risk of failure, decommissioning, and replacement. Triple bottom line (economic, environmental, and social) costs and benefits are considered. AMP forecasts resource needs decades into the future to minimize rate increases and assure intergenerational cost equity.
- Efficiency gains or cost savings; right-sized services. A key component of AMP is defining target customer service levels. Once defined, the most cost-effective asset management strategies to meet them are selected. This iterative process assures service levels commensurate with available resources.
- Collaboration and partnerships. See Section 4. Also, Bellevue participates with other U.S. utilities to determine best management practices for AC water mains (short-lived, sometimes fragile pipe that comprises over 45% of our water system piping), and participates on the ASCE Underground Pipeline Asset Management Wastewater Committee.
- Innovative and Creative. The AMP continually evaluates new technologies, such as the AC watermain management strategies study, and industry technologies for asset condition assessment, maintenance, repair, and replacement.
- Best Practices. Formal asset management is a best management practice adopted by the US EPA for utility providers.

Eliminate low value-added activities. AM identifies how critical each asset is toward meeting service level goals while reducing risk. Fewer resources are allocated to less critical assets.

- Promote environmental stewardship. Utility failures can seriously damage the environment. AM reduces the

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likelihood of high-consequence asset failures that could result in environmental damage.

C. Short- and long-term benefits of this proposal:

Short-term benefits: AMP assures that Bellevue provides utility services cost effectively by providing decision-making tools. By monitoring asset condition, performance, and criticality, required improvements are identified, and cost effective operation, maintenance, repair, and replacement decisions are made. Trends in system failures and vulnerabilities for particular asset types can be identified, and priorities established to address known problems.

Long-term benefits: AMP is essential to providing municipal utility services as cost-effectively as possible by providing required information to minimize the total life cost of utility system components, while maintaining service, minimizing business risk, and avoiding rate shocks or deteriorating service levels. Optimal decisions are made about whether to repair or replace assets and capital projects are prioritized and long-term resource needs are forecast. With the utility system replacement value of well over \$25,000 for each of Bellevue's 117,000 residents, smart management is imperative.

D. Performance metrics/benchmarks and targets for this proposal: The AMP tracks over 60 performance indicators to identify trends in system performance and failure. A sampling:

- % of customers with unplanned water service disruptions: Target < 3%
- # of sewage overflows caused by sewer system structural/mechanical failures: Target = 0.
- # of flooding incidents caused by drainage system structural/mechanical failures: Target < 10.

E. Describe why the level of service being proposed is the appropriate level:

This proposal maintains Bellevue's AMP, which includes continuing to advance certain program elements. Bellevue's formal AMP is in its adolescence, and requires extensive continued investment and development to achieve long term objectives.

Section 8: Provide a Description of Supporting Revenue

This proposal is entirely supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all

1. Legal: Increased failures and the associated environmental impacts could result in mandated system improvements, and claims against the City would increase as a result of utility system failures. The City would also be out of compliance with mandates and EPA recommendations listed above in Section 6.
2. Customer Impact: Service to utility customers will decline due to increases in system failures and service interruptions. The costs of utility system management would increase, resulting in sporadic sharp rate increases to react to failures, and overall higher rates over time. Information about utility facilities could not be provided as quickly to field staff, developers, citizens, and engineers.
3. Investment/Costs already incurred: NA
4. Other: The quality of data available to prioritize work on system deficiencies and long term capital planning will decline. Consequently, repair and replacement decisions will be reactive rather than proactive, and less cost-effective. We would also be unable to analyze data for trends, or take proactive measures to minimize failures and claims.

B. Consequence of funding at a lower level: Consequences would be similar to A, but to a lesser degree.



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Section 1: Proposal Descriptors

Proposal Title: Utility Systems Analysis		Proposal Number: 140.12NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Pamela Maloney, x4625		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: Yes	Enter CIP Plan #: NA
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Analysis of water, sewer, and stormwater systems assures they are operated efficiently, provides capacity information to developers, and identifies potential deficiencies. Computer models of each utility system predict the amount of water available to fight fires, map and predict flooding, and forecast potential sewer overflows. Systems Analysis includes collection of physical and biological information about streams for analysis of fish usage and environmental health.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$251,527	\$238,922
Other	154,286	154,306
	\$405,813	\$393,228

Supporting Revenue

	\$405,813	\$393,228
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LTE/FTE

FTE	2.0	2.0
LTE	0.5	0.0
Total Count	2.5	2.0

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/Collaboration. *Internal:* Fire, Planning & Community Development, and Development Services rely on Utility system analysis for building and planning permits. Utilities Operations staff use system analysis results for operations of water reservoirs, water and sewer pump stations, and detention ponds. The City Manager's Office uses environmental data to support the Environmental Stewardship Initiative. *External:* King Co. and the Lake Washington/Cedar/Sammamish Watershed use biological data and analysis from Bellevue with other regional agencies. Cascade Water Alliance, King Co. Metro, and Wash. Dept of Health require water and wastewater forecast and demand data. Redmond, Issaquah, and Sammamish collaboratively support USGS gages.

Efficiencies/Innovations:

- When Bellevue assumed the Coal Creek Utility District, one of the water pump stations needed significant, expensive rehabilitation to continue operating. Systems Analysis revealed that installation of a pressure reducing valve could provide more water flow and would allow permanent abandonment of the water pump station. This alternative increased flow capacity, eliminated the need to rehabilitate the pump station (\$500,000-\$1,000,000), and eliminated the ongoing operations and maintenance costs of a pump station.
- City-managed computer models allow rapid response to developer requests about system capacity, for emergency response, and provide flexibility to respond to City initiatives.
- System data is collected cost-effectively using a mix of City staff, volunteers, and consultants.
- Merging Bellevue's data with other regional entities provides regional trend data very cost effectively.

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Cost Avoidance:

- System models ensure capital projects are 'right sized', providing sufficient capacity to meet regulatory requirements without over-building facilities, which adds to overall costs.
- Biological indicators monitoring is helping to avoid state-mandated water chemistry monitoring, which would be much more costly. Agencies currently required to perform chemical monitoring spend \$850,000 to \$1,000,000/year.
- Salmon monitoring information allows Bellevue to demonstrate persistent salmon populations, increasing the potential for salmon recovery grants, demonstrating Bellevue is meeting salmon protection objectives, and reducing the potential for third-party challenges under the Endangered Species Act.

Section 5: Budget Proposal Description

Systems Analysis is a mission-critical body of work to collect and analyze information about water, sewer, and stormwater system performance for efficient operations, to quantify system capabilities, and to identify system problems or deficiencies. Models of each utility system are developed, maintained, and used to predict the amount of water available to fight fires (water), map and predict flooding (storm), and forecast potential sewer overflows (sewer). The models allow accurate assessment of each system's ability to accommodate scenarios such as planned population growth or changed land uses, data which is then made available for Utility Comprehensive Planning (see attachment 140.09NN_Attach1_Comp_Planning_Assets_and_Analysis). A limited amount of drinking water quality modeling is also done. Systems Analysis includes analysis of trends in stream health based on fish usage and biological indicators that respond to changing stream conditions.

The computer models and trend analysis rely on up-to-date, accurate information. Data about facilities is provided from the Asset Management Program. Collecting physical and biological information about streams is integral to Systems Analysis. This proposal includes:

- Professional services to supplement City staff, temporary help, and trained volunteers for weekly surveys of spawning salmon in the fall, for scientific and laboratory analysis of insect data, and to occasionally update computer models when software or modeling practices change; and
- Resources to collect and analyze stream flow data at critical locations and for Bellevue's share of USGS gages on Kelsey Creek and Lake Sammamish.

The FTEs include a systems engineer expert in analysis of piped utility systems, an engineer/hydrologist who specializes in stormwater runoff and stream behavior, and a portion of an engineering technician who supports stormwater analysis. This staff is supplemented by a temporary student intern.

Section 6: Mandates and Contractual Agreements

- **Wash. Dept. of Health Water Use Efficiency Rule** requires annual reporting of water lost to system leakage
- Cascade Water Alliance contract requires annual submittal of water use and water needs forecast data.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. *Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:*

Factor 1: Water Resources. Systems analysis is critical to the delivery of reliable, safe, and sufficient clean drinking water, efficient and reliable removal of sewage, and management of stormwater runoff to prevent flooding, stream erosion, and protect stream habitat. System models can proactively identify constraints to continued delivery of these services and recommend solutions.

Factor 2: Clean Living Environment, Factor 3: Nature Space, and Factor 5: Conservation. Using volunteers for insect sampling and fish observation engages citizens in meaningful aquatic management as they become educated about stream health and sustainable environmental practices. Changed behavior ultimately improves streams, wetlands, lakes, and overall environmental health. Computer modeling of our constructed systems can identify opportunities for improved energy efficiency at water and sewer pump stations and between water pressure zones. Predicting capacity constraints that could lead to sewer overflows or flooding leads to improvements that reduce the potential for pollution to the environment.

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Purchasing Strategies in the Healthy and Sustainable Environment outcome:

- Environmentally sensitive and sustainable results; emphasize proactive vs. reactive actions: Systems Analysis leads to proactive system expansion and identification of constraints that could otherwise result in environmental damage (flooding, erosion, sewer overflows, and insufficient water for emergencies). It facilitates emergency response planning and analysis of proposed changes that affect utility service delivery.
- Foster changes through community collaboration and partnership: Volunteers have an opportunity to work in Bellevue's streams; an experience they take home and share with neighbors and friends.
- B. **Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):** This proposal responds to other Outcomes: Engaging volunteers heightens awareness of and care for the environment, strengthening the sense of community, for a Vibrant and Caring Community. Flood prediction allows improved response to flooding emergencies, yielding Safer Communities and better Quality Neighborhoods. System Analysis results in a robust utility network that accommodates new homes and businesses, supporting Economic Growth and Competitiveness.

Citywide purchasing strategies addressed by this proposal:

- Best Value; best practices; cost savings; sound management of resources and business practices:
 - 200+ volunteers provide 600+ hours and 950+ field visits each year, cost-effectively collecting data AND learning to change personal behavior that impacts the environment. Volunteers save an estimated \$12,450/year in staff costs.
 - Professional consultants are retained during peak labor-intensive periods and as required to meet regional data collection protocols.
 - Stream flow monitoring is managed cost-effectively. Bellevue owns and maintains equipment; contractors download and organize the data; and staff analyze the results to calibrate stream and 'backflow' models which predict flooding.
 - Computer models are updated periodically to reflect advances in the industry of hydraulic system modeling. Computer modeling is the most cost effective way to evaluate solution alternatives.
 - Bellevue uses free model software provided by the U.S. EPA, avoiding the expense of custom, proprietary software.
- Promote environmental stewardship: Proactive identification of service constraints and thorough alternatives analysis helps avoid sewage spills into streams or low spots, flooding and erosion damage, to Bellevue's environment.
- Consider short- and long-term financial impacts: System modeling allows analysis of alternative solutions. The costs and benefits of each can be quantified, and the least cost (based on triple bottom line considerations of cost, environment, and social elements) solution identified.

C. **Short- and long-term benefits of this proposal:**

Short-term benefits: Systems Analysis helps create a healthy environment by providing tools to efficiently determine what is required to: (1) deliver drinking water for customer daily use, to fight fires, and to cope with local or regional water supply system failures; (2) convey sewage from homes, businesses, or the environment; and (3) manage stormwater without flooding streets, homes, or businesses. Systems analysis also evaluates stream health, to understand whether environmental conditions are healthy enough to sustain salmon.

Long-term benefits: This proposal helps assure that utility system operation is optimized and sustainable into the future by modeling variables such as land use and climate changes. It provides long-term trend data for stream health and biologic productivity, critical for environmental management and sustainable environmental restoration. It provides the data to map and analyze floodplains, which can affect land use regulations. It helps determine whether environment conditions coupled with stormwater management practices and land use regulations will be sufficient to achieve the City's Vision of sustainable environmental quality in an urban setting.

D. **Performance metrics/benchmarks and targets for this proposal:**

- # of Development Services requests for available fireflow completed within 2 weeks: Target = 100% (100% in 2009).

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- % of selected 'index' stream reaches (based on WRIA 8 recommendations) surveyed for spawning salmon using protocols established by the State: Target= 100% (79% in 2009)
- % of Bellevue's biological integrity assessment program completed (uses regionally established macro-invertebrate index as an indicator of stream health): Target = 100% (100% in 2009).

E. Describe why the level of service (LOS) being proposed is the appropriate level:

This proposal maintains the current level of service:

- The proposed level of service maintains basic computer models of each utility system which is necessary to generate data for mandatory state and regional reporting, provide information critical for floodplain management; respond to standard customer requests about system capacity and service to their properties or development projects; and inform effective management, planning, and operation of each system.
- Salmon Spawner surveys provide protocol-compliant data for salmon streams of primary interest regionally and locally, and qualitative information on other salmon streams from volunteer observations.
- Biological indicators provide annual monitoring for trending purposes, consistent with the U.S. EPA standard for Puget Sound lowland streams. Stream sites visits are rotated to meet resource limitations.

Section 8: Provide a Description of Supporting Revenue

This proposal is entirely supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal:
 - Water chemistry monitoring to evaluate storm water quality could be mandated by the state, at significantly higher cost (estimated \$850,000 to \$1,000,000/year).
 - Inability to demonstrate persistent salmon populations in Bellevue would increase the potential for third party challenges the Endangered Species Act.
 - Violation of state law and contractual requirements for reporting system data
2. Customer Impact:
 - Developers would not have accurate system capacity.
 - If excluded from participation in FEMA's National Flood Insurance Program, Bellevue citizens could not purchase federally-backed flood insurance.
3. Investment/Costs already incurred: N/A
4. Other:
 - No data for trends in stream and ecosystem health (relies on long term unbroken data collection); could not observe whether fish passage projects are functioning as anticipated; reduced volunteer participation in our streams, leading to reduced behavioral changes for environmental benefit.
 - Unable to predict and prepare for the impact of changes (e.g. in land use) to utility systems.
 - Reduced ability to plan for and to respond rapidly and appropriately to emergencies such as water supply outages, drinking water system contamination, or sewer overflows
 - Lost opportunities to improve the design of capital projects
 - Reduced system operational efficiencies
 - Reactive rather than proactive management of critical public utility lifelines

B. Consequence of funding at a lower level: Consequences would be similar to A, but to a lesser degree.



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Section 1: Proposal Descriptors

Proposal Title: Water Mains and Service Lines Repair Program		Proposal Number: 140.13NA
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Kipp Fockler x 2923		One-Time/On-Going: On-Going
Fund: Water	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Failures of water system infrastructure can have catastrophic consequences, including flooding from broken mains damaging property, roadways, and the natural environment and water service disruptions to homes and the business community. While Utilities has sound water maintenance and capital improvement programs, main breaks can occur at any time and are increasing as the water infrastructure ages. The water repair program's overriding goals are to fix system breaks quickly, protect drinking water quality, restore water service to customers quickly, and mitigate environmental damage. The City also benefits financially from speedy and efficient repairs that minimize revenue losses and claims for damages. Service examples include repairs to broken, leaking or malfunctioning water mains and service lines, fire hydrants, and control valves.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$632,229	\$666,006
Other	588,696	589,752
	<u>\$1,220,925</u>	<u>\$1,255,758</u>

Supporting Revenue

	\$1,220,925	\$1,255,758
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LTE/FTE

FTE	7.85	7.85
LTE	0.00	0.00
Total Count	<u>7.85</u>	<u>7.85</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Efficiencies/Innovations: Utilities performs leak detection inspections to proactively identify small leaks on the public system not visible on the ground. Early detection prevents a small leak from becoming a catastrophic failure that is more expensive to repair and that causes substantial property damage and claims. In addition, staff performing main and service repair are cross-trained to perform other planned services to address both preventive and reactive maintenance needs.

Partnership/Collaboration: Through franchise agreements Bellevue Utilities provides water service to King County (Eastgate area), Clyde Hill, Medina, Yarrow Point, Hunts Point, and Issaquah (South Cove area).

Section 5: Budget Proposal Description

Customers expect and depend on safe and reliable water service to meet their household and business needs. Unfortunately, some equipment and system failures are inevitable. The City's drinking water system includes 620 miles of water mains, 9000 valves, 40,135 water service connections, and 5,765 fire hydrants. The water infrastructure is aging and most of the system is well past its mid-life. As a result, the drinking water system is experiencing more failures at

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increasing costs. This proposal requests the resources necessary to quickly respond to and repair drinking water pipeline infrastructure in order to minimize service disruption, property damage and liability claims.

Field staff repair all water main and service line breaks in a timely manner to minimize the scope and duration of water service interruptions, property damage and claims, water loss and corresponding revenue loss, and protect drinking water quality.

Repair needs are discovered through inspections, maintenance activities and emergency service requests generated by citizens, staff, and contractors within the City. Services include 24-hour response to perform emergency repairs whenever they are needed. Repair crews may need to work in very difficult conditions including deep, muddy trenches and heavy traffic areas. Managing traffic impacts and protecting pedestrians and motorists is often necessary at water main repair sites.

The repair program also provides leak detection services and system inspections, and protects public safety by quickly fixing any broken City-owned fire hydrants and mainline valves – critical to controlling the flow and delivery of water during fire suppression. Based on 10 year trends, there are 30 main break repairs and 200 service leak repairs per year. Utilities complete approximately 650 hydrant repairs and 120 valve repairs annually.

Staff included in this proposal also have key roles in responding to disasters and major emergency events. Having in-house staff performing the work in this proposal maintains 24/7 availability of a skilled and trained workforce with technical system knowledge, experience and incident command system (ICS) training. Possible events include extreme rain/flooding, snow/ice events, windstorms, earthquakes, as well as other unforeseen disasters.

Section 6: Mandates and Contractual Agreements

- **WAC 246-290-230 Distribution Systems.** Sets requirements for fire flow for firefighting purposes.
- **Uniform Fire Code 903.4.1.2 Testing and Maintenance.** Fire hydrant systems shall be maintained in an operative condition at all times and shall be repaired where defective.
- **Safe Drinking Water Act 1974 (SDWA).** Effective repair activities support Utilities' efforts to maintain a safe, reliable water supply that meets all SDWA standards by lessening the potential for water contamination through leaking pipes and service lines.
- **WAC 246-290-820, Distribution System Leakage Standard.** Requires that distribution system leakage average 10 percent or less over the previous three years.
- **Washington State Municipal Water Law 2003 (MWL) and WAC 246-290 Water Use Efficiency Rule (WUE)** program requires water systems to manage water loss.

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factors in the Healthy and Sustainable Environment outcome:

- Factor 1: Water Resources/ Clean Drinking Water. Repair services in this proposal are critical to the delivery of reliable, safe, and sufficient clean drinking water.
- Factor 5: Conservation/ Conservation of Natural Resources. Services under this proposal conserve water and energy while promoting optimal drinking water quality. Minimizing leaks and unmetered water loss through proactive repairs saves water for other uses.

Purchasing Strategies in the Healthy and Sustainable Environment Outcome:

- Water repair programs optimize system performance to ensure continued delivery of drinking water to our customers.
- Program emphasizes proactive repairs where possible and provides response services where unavoidable (water main and service line breaks).
- Activities under this proposal conserve natural resources by minimizing the amount of water lost from leaks through proactive repair programs.

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B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed in this proposal:

- Safe Community, Factor 2: Response. Fire fighting response capabilities are supported by repair of all City-owned fire hydrants. Keeping fire hydrants in service and operating supports the Fire Department's ability to fight fires.
- Economic Growth and Competitiveness, Factor 3: Infrastructure. Adequate and reliable water supply is a foundation for the City's economic competitiveness and advances the standard of living in the community.
- Improved Mobility, Factor 2: Traffic Flow. Most water mains and water services are located within the right-of-way. Often, repairs on water pipes and valves are conducted within the lane of travel. A quick response to system breaks is essential to immediately secure the area and assess any roadway damage that could affect vehicle safety. Immediate response also helps to reduce road closures, thus minimizing traffic congestion.
- Responsive Government, Factor 4: Exceptional Service, Efficient and Effective Delivery. The repair program ensures that Utilities has the resources required to respond to and mitigate leaks promptly with minimal service interruptions.

Citywide purchasing strategies:

- Best Value, Gains in Efficiency and Cost Savings and Sound Management of Resources and Business Practices. Preventing water loss helps us keep water rates low and provides the best value to the community. Services under this proposal minimize the loss of drinking water and conserve water resources. A 1% decrease in water loss represents a savings of \$152,000 in wholesale water costs, and \$3,000 in energy costs to pump the water, both of which directly impact water rates.
- Best Practices. We exercise best practices in repair of the water system including a leak detection program and prioritize work based on failure rates and consequence of failure. This detection and prioritization of required repairs helps us to keep system repair costs lower. It also helps prevent large claims from being filed against the City resulting from water main failures and property damage.

The repair program coordinates workload to achieve maximum results based on several considerations, such as location, time of day, impacts from traffic and other job-specific concerns. It is not uncommon to find the crew out working very early in the morning, at night, or on weekends to accomplish jobs that would impact traffic or customers during regular working hours.

- Promote Environmental Stewardship
Repairs to water main and service lines minimize environmental impacts associated with water flows into streams or low spots, or flooding and erosion damage. This proactive approach promotes stewardship of Bellevue's environment.

C. Short- and long-term benefits of this proposal:

- Short-term benefits: Repair programs help create a healthy environment by minimizing water service interruptions and economic impacts to the customers while providing programs that allow us to efficiently deliver drinking water where and when it is needed for customer daily use and to fight fires.

Long-term benefits: Repairing the water system is an investment to maintain reliable water supplies for homes and businesses and water to fight fires. In addition, it lowers water loss, damage to streets, and traffic impacts. The programs also minimize the duration and impacts of water services interruptions to the customer. These programs aid in minimizing energy usage, optimizing drinking water quality and supporting water conservation.

D. Performance metrics/benchmarks and targets for this proposal:

Evidence and logic supporting this proposal

Repair programs support the City's ability to provide dependable water service while minimizing costs associated with failures. A dependable water piping network with minimal leaks maintains water quality and adequate supply for drinking and fighting fires.

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Performance Measures

- % of Fire hydrants function as intended when needed. (No failures during a fire.) Target 100% 2009 actual = 100%
- % of inoperable fire hydrants repaired within 10 working days. Target = 95% 2009 Actual = Not tracked
- Unplanned water service interruptions per 1,000 service connections Target = 3.0 2009 Actual 2.6
- % of distribution system water loss. Target = <10% 2009 Actual = 5.7%
- # of water main repairs annually. Target = 30 2009 actual = 29
- # of service repairs annually. Target = 200 2009 Actual = 144

E. Describe why the level of service being proposed is the appropriate level:

Water main breaks and service line leaks are performed as reactive maintenance. These are demand-driven service levels dictated by the number of breaks and leaks that occur, and timely repairs are completed to maintain water service and drinking water quality, mitigate environmental damage, and minimize claims damages and traffic impacts. From 1997 – 2007, Utilities averaged 3 claims paid per year at an average total annual cost of \$101,048.

Section 8: Provide Description of Supporting Revenue

This proposal is entirely supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: Property damage claims against the City would increase.
2. Customer Impact: Without effective repair programs, the City's ability to deliver reliable, safe, and sufficient clean drinking water would be negatively impacted. Customers would face more frequent and longer water service interruptions. Unmitigated leaks contribute to water loss and without the ability to identify and quickly make repairs, costs would escalate and ultimately be passed on to the rate payers.
3. Investment/Costs already incurred: N/A
4. Other: Broken or malfunctioning fire hydrants impede the Fire department's ability to respond to and fight fires. This can result in more property damage and a higher probability for loss of life. Coupled with that is negative media attention and decreased customer confidence in our ability to protect life and property. Leaks result in chlorinated water entering our ground water and stream systems which has a negative impact on fish and the environment.

B. Consequence of funding at a lower level: Similar to those described above.



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Section 1: Proposal Descriptors

Proposal Title: Drinking Water Distribution System Preventive Maintenance Program		Proposal Number: 140.14NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Kipp Fockler x 2923		One-Time/On-Going: On-Going
Fund: Water	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Lack of adequate water system maintenance impacts staff's ability to quickly repair water main breaks; increases the chance of waterborne disease and problems with drinking water color, smell and taste; and results in fire hydrants and valves that do not work when needed to fight fires or respond to other emergencies. This proposal provides preventive maintenance services to ensure the ongoing safety and operational integrity of the water distribution system. Services include fire hydrant inspection and maintenance, valve inspection and maintenance, and water distribution system flushing (cleaning) programs. These programs extend the useful life of water system assets, are critical for system function and reliability, and maintain safe, high-quality drinking water for residents and businesses.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$481,037	\$506,749
Other	200,346	200,381
	<u>\$681,383</u>	<u>\$707,130</u>

Supporting Revenue

	\$681,383	\$707,130
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LTE/FTE

FTE	6.25	6.25
LTE	0.00	0.00
Total Count	<u>6.25</u>	<u>6.25</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/Collaboration: Hydrant inspection and maintenance is coordinated with the Fire Department. Through franchise agreements Bellevue Utilities provides water service to King County (Eastgate area), Clyde Hill, Medina, Yarrow Point, Hunts Point, and Issaquah (South Cove area).

Cost Savings/Innovation: The flushing program utilizes "unidirectional" flushing to direct the flow of water by systematically opening and closing system valves to direct the flow of water through specific lengths of pipe. This decreases water usage and related costs, while improving the program's effectiveness in removing sediment and cleaning the water system. In addition, staff performing distribution system preventive maintenance are cross-trained to perform other reactive activities to address both preventive and reactive maintenance needs.

Section 5: Budget Proposal Description

Businesses and residents in Bellevue expect their water service to be reliable and a high quality product. Continuing to meet these expectations will be increasingly difficult because most of the City's water mains, fire hydrants, and valves are more than halfway through their useful life. Aging infrastructure increases the

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frequency of component failures, and the costs to repair and maintain the system. This proposal supports the following preventive maintenance activities in order to minimize system failures and prolong the life of existing drinking water system assets:

- **Fire Hydrant Maintenance:** *Inspect, exercise, and maintain all 5,765 fire hydrants every two years to ensure that hydrants perform reliably when needed.*

Inspections and maintenance are conducted to comply with National Fire Protection Association (NFPA) standards, and to have high confidence that all hydrants will perform properly in an emergency. Fire hydrants can't be fixed in the middle of a fire response, so it is important to detect problems and correct them prior to a hydrant being needed. A number of circumstances can affect a hydrant's performance, including vandalism, accidental damage, wear and tear, and mechanical failure. NFPA standards call for all public fire hydrants to be inspected on a regular basis. The Bellevue Fire Department and Utilities have determined a 2-year inspection and maintenance cycle is most appropriate based on performance and the results of past inspections.

- **Valve Maintenance:** *Locate, inspect, and exercise all 9,000 water system valves on a 3-year cycle to identify those needing replacement or repairs.*

The purpose of valves in distribution system is to shut off mains during main or service breaks, or to facilitate CIP or private construction activity. Valve exercising consists of manually turning each valve so it closes and opens to ensure it is working properly and to prevent internal components from corroding and seizing up. Properly operating valves are crucial to minimizing the number of customers experiencing service interruptions by limiting the area of the shutdown. Valves are also used to control the flow and direction of water for flushing. Inspection identifies valves with access problems that can be corrected before the valve is needed in an emergency.

- **Drinking Water System Flushing.** *Cleaning the water distribution system on a 6-year cycle by cleaning 100 miles of water main annually through unidirectional flushing to remove sediments and maintain adequate chlorine residual in all parts of the service area.*

Regular flushing to clean water mains is essential to maintaining adequate disinfectant residuals (chlorine) to prevent coliform bacteria regrowth and waterborne disease outbreaks. It is also critical to minimizing customer complaints about taste, odor, or clarity of their water.

Water mains are designed to handle fire flow capacity, which may be several times higher than normal domestic or commercial needs. As a result, the velocity of flow (rate that water flows through pipes) in most mains is usually fairly low. Because of the slow flow, very fine solids settle to the bottom of the pipes and chlorine residuals decay over time (water age), impacting water quality. The problem is more significant where there are dead-end pipes or areas of low water use. These deposits can be a source of color, odor, and taste problems if the deposits are stirred up by increased flows. Flushing pipes at controlled and directed high velocities removes settled substances and improves drinking water quality by maintaining chlorine residuals (essential for preventing bacterial contamination and disease) throughout the distribution system. Flushing is a proactive program and a best management practice used to maintain compliance with federal/state drinking water quality standards.

Staff included in this proposal also have key roles in responding to disasters and major emergency events. Having in-house staff performing the work in this proposal maintains 24/7 availability of a skilled and trained workforce with technical system knowledge, experience and incident command system (ICS) training. Possible events include extreme rain/flooding, snow/ice events, windstorms, earthquakes, as well as other unforeseen disasters.

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Section 6: Mandates and Contractual Agreements

- WAC 246-290-230, Distribution Systems: Dictates the characteristics of the water delivery system required for effective fire hydrant operation.
- Safe Drinking Water Act 1974 (SDWA); Total Coliform Rule (TCR); Disinfection Byproduct Rule (DBP): Compliance with the Total Coliform and Disinfection Byproduct rules is predicated on an effective water main flushing program.
- Uniform Fire Code, 903.4.1.2 Testing and Maintenance: Fire hydrant systems shall be subject to such periodic tests as required by the chief, shall be maintained in an operative condition at all times, and shall be repaired where defective.

Section 7: Proposal Justification/Evidence

A. *Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome*

- Factor 1: Water Resources/ Clean Drinking Water. Services under this proposal are critical to the delivery of reliable, safe, and sufficient clean drinking water for domestic and commercial use and fire fighting.

Purchasing strategies in the Healthy and Sustainable Environment outcome:

- Continued delivery of a clean, safe, reliable supply of drinking water. Flushing improves chlorine residuals, reduces sedimentation, reduces biofilm regrowth, reduces the risk of waterborne disease outbreaks, and minimizes water quality complaints. The maintenance programs covered in this proposal emphasize *proactive* inspections (hydrant and valve survey, leak detection) to minimize service interruptions and maximize reliability.

B. *Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s)*

- Safe Community, Factor 2: Response. This proposal provides safe drinking water to the community through the flushing program. Public safety and fire fighting response capabilities are supported by inspection, maintenance, and repair of all City-owned fire hydrants.
- Economic Growth and Competitiveness, Factor 3: Infrastructure. Adequate and reliable water supply is a foundation for the City's economic competitiveness and advances the standard of living in the community.

Citywide purchasing strategies addressed:

- Best Value. Regular maintenance and inspection of valves and hydrants contributes to higher International Organization for Standardization (ISO) fire insurance ratings. This is the standard that rates and governs insurance costs to homeowners and businesses. The Bellevue Fire Department has an ISO rating of 2, the highest level currently awarded in Washington State. Maintaining our high insurance rating keeps insurance premiums low for residents and businesses.
- Best practices. Inspection and maintenance schedules for valves are based on American Water Works Association (AWWA) recommendations. Fire hydrant inspections are based on National Fire Protection Association (NFPA) recommendations. Unidirectional flushing is conducted per AWWA industry standards and recommendations from a 1995 study by Economic Engineering Services specific to Bellevue's system.

C. *Short- and long-term benefits of this proposal:*

Short-Term: These programs ensure fire hydrants and shutoff valves are functioning properly when needed and repairs are initiated when repair needs are identified. Flushing works to ensure drinking water meets safety and water quality standards required by state and federal mandates and utility customers.

Long-Term: These programs prevent premature failure of hydrants and valves and minimize the duration and impacts of water services interruptions to customers during main breaks. These programs ensure compliance with Safe Drinking Water Act standards and maintain the aesthetic (color, odor, taste, clarity) quality of water, resulting in customer confidence in water supply safety.

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D. Performance metrics/benchmarks and targets for this proposal:

Evidence and logic supporting this proposal:

Adequate proactive and effective preventive maintenance programs ensure the City's ability to provide dependable, safe water service while minimizing costs associated with failures.

Performance measures:

- Percentage of days per year in compliance with state and federal drinking water regulations. Target = 100%. 2009 Actual = 100% compliance
- Number of drinking water quality complaints per thousand service connections. Target = 0 2009 Actual < 1
- Percentage of fire hydrants that function as intended when needed (no failures during a fire). Target = 100% 2009 Actual = 100%
- Linear feet (LF) of water main flushed annually. Target = 519,000 LF 2009 Actual = 344,506 LF
- Number of fire hydrants inspected annually. Target = 2900 2009 Actual = 5739 (the 2011-2012 target is lower due to the shift to a 2-year inspection cycle).
- Number of valves inspected annually. Target = 3000 2009 Actual = 4687

E. Describe why the level of service being proposed is the appropriate level:

Note: The service levels proposed for each program are discussed at length in Section 5.

The service levels proposed are consistent with accepted industry standards and practices from the AWWA and NFPA, and are necessary to ensure safe drinking water, the ability to shut down water mains for repairs, and proper functioning of fire hydrants.

Water main flushing is based on a 6-year cycle per Bellevue-specific recommendations from American Water Works Association Research Foundation/ Economic and Engineering Services research. Historical data show this level of service meets drinking water regulations and minimizes aesthetic water quality complaints.

Section 8: Provide Description of Supporting Revenue

This proposal is entirely supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: Violations of state and federal drinking water legal requirements.
2. Customer Impact: *Hydrant and Valve Inspection Programs*: Inaccessible or broken water valves slow the response to water main breaks increasing damage to property and roadways and requiring staff to extend water service shutdowns. This results in more customers out of water for longer durations. Lack of hydrant inspection increases the probability that the Fire Department will be delayed in finding a properly functioning fire hydrant in the event of an emergency which results in more property damage and potential loss of life. *Flushing Program*: Lack of adequate chlorine residual to protect and maintain drinking water quality; increased risk to public health due to waterborne disease outbreaks.
3. Investment/Costs Already Incurred: N/A
4. Other: Decreased public confidence in the City's ability to provide safe and reliable drinking water and protect life and property; negative media attention.

B. Consequence of funding at a lower level: Similar to those described above.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Water Pump Station, Reservoir and PRV Maintenance Program		Proposal Number: 140.15NA
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Kipp Fockler, x2923		One-Time/On-Going: On-Going
Fund: Water	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Bellevue’s unique topography (with elevations ranging from sea level to 1,440 feet) requires a complicated system of reservoirs, pump stations, and pressure regulating valves (PRVs) to provide safe water at adequate flow and pressures at different elevations throughout the service area. Adequate preventive maintenance and repair services for these critical water system components are essential to providing safe drinking water to over 40,000 residential and commercial water service connections and adequate fire flow and pressure to over 5,700 fire hydrants in the city. This proposal provides necessary preventive maintenance and repair throughout the public water system. These services extend the useful life of assets, avoid costs associated with catastrophic failures and increase system reliability while maintaining drinking water quality.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$399,258	\$419,941
Other	721,314	731,347
	<u>\$1,120,572</u>	<u>\$1,151,288</u>

Supporting Revenue

	\$1,120,572	\$1,151,288
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LTE/FTE

FTE	4.50	4.50
LTE	0.00	0.00
Total Count	4.50	4.50

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Efficiencies/Innovations: The Utilities Bellevue Service Center uses Telemetry/Supervisory Control and Data Acquisition (SCADA) to remotely operate water pump stations and troubleshoot if any problems arise. Remote operations generate savings by reducing the need for service personnel to do on-site visits. Pump stations are equipped with variable frequency drive motors which save power costs by pumping at controlled flow rates based on demand needs. Reservoir turnover to maintain water quality is optimized using chlorine analyzer readings further lowering power costs.

Partnership/Collaboration: Through franchise agreements Bellevue Utilities provides water service to King County (Eastgate area), Clyde Hill, Medina, Yarrow Point, Hunts Point, and Issaquah (South Cove area).

Section 5: Budget Proposal Description

Funding for this proposal provides the necessary resources to efficiently deliver an average daily demand of 16.7 million gallons per day (gpd) and peak summer demands averaging 32.8 million gallons per day (MGD) to customers, and maintain storage capacity of 42.5 million gallons for fire flow and peak demand. The proposal

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provides resources to ensure water supply and water quality of the drinking water system, perform condition assessment, and repair/replace pumps, motors, and valves as needed. Electricity to power the pump stations makes up \$315,000 of this proposal and is based on demand.

Pump Station Maintenance, Repair, and Replacement

Pump station facilities house the motors and pumps that push water from lower to higher elevations. Pump stations include pumps, motors, pump control valves, isolation valves and power supply connections and emergency generators to maintain pumping during power failures. The 23 pumps stations are inspected frequently to look for reservoir and fencing security breaches, check pump and motor operations, lighting and electrical components, leaks, and station cleanliness. These services are critical to ensure the pump stations operate reliably 24 hours a day, 365 days a year. Preventive maintenance includes inspecting and servicing all pumps. Onsite and portable backup power supply emergency generators are tested and maintained to ensure the equipment provides power when needed during power outages.

Reservoir Maintenance and Repair

Water reservoirs maintain uniform water pressure by storing water for high water use incidents such as fire fighting, emergency use, and exceptionally high consumer demand. Bellevue maintains 27 reservoirs. When demand is high, the reservoir is used as a “backup supply” to maintain consistent pressure and flow capacity throughout the system. Scheduled maintenance prolongs the useful life of these long-lived assets and avoids catastrophic failure. Reservoirs are drained, cleaned and inspected on a 4-year cycle to maintain water quality or on a more frequent basis if needed based on reservoir water quality. At the time of cleaning we inspect the condition of the interior and exterior coating or membrane, review structural integrity, address any water quality concerns, and review the condition of supply pipes. This proposal allocates funding for activities including interior and exterior recoating (painting) of steel tanks/reservoirs and ensuring the seals are maintained on concrete reservoirs.

Pressure Regulating Valve Maintenance

Pressure regulating valves (PRVs) regulate water pressure throughout the water distribution system. Bellevue’s water distribution system is controlled by 276 PRVs and 127 relief valves housed in 142 vaults in 64 pressure zones. PRVs must always be ready to operate properly when needed in order to maintain adequate but not excessive water pressures throughout the water system for domestic, commercial and fire fighting uses. High water pressures can cause leaks and failures in the customer’s plumbing systems. Due to their criticality and based on manufacturer’s recommendations, PRVs are inspected and maintained on a 5-year cycle. This proposal provides the resources needed to maintain these important assets so that they function with a high degree of reliability for the life of the valve.

Staff in this proposal also have key roles in responding to disasters and major emergency events. Having in-house staff performing the work in this proposal maintains 24/7 availability of a skilled and trained workforce with technical system knowledge, experience and incident command system (ICS) training.

Section 6: Mandates and Contractual Agreements

- **WAC 246-293-640, Minimum standards for fire flow, & WAC 246-293-660, Minimum standards for system reliability:** Wash. State mandates for fire flow capacity and water system infrastructure requirements.
- **WAC 246-290-230, Distribution systems, and WAC 246-290-420, Reliability and Emergency Response:** Washington State mandates regarding requirements for water distribution to fire hydrants and the ability of the system for sufficient water pressurization to supply hydrants during fire suppression.
- **WAC 246-290-415 Water Operations and Maintenance:** Washington State mandates concerning requirements for utilities facilities operations.
- **Federal Safe Drinking Water Act and Washington Administrative Code (WAC)** mandates reservoir cleaning based on AWWA (American Water Works Association) and APWA (American Public Works Association) recommended practices.

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Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factor 1: Water Resources/ Clean Drinking Water. Properly functioning pumps, motors, control valves and reservoirs contribute to a water system that runs efficiently to deliver high quality, safe, reliable drinking water with minimal interruptions to businesses and homes. Properly maintained reservoirs minimize the risk of security breaches and water contamination.

Factor 5: Conservation/ Conservation of Natural Resources. A well-maintained water system is efficient and saves energy and water. Pumps and motors in good working order need less power to run. Control valves in good working order reduce distribution system leakage. Malfunctioning control valves can cause a section of the water system to experience high pressures which can cause leaks. Leaks can turn into major breaks which can cause property and environmental damage. Streams can be adversely affected by chlorinated water running at high velocities; a properly maintained system helps protect our waterways from environmental hazards.

Purchasing Strategies in the Healthy and Sustainable Environment Outcome:

Continued delivery of a clean, safe, reliable supply of drinking water. Pump station, reservoir and PRV maintenance assures continued delivery of water in an environmentally sensitive and sustainable way by minimizing the cost of service over the life of assets, while maintaining expected service delivery. It assures we don't prematurely replace assets that should be repaired and maintained. It is proactive system management, rather than responding after systems fail. It reduces the chance of failure and minimizes the likelihood of large damage claims. Reliable utility systems mean less impact to the environment from flooding and erosion. Maximizing asset component life means efficient system replacement, avoiding wasting materials.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

- Economic Growth and Competitiveness, Factor 3: Infrastructure. Adequate and reliable water supply is a foundation for the City's economic competitiveness and advances the standard of living in the community.
- Safe Community, Factor 2: Response. Fire fighting response capabilities are supported by adequate water supply, flow and pressure.

Citywide Purchasing Strategies:

- Provide best value: Cost effective maintenance strategies are provided by evaluating component condition, performing maintenance and developing just in time replacement strategies.
- Efficiency gains or cost savings; right sized services: Bellevue uses telemetry based water quality data to ensure adequate mixing within reservoirs. This data allows the utility to save on power costs by not over mixing the reservoir needlessly. In addition, pump motors using variable frequency drives (VFD's) are installed which allow pumping capacity tailored to demand further reducing power usage and costs.
- Best Practices: Activities under this proposal are proactive and result in cost-effective use of ratepayer resources. AWWA (American Water Works Association) recommends reservoir inspection and cleaning every 3-5 years. Bellevue has 25 reservoirs. 6 are cleaned each year based on a 4-year cycle. This interval strikes a balance between available resources, competing workload, and industry recommendations while maintaining safe drinking water.
- Promote environmental stewardship: Preventive maintenance reduces the likelihood of high-consequence component failures that result in environmental damage, including overflow impacts to sensitive areas and chlorinated water impacts on the natural environment.

C. Short- and long-term benefits of this proposal:

Short-term benefits: This proposal helps create a healthy environment by providing safe drinking water where and when it is needed for customer daily use, to fight fires, and to cope with local or regional water supply system failures. **Long-term benefits:** Life cycle cost analysis is core to the pump station, reservoir and PRV maintenance programs. All costs (i.e. planning, design, construction, operations, maintenance, risk of failure, decommissioning and replacement costs) are considered. Triple bottom line (economic, environmental and

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social) costs and benefits are considered. This proactive approach to maintain components prolongs the useful life of assets and decreases operating costs to customers.

D. Performance metrics/benchmarks and targets for this proposal / Evidence and logic supporting proposal: Deferred maintenance on long lived assets has major consequences. In 2004, Bellevue assumed a neighboring water district. Inspection of Factoria Reservoir, built in 1981, found the 23-year old tank had significant interior coating failures and severe corrosion and structural deterioration of the roof support beams and ceiling surface which were the cause of several leaks. Due to the lack of a proactive maintenance program by the previous owner, Bellevue incurred significant and unexpected costs in the amount of \$298k to make repairs and bring the tank back to acceptable standards. Maintenance intervals are right sized to detect problems before they become expensive repairs or result in catastrophic failure or water contamination.

Performance Measures

- # of reservoirs taken out of service as a result of drinking water quality concerns. Target=0 2009 Actual = 0
- # of PRV failures per year. Target= 0 2009 Actual = 0
- Reservoirs cleaned per year. Target = 6 2009 Actual = 4
- PRV's maintained per year. Target = 152 2009 Actual = 136
- # of pump failures per year Target = 0 2009 Actual = 1

E. Describe why the level of service being proposed is the appropriate level:

Following the recommendations of American Water Works Association (AWWA) for reservoir inspection and cleaning, Utilities cleans reservoirs based on a 4-year cycle. This level of service allows us to maintain reservoirs economically, while meeting mandated levels of service required by the Federal Safe Drinking Water Act. PRV, pump station component and backup power emergency generator maintenance intervals are based upon manufacturers' recommendations. Reservoirs are recoated based upon inspection results used to develop maintenance priorities.

Section 8: Provide Description of Supporting Revenue

This proposal is entirely supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

Properly maintained pump stations, reservoirs and valves provide the basis for adequate and safe drinking water. Lack of maintenance increases system failures and raises water quality issues which are public health and consumer confidence issues. Failures also impact water supply for firefighting, which is a life/safety issue.

A. Consequence of not funding the proposal at all:

1. Legal: Increased violations/fines levied from environmental regulations agencies
2. Customer Impact: Drinking water quality issues and increased public health risks leading to a loss of public confidence in the water supply. Pressure fluctuations negatively impact the water system and high pressures can damage customer's pipes.
3. Investment/Costs already incurred: Reservoirs would need to be replaced before they reached their useful life expectancy, causing an unnecessary increase in replacement costs. Pumps would run less efficiently, resulting in higher pump station power costs and longer pump run times which would reduce the life of the equipment.
4. Other: Increased failures, claims, and water loss due to main breaks as a result of high pressures.

B. Consequence of funding at a lower level: Similar to those described above.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Water Meter Repair and Replacement Program		Proposal Number: 140.16NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Kipp Fockler x 2923		One-Time/On-Going: On-Going
Fund: Water	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Accurate water meters ensure fair and equitable billing for water and sewer services. Under-registering or stopped water meters result in lost revenues which are spread to the rest of the rate base. This proposal provides for regular testing, calibration, and replacement of City-owned water meters at established intervals to ensure meter accuracy for water and sewer revenue collection, equitable billing and rates, early leak detection for the customer, and to promote water conservation. Meter box maintenance activities are included to ensure access for meter reading and to shut off the water service in the event of an emergency.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$165,543	\$174,252
Other	80,718	35,732
	\$246,261	\$209,984

Supporting Revenue

	\$246,261	\$209,984
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LTE/FTE

FTE	2.00	2.00
LTE	0.00	0.00
Total Count	2.00	2.00

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Cost Savings: This proposal promotes cost savings to the customer through early leak detection and accurate metering of water usage.

Efficiencies/Innovations: Utilities has developed reports within the customer billing system that alert staff to meters which are potentially reading low or malfunctioning. This allows for a more effective maintenance program through targeted follow-ups and works to minimize large unexpected bills to the customer. Since small meters are relatively inexpensive, it is more cost effective to replace and recycle them rather than repair them.

Partnership/Collaboration: Through franchise agreements Bellevue Utilities provides water and sewer service to King County (Eastgate area), Clyde Hill, Medina, Yarrow Point, Hunts Point, and Issaquah (South Cove area).

Section 5: Budget Proposal Description

Under this proposal, City staff test, calibrate, and replace City-owned water meters at regular intervals to ensure meter accuracy for billing and revenue collection, equitable rate setting, early leak detection, and to promote water conservation. This proposal includes funding for the following services.



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Test, Calibrate and Repair Large Meters: Test, calibrate and repair 70 large water meters annually on a 5-year test/calibration cycle for 280 large meters over 3” in size to ensure their continued accuracy. In addition, customer billing system reports are used to identify meters that need extra testing when recorded water usage is low. This helps Utilities and customers avoid surprises due to failed meters that result in high billings which can exceed \$50,000 for a large commercial establishment if the meter went unchecked for 2-3 years. This damages customer relations and presents a hardship for the customer. By law, retroactive billing can be calculated for a period of up to three years prior to meter correction.

Small Meter Replacement: Replace 2,000 water meters annually (20-year replacement cycle).

Replacement of residential meters is necessary because meters lose accuracy and under-register (read low) as they age, and should be replaced every 20-25 years based on manufacturer’s recommendations and industry standards. Over 40% of City-owned water meters are over 20 years old. Since small meters are relatively inexpensive, it is more cost effective to replace them than to test and repair them. Accurate meters support equity among the ratepayers and allow the customers to make informed choices about their water usage and conserve water accordingly. Small meters under-register (slow down) when beyond the recommended life cycle and cause revenue loss for the Utility.

Meter Box Maintenance: Perform meter box maintenance to identify and correct problems.

A water meter box protects the water meter, provides customer access to their meter to monitor usage (and possible leaks) and gives the City access for meter reading and the shut-off valve. Meter box maintenance activities include identifying leaks on the customer’s side of the meter and encouraging customers to make repairs in a timely manner to conserve water; trimming overgrown vegetation so the meters can be read efficiently, and raising or lowering meter boxes to eliminate tripping hazards and improve safety. Not performing meter box maintenance can result in trip and fall claims. Utility crews mark meter box locations by painting a reflective white stripe on the curb or street. This enables crews to quickly read meters and find and shut off meters during emergencies, and is useful when customers are trying to locate their meter.

Staff included in this proposal also have key roles in responding to disasters and major emergency events. Having in-house staff performing the work in this proposal maintains 24/7 availability of a skilled and trained workforce with technical system knowledge, experience and incident command system (ICS) training. Possible events include extreme rain/flooding, snow/ice events, windstorms, earthquakes, as well as other unforeseen disasters.

Section 6: Mandates and Contractual Agreements

- **WAC 246-290-496** Metering requirements: Meters must be selected, installed, operated, calibrated, and maintained following generally accepted industry standards and information from the manufacturer.
- **RCW 70.119A.180** Water use efficiency requirements: It is the intent of the legislature that the department establishes water use efficiency requirements designed to ensure efficient use of water while maintaining water system financial viability, improving affordability of supplies, and enhancing system reliability.
- **WAC 246-290-820** Distribution system leakage standard: Total water produced and purchased, and authorized consumption must be calculated using data from meters.

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

The services funded by this proposal support a Healthy and Sustainable Environment through accurate metering by supporting water conservation and providing the information needed to ensure accurate and equitable billing for customers.



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This proposal directly supports a healthy and sustainable environment by providing efficient and accurate accountability of drinking water usage to support the delivery of a safe, reliable supply of drinking water. Accurate water meters enable Utilities to equitably collect revenues, and also help pinpoint leaks.

In addition, the sewer bill is based on drinking water usage. An effective meter calibration and replacement program supports equitable billing for both water and sewer ratepayers.

Factors in the Healthy and Sustainable Environment Outcome

Factor 1: Water Resources/ Education. Accurate meters help detect customer-side leaks and minimize water loss. Accurate water meters enhance the community's awareness and understanding of the choices they have and the consequences of those choices on water resources and their bills. Informed customers are more likely to modify their behavior for the benefit of the community and the environment in which they live.

Factor 5: Conservation/ Conservation of Natural Resources. Accurate meters help reduce waste and water consumption, and increase water efficiency. Accurate readings of water usage provide the customer needed information to make informed decisions about water usage and control bills.

Purchasing Strategies in the Healthy and Sustainable Environment Outcome:

- Ensure that our water resources are effectively managed and protect and conserve valued natural resources through preservation, restoration, and efficient use. Accurate measurement of the water we provide ensures greater accountability of water purchased to the consumer. It also contributes to early leak detection to minimize water waste and unaccounted for water and leakage from pipes.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed in this proposal:

Quality Neighborhoods Factor 3 – Public Health and Safety – well maintained meter boxes support clean and well-maintained commercial and residential properties.

Responsive Government Factor 5 - Stewards of the Public Trust – well maintained and accurate water meters ensure equity among the ratepayers and builds trust between the customer and the City.

Citywide Purchasing Strategies addressed by this proposal:

- Value, Efficiencies and Cost Savings: Services under this proposal minimize non-revenue water caused by under-registering meters. A 1% decrease in non-revenue water (water loss) represents a savings of \$152,000 in wholesale water costs and which directly impact water rates. Preventing water loss helps us keep water rates low and provides the best value to the community.
- Innovative and creative: Utilities has developed reports within the customer billing system that alerts staff to meters which are potentially reading low or malfunctioning. This allows for more effective maintenance program through targeted follow-ups.
- Best Practices: Meter change out and calibration intervals have been developed according to industry best practices. Industry best practices encourage a proactive approach to maintain and preserve water meter accuracy.
- Utilities promotes sound management of resources by monitoring high-volume accounts served by multiple meters to check for gradual meter slow-downs, indicating that the meter may be failing. If the meter is not recording consumption properly, the City loses revenue. If our monitoring shows a spike or other abnormality in usage, customers are quickly notified so that they can perform troubleshooting on their system, enabling them to save money and conserve resources.
- Promote Environmental Stewardship: The proposal supports activities to efficiently and effectively measure water consumption and detect leaks on customer side plumbing to conserve water. This proactive approach promotes stewardship of water resources.

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C. Short- and long-term benefits of this proposal:

Short-term benefits: Meter calibration, maintenance and replacement helps create a healthy environment by providing tools that allow for (1) accurate measurement of water use; (2) efficiently read meters for accurate and prompt billing with minimal mistakes; and (3) early detection of leaks to promote timely repairs, conserve water and electricity, and prevent damage to the environment.

Long-term benefits: The proper level of preventive maintenance and repair, meter calibration, maintenance and replacement supports equity among all ratepayers and avoids lost water and wastewater revenues.

D. Performance metrics/benchmarks and targets for this proposal:

Performance measures:

- % of commercial meters that meet accuracy standards at the time of the test. Target = 85% 2009 Actual = 74%
- # of small meter change outs annually. Target = 2000 2009 Actual = 923
- # of commercial meters tested annually. Target = 70 2009 Actual = 71

D. Describe why the level of service being proposed is the appropriate level:

The level of service being proposed uses manufacturer's recommendations of useful meter life to inform replacement, repair and inspection cycles. These service levels work to ensure accurate meter reads for all customers and minimize non-revenue water loss for the water and wastewater utilities and support state and federal regulations related to water conservation and metering requirements.

Section 8: Provide Description of Supporting Revenue

Activities are supported by utility rates. Meters that are changed out are sold based on market rates for brass and recycled.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: Retroactive billing window is three-years; WAC 246-290-496 states meters must be selected, installed, operated, calibrated, and maintained following generally accepted industry standards and information from the manufacturer.
2. Customer Impact: If a customer's meter is malfunctioning, they would not be aware of the true amount of water they're using. After replacement, the customer may be in for a "nasty surprise" when they discover the amount of their utilities bill compared to previous bills from the underreporting meter.
3. Investment/Costs already incurred:
4. Other: Failing to discover malfunctioning meters in a timely manner results in lost water and wastewater revenues. Since we are only able to recapture underpaid utilities for a retroactive three-year period, any billing shortages previous to that point represent money lost.

B. Consequence of funding at a lower level: Similar to those described above.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Water Service Installation and Upgrade Program		Proposal Number: 140.17NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Kipp Fockler, x2923		One-Time/On-Going: On-Going
Fund: Water	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Installation of water service connections is required for new homes and businesses to obtain occupancy permits without costly delays to the property owner or contractor. Utilities performs water main shutdowns, water main condition assessments, and the pipe work to install water services. Asphalt cuts and excavations needed for installation are completed by private contractors under the right-of-way (ROW) use permit process. This hybrid Utility/contractor approach to water service installations provides timely installation of new services for developers, condition assessment data critical for asset management, minimizes customer service impacts of water shutdowns and assures consistent quality control and sanitation while supporting economic development.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$75,054	\$79,053
Other	76,189	76,196
	\$151,243	\$155,249

Supporting Revenue

	\$151,243	\$155,249
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LTE/FTE

FTE	1.00	1.00
LTE	0.00	0.00
Total Count	1.00	1.00

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Efficiencies/Innovations:

Utilities adopted recommendations from a 2008 process improvement analysis conducted by Roth Hill Engineering Partners to change the role of Utilities staff in water service installations. Previously, staff performed all aspects of an installation from digging trenches, to making connections, to restoring pavement. However, because of Bellevue's robust economic development at the time, demand outpaced staff capacity and water service installations requests had a 12-week backlog. With changes to the process, the City now only installs the water pipe and assesses the condition of the water main, performs necessary shutdowns and customer service notifications, and obtains trench compaction records. Private contractors obtain right-of-way use permits and excavate the street for the installation. This division of labor reduced the Utilities staffing previously required for excavation, pavement repair, and traffic control. In 2009, 96% of the new service installations were completed within 4 weeks.



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Partnership/Collaboration: Through franchise agreements Bellevue Utilities provides water service to King County (Eastgate area), Clyde Hill, Medina, Yarrow Point, Hunts Point, and Issaquah (South Cove area).

Section 5: Budget Proposal Description

Water service connections support community growth and economic development if they are performed expeditiously and minimize construction delays. Commercial and residential development requires water services prior to occupancy, so delays can be very costly for customers and contractors. This proposal provides labor, tools, equipment, and parts to install new water services, install water meters, and upgrade or relocate existing water services. **Note: These are billable services with offsetting revenues that support the cost of installing water service connections.**

- **New Water Service Installations:** Water services are installed when a new building or home is being built. The contractor is responsible for excavating the utilities and providing traffic control. City crews notify customers of any temporary water outages, shut off the water if necessary, and install the new water service piping and water meter. The meter service is turned on after the contractor satisfies all permit requirements. Based on 2009-2010 workload projected new water service installations are 40-60 per year for 2011-2012.
- **Installation of Water Meters in New Development Projects:** When a water distribution system extension is completed in a residential plat for a new development project with multiple homes, Utilities installs the new water meters for each home. O&M crews clean the service lines, install the new water meters, and document the meter serial numbers, locations, and other pertinent information needed to activate services and billing. Based on 2009-2010 workload projected meter installs are 75 per year for 2011-2012.
- **Upgrade/Relocate Water Service.** In some cases, existing water service connections need to be upgraded, such as when a capital improvement project is planned that involves replacing water mains, or a house remodel requires an increased volume of water because of a fire sprinkler system. Based on 2009-2010 workload projected upgrades/relocations of water services are 40 per year for 2011-2012.

Staff included in this proposal also have key roles in responding to disasters and major emergency events. Having in-house staff performing the work in this proposal maintains 24/7 availability of a skilled and trained workforce with technical system knowledge, experience and incident command system (ICS) training. Possible events include extreme rain/flooding, snow/ice events, windstorms, earthquakes, as well as other unforeseen disasters.

Section 6: Mandates and Contractual Agreements

- WAC 246.290.49, Metering Requirements. Meters must be selected, installed, operated, calibrated, and maintained following generally accepted industry standards and information from the manufacturer.
- WAC 480.110.365, Service Responsibilities. Defines roles and responsibilities of both the customer and the water company regarding equipment, changes to equipment and service interruptions. For scheduled service interruptions, the water company must notify its customers in advance.

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome

Factors in the Healthy and Sustainable Environment outcome:

- **Factor 1: Water Resources/ Reliable Water Supply.** Homes and businesses need to connect to the City's water supply. Activities under this proposal enable water service connections for the delivery of reliable, safe, and sufficient drinking water to homes and businesses.

2011-2012 Budget Proposal

- Factor 5: Conservation/ Conservation of Natural Resources. Utility crews provide high quality work to ensure that water services will not leak or fail, thereby reducing water system losses.

Purchasing strategies in the Healthy and Sustainable Environment outcome:

- Ensure our water resources are effectively managed to meet the needs of the environment and our community.
- Ensure the safe, reliable supply of drinking water to, and removal of wastewater from, homes and businesses.

Installation of new water service connections makes possible the delivery of reliable drinking water to Bellevue residents and businesses. Utilities staff work practices also consider efficiency and environmental sustainability. If crewmembers determine that any infrastructure needs to be replaced or repaired when they make service connections, repairs can be made to prevent failure and enhance service reliability. For example, an existing “saddle” connection between the water pipe from a home and the City’s water main could be corroded and need to be replaced. Proactive inspections and repairs in the course of new service connections can prevent future catastrophic water main breaks that cause property and environmental damage, service interruptions, and possible claims against the City.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s)

Other factors addressed in this proposal:

- Economic Growth and Competitiveness, Factor 3: Infrastructure. Developers and contractors need a reliable, satisfactory, and efficient means of connecting to local utilities. The water service install procedures provide contractors with more control over the time it takes for water service connections. This creates a friendlier climate for developers and encourages them to continue investing in Bellevue.

Citywide purchasing strategies addressed:

- Leverage Collaboration (with external organizations), Efficiency Gains/Cost Savings, and Best Practices. Activities under this proposal represent a collaborative effort with the development community, which benefits both the City and customers. The City reduces labor resource needs because customers and developers choose their own contractors to perform excavations and pavement restoration as part of water service installation. The customers benefit from the accelerated service connection times that this division of work allows. This collaborative service delivery model follows the best practices recommendations from the Roth Hill Engineering Partners 2008 report.

C. Short- and long-term benefits of this proposal:

- Short-term benefits: Customers and developers get needed water service connections, a prerequisite for occupancy permits. The City’s collaborative approach reduces delays before service connections can be made. Inspections of existing water system components when new connections are made can uncover system components in an “imminent failure state,” allowing for preventive maintenance, repair, or replacement.
- Long-term benefits: Water service connections support community growth and development and boost the local economy. The integrity and safety of the drinking water system is maintained.

D. Performance metrics/benchmarks and targets for this proposal:

- Percentage of water service installations completed within four weeks of request. Target = 95% 2009 Actual = 96%
- Number of water service installations completed annually. Target = 50 2009 Actual = 44

2011-2012 Budget Proposal

E. Describe why the level of service being proposed is the appropriate level:

This proposal provides for an acceptable level of service to the development community. The new installation procedures allow Utilities to meet customer needs within a satisfactory time frame without additional staff resources.

Section 8: Provide Description of Supporting Revenue

These activities are funded 100% through permit fees collected from developers.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: N/A
2. Customer Impact: Existing customers would have inconsistent levels of service on water shutdowns both in execution, duration, and water quality impacts of the shutdown. Developers would have to address new service installations and upgrades process by other means in order for new home and commercial construction to continue. The need to perform the work would not go away.
3. Investment/Costs already incurred: N/A
4. Other: If not funded, the Utilities Department would need to develop a process for a developer to install the entire new water service connection, including the piping and water shutdowns.

B. Consequence of funding at a lower level: Similar to those described above.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Sewer Mains, Laterals, and Manhole Repair Program		Proposal Number: 140.18NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Stacey Morales, x4889 or Dave Dickson, x4359		One-Time/On-Going: On-Going
Fund: Sewer	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Raw sewage contains viruses, bacteria, chemicals and other pathogens that are an extreme threat to public health and the environment when not managed and contained within the sewer collection system. Broken or defective sewer mains and connections result in blockages and overflows of sewage that can flood and contaminate customer's homes, businesses or the environment; create public health issues and result in costly liability claims to the City. The City of Bellevue's Sewer section is responsible for operation, maintenance, and repair of 651 miles of buried or submerged pipe and 14,337 manholes and cleanouts (maintenance access structures) within its service territory. This proposal provides repair services for the sewer collection system. These repairs correct deficiencies predominately due to aging infrastructure and allow the City to get the most use out of each pipe and manhole over the life of the asset for the least long-term cost.

Section 3: Required Resources

Other	257,021	257,071
	\$779,602	\$807,686

Supporting Revenue

\$779,602	\$807,686
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LTE/FTE

FTE	7.00	7.00
LTE	0.00	0.00
Total Count	7.00	7.00

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/Collaboration: Utilities coordinates with the Transportation Overlay program to minimize pavement restoration costs and traffic disruption. This is accomplished by identifying and completing needed repairs prior to scheduled pavement overlay saving restoration costs and leaving a more seamless road surface. Via franchise agreements Bellevue Utilities also provides sewer service to the following communities: King County, Clyde Hill, Medina, Beaux Arts, Yarrow Point, Hunts Point, and Issaquah (South Cove area).

Efficiencies/Innovations: Experience has shown that performing repairs in-house saves \$10,000 per repair on average compared to outsourcing. The wastewater repair crew has successfully tested a product to repair pipes internally without needing to cut pavement and excavate. While this approach doesn't work for all repairs, when this method is used, repairs that average \$5,000 using traditional methods are fixed at an average cost of \$1,000 per repair. And because repairs can be done without traditional disruptive methods, traffic impact is lessened. "Low connection surveys" were completed to identify homes/businesses at higher risk if sewer backups occur. Survey results help prioritize repairs using consequence of failure as a criterion.

2011-2012 Budget Proposal

Section 5: Budget Proposal Description

The City of Bellevue's Sewer section is responsible for operation, maintenance, and repair of 651 miles of buried or submerged pipe and 14,337 manholes and cleanouts (maintenance access structures) within its service territory. The sewer collection system is aging and requires scheduled and emergency repairs to ensure reliability and service to Bellevue's citizens and businesses. Defects to the system are discovered through Closed Circuit TV (CCTV) video inspections, maintenance activities and emergency service calls from customers. Repairs include spot repairs to sewer mainlines, side sewer stubs within the right-of-way and manhole repairs. The 128 miles of side sewer stubs within the right-of-way pose special challenges as they have difficult access for condition assessment and no access for routine maintenance. Many of these repairs involve deep excavations (10 feet +) to access the pipe for repair.

The sewer collection system is aging and more defects needing repair are identified daily. The Wastewater section currently has a backlog of over 800 defects needing repair and the backlog is projected to reach 1,000 by the end of 2010. In response to the growing number of needed repairs, Council approved three additional FTE's for sewer repairs in the 2009-2010 budget. In 2009, the Wastewater section launched a full-time repair crew dedicated to wastewater system repairs with a goal to complete 100 in-house repairs annually. In concert with Engineering's efforts to develop CIP programs for pipe rehabilitation and replacement, the long-term goal is to eliminate the backlog and keep pace with identified repair needs on an ongoing basis.

Staff included in this proposal also have key roles in responding to disasters and major emergency events. Having in-house staff performing the work in this proposal maintains 24/7 availability of a skilled and trained workforce with technical system knowledge, experience and incident command system (ICS) training. Possible events include extreme rain/flooding, snow/ice events, windstorms, earthquakes, as well as other unforeseen disasters.

Section 6: Mandates and Contractual Agreements

- WAC 246-271-020: Prohibitive methods of sewage disposal: No sewage or industrial waste, or components thereof, shall be placed or permitted to flow onto the surface of the ground, or into any waters of the state.
- WAC 173-240-060: The Washington Depts. of Ecology and Health require sewer system operators to minimize overflows to surface water bodies. Repeated overflows can lead to enforcement action or state-mandated capital projects.
- The National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Stormwater Permit (a federal Clean Water Act mandate) requires Bellevue to reduce the discharge of pollutants to surface water to the maximum extent practicable.

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factors in the Healthy and Sustainable Environment Outcome:

- Factor 1: Water Resources/ Reduced Pollutants through containment of sewage and the reduction of wastewater overflows to the environment. Water Removal and Control of wastewater is essential to the conveyance of sewage to the King County treatment facilities
- Factor 2: Clean Living/ Waste Management provides the infrastructure and services to reliably remove wastewater from homes, businesses, and neighborhoods
- Factor 3: Nature Space/ Protection of Lakes, Streams and Wetlands through wastewater containment and overflow reduction.
- Factor 5: Conservation/ Protection of Environmental Hazards through a reliable wastewater system reducing the potential of overflow exposures during a natural event like wind and rain storms

2011-2012 Budget Proposal

Repair activities work to ensure flow, reduce environmental impacts and reduce claims against the City. By making necessary repairs we reduce the potential for backups, overflows, and claims. Repair activities allows us to repair structural pipe and manhole defects that pose imminent blockage potential and return service to customers in a reasonable amount of time. Furthermore, it provides a proactive approach to repair prior to complete failure.

Purchasing Strategies in the Healthy and Sustainable Environment Outcome:

- Deliver results in an environmentally sensitive and sustainable way: Wastewater repairs ensure system performance to provide the safe and reliable removal of sewage from homes and businesses and minimize the impacts of sewer blockages and overflows on the environment.
- Services emphasize proactive repairs where possible (planned repairs identified through condition assessment) and provide emergency repairs where unavoidable (identified through blockages, restrictions and overflows).
- Address multiple factors: This proposal directly affects multiple factors as explained above.

Additional factors:

- Risk reduction and reduced claims are attributed to repair activities. Pro-active repairs reduce the number of backups and overflows.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

- Economic Growth and Competitiveness, Factor 3: Infrastructure. A properly functioning sewer system adds value to land by permitting higher productive uses. Fast, effective repairs reduce economic impacts to businesses/residences.
- Improved Mobility, Factor 2: Traffic Flow. Planned repairs help to avoid crisis situations where sewer line emergencies can disrupt traffic impacting mobility. Closing roads or diverting traffic during an unplanned sewage repair or emergency can contribute to more traffic congestion.
- Responsive Government, Factor 4: Exceptional Service, Efficient and Effective Delivery. Proactive repairs lower the need for emergency repairs which are generally 50% more expensive if outsourced through contracting.

Citywide Purchasing Strategies:

- Provide the best value in meeting the community needs by minimizing life cycle cost through effective asset management and minimizing claims due to sewage backups; extends the useful life of the collection system.
- Provide for gains in efficiency and/or cost savings and ensure that services are "right sized" by prioritizing repairs based on probability and consequence of failure in order to make the repairs prior to defect failure.
- Consider best practices System repairs minimize life cycle cost and risk through sound management of resources and business practices.
- Promote environmental stewardship by reducing sewage blockages and related environmental impacts.
- Enhance Bellevue's image – "Beautiful View" by minimizing sewage backups.

C. Short- and long-term benefits of this proposal:

Short-term benefits: The continued effective functioning of the City's sewer system, providing citizens and businesses with reliable sewer service. Preventing disruption of the City's traffic flow related to serious, unplanned system repairs that require street blockage and closures.

Long-term benefits: A proactive approach to repairs extends the useful service life of the sewer system. Repairs done in-house can be expedited which reduces time and cost per repair. In addition, these activities contribute to Utilities' stated objective of managing the City's wastewater infrastructure to provide the service levels expected by the community and required by regulators, while optimizing the cost of operating, maintaining, renewing and replacing the infrastructure.

2011-2012 Budget Proposal

D. Performance metrics/benchmarks and targets for this proposal:

- Number of in-house pipeline repairs completed annually Target = 100 2009 Actual = 81
- Backlog of pipeline defects waiting repair Target = 100 2009 Actual = 765 (as of 12/31/09)
- Number of manhole repairs completed annually Target = 240 2009 Actual = 198
- Backlog of manhole repairs Target = 40 2009 Actual = 670
- Number of beach closures due to pipe defects Target = 0 2009 Actual = 0
- Number of sewer overflows due to pipe defects Target = 0 2009 Actual - not tracking in 2009
- Claims paid due to pipe defects Target = 0 2009 Actual = 2

E. Describe why the level of service being proposed is the appropriate level:

The service levels proposed balances the need to ensure the safe and reliable removal of sewage from homes and businesses and minimize the impacts of sewer blockages and overflows on the environment against the costs to provide wastewater system repairs and relative risks associated with service failures. Due to the high consequences of failure when repair needs are not addressed, these service levels support the goals for reliability and performance.

Over twenty deficiencies are identified each month needing repair and/or monitoring. The activities in this proposal are intended to address the repairs on the sewer system mains and service stubs. The services prolong the infrastructure life and are vital in providing sewer services to the homes and businesses of Bellevue and the neighboring franchise areas.

Section 8: Provide Description of Supporting Revenue

Activities are supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

Sewer spillage can be expensive. In January of this year, King County/Metro was fined \$24K by the EPA for a December 2009 spillage incident. From 1997 – 2007, Utilities has averaged 9 claims paid per year with an average annual total cost of \$138,000. While the average number of claims has been relatively flat, the dollar amounts of those claims have risen slightly.

Maintaining the integrity of Bellevue's wastewater system infrastructure is essential.

A. Consequence of not funding the proposal at all:

1. Legal: Lack of maintenance of the Bellevue wastewater system would violate NPDES Phase II permit requirements and could result in fines, imprisonment and/or 3rd party lawsuits (NPDES Permit enforcement options).
2. Customer Impact:
 - Citizens would be impacted due to more frequent and costly failures/overflows; increased service interruptions and economic impacts to businesses without sewer service (restaurants). Mobility in Bellevue would be reduced due to disruptions associated with unplanned repairs.
 - The natural environment and public health will be negatively impacted with overflows and exposure to sewage on the ground surfaces and in the waters of Bellevue.
 - Reduction of system reliability and increased claims due to failure; costs to perform system maintenance will increase when needed repairs are deferred.
3. Investment/Costs already incurred: Council approved three additional FTE's for sewer repairs in the 09-10 budget.
4. Other: N/A

B. Consequence of funding at a lower level:

Reduction of the program budget would mean an even larger backlog of critical sewer defects awaiting repair, likely with offsetting emergency repair costs, environmental pollution, and damage claims. Emergency repair work is generally 50% more expensive than proactive internal defect repair.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Sewer Condition Assessment Program		Proposal Number: 140.19NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Stacey Morales, x4889, or Dave Dickson, x4359		One-Time/On-Going: On-Going
Fund: Sewer	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Raw sewage contains viruses, bacteria, chemicals and other pathogens that are an extreme threat to public health and the environment when not managed and contained within the sewage collection system. The Sewer Condition Assessment Program uses Closed Circuit TV (CCTV) equipment to provide digital images of the inside of sewer pipes and stubs in the right-of-way (ROW) to identify and evaluate pipe defects that need repair and document less severe defects that need regular maintenance. Sewer pipe defects can cause catastrophic failures resulting in blockages, backups and sewer overflows which impact customers, public health, and the environment. In addition, identifying and repairing sewer defects prior to road overlay activities minimizes pavement impacts and lowers restoration costs.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$455,802	\$479,871
Other	191,885	191,924
	<u>\$647,687</u>	<u>\$671,795</u>

Supporting Revenue

	\$647,687	\$671,795
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LTE/FTE

FTE	5.45	5.45
LTE	0.00	0.00
Total Count	5.45	5.45

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/Collaboration: Condition assessment video inspections are coordinated with the City's Transportation Department and other municipalities as part of road overlay activities, identifying needed repairs prior to new pavement overlay to minimize pavement restoration costs and traffic disruption. Also participating are King County, Issaquah (South Cove Area), Clyde Hill, Medina, Beaux Arts, Yarrow Point, and Hunts Point, which minimizes restoration costs.

Efficiencies/Innovations: CCTV is essential to the process improvement of the Preventive Maintenance program by evaluating pipe conditions to determine appropriate maintenance levels for known problem areas. It allows for right-sizing of maintenance levels saving labor and equipment that can be put to other maintenance needs. An example is the contracted root sawing program for pipes that need maintenance due to root intrusion. CCTV is used for quality control and to determine the appropriate frequency of maintenance. Going forward, continued assessment activities in the process improvement area work to move preventive maintenance from recurring high maintenance pipes towards system-wide cleaning resulting in more comprehensive and effective preventive maintenance to the sewer collection system.

2011-2012 Budget Proposal

Section 5: Budget Proposal Description

This proposal provides sewer condition assessment services for the public sewer system. The condition assessment program provides data and information used to prioritize sewer system maintenance and repair activities. Making necessary repairs to underground pipes prior to street overlay or pipe failure is significantly less expensive than repairing defects after a street has been overlaid or system failure. Assessing the condition of pipes supports asset management and identifies pipes in need of repair prior to complete failure.

Condition assessment is the digital recording, evaluation, and reporting of CCTV video of sewer mains and service stubs. CCTV data is used by Utilities Engineering and Operations and Maintenance to identify and prioritize repairs and determine which defects can be deferred for future monitoring. This data also provides needed information to proactively manage the sewer system including the development of long-term renewal and rehabilitation CIP programs. Condition assessment is vital to effective asset and risk management, provides a high level of customer service via emergency response and claims investigation, and supports the optimization of preventive maintenance activities and schedules. Included in this proposal is \$55,000 for camera equipment replacement in 2011. The condition assessment vehicles have a 10-year life cycle, while the cameras and associated cabling/wiring have a 5-year life cycle. These cameras are invaluable for video assessment of laterals in the ROW that have limited or no access from the customer's side.

Asset Management

Sewer condition assessment information is evaluated using an industry standard scoring system with the most severe deficiencies (failures) documented and scheduled for repair and/or maintenance. Condition Assessment crews work with Engineering staff to determine the severity of deficiencies and to prioritize and schedule necessary repairs.

The sewer system experiences more failures as it ages. Crews have identified over 800 sewer defects that need repair. In the past few months, the number of defects identified (both needing repair and for monitoring) has averaged over 20/month. By the end of the year, the total number of defects may exceed 1000.

A 2004 study performed by Black & Veatch recommended Bellevue Utilities video assess 10% of the service area annually. This represents video inspection and review of 65 miles (343,000 feet) of sewer main and service stubs in the right of way annually. These assessments are not possible without the services provided in this proposal.

Risk Management and Claims Reduction

This proposal also provides emergency response and claims investigation. CCTV allows staff to identify causes of failure in order to develop mitigation and response strategies and assign failure ownership.

Staff also have key roles in responding to disasters and major emergency events. Having in-house staff performing the work in this proposal maintains 24/7 availability of a skilled, trained workforce with technical system knowledge, experience and incident command system (ICS) training. Possible events include extreme rain/flooding, snow/ice events, windstorms, and earthquakes, as well as other unforeseen disasters.

Section 6: Mandates and Contractual Agreements

- **WAC 246-271-020:** Prohibitive methods of sewage disposal: No sewage or industrial waste, or components thereof, shall be placed or permitted to be placed, or permitted to flow onto the surface of the ground, or into any waters of the state.
- **WAC 173-240-060:** The Washington Depts. of Ecology and Health require sewer system operators to minimize overflows to surface water bodies. Repeated overflows can lead to enforcement action or state-mandated capital projects.
- **National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Stormwater Permit** requires Bellevue to reduce the discharge of pollutants to surface water to the maximum extent practicable.

2011-2012 Budget Proposal

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Condition assessment provides the necessary information to best manage the repair, replacement, and preventive maintenance of sewer mains and lateral service lines while minimizing life cycle costs. This service provides Utility Engineering with current system conditions for review, design, and repair. Condition assessment for emergency response is necessary to mitigate impacts to the natural environment and property. Condition assessment allows for quality decisions which helps reduce environmental impacts and promotes public health. Additionally, the services within this proposal support claims avoidance by proactively identifying deficiencies before a sewage backup impacts homes or businesses. The use of these resources to investigate claims ensures only legitimate claims against the City are paid.

Factors in the Healthy and Sustainable Environment Outcome:

- Factor 1: Water Resources/ Reduced Pollutants through containment of sewage and the reduction of wastewater overflows to the environment. Water Removal and Control of wastewater is essential to the conveyance of sewage to the King County treatment facilities
- Factor 2: Clean Living/ Waste Management provides the infrastructure and services to reliably remove wastewater from homes, businesses, and neighborhoods
- Factor 3: Nature Space/ Protection of Lakes, Streams and Wetlands - wastewater containment and overflow reduction
- Factor 5: Conservation/ Protection of Environmental Hazards through a reliable wastewater system reducing the potential of overflow exposures during a natural event like wind and rain storms

Healthy and Sustainable Environment purchasing strategies:

- Effective management of water resources by ensuring removal of sewage from homes and businesses using proactive condition assessment services
- Ensure that sewer system is adequately maintained to minimize negative impacts from sewage backups and overflows. Condition assessment of the sewer system proactively detects needed repairs before problems cause blockages, backups, and overflows.
- Provide services for keeping our living environment clean and free of waste, debris and toxic materials. A properly functioning sewer system collects and conveys sewage.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

- Safe Community, Factor 1: Prevention. Condition assessment identifies defects prior to major failures resulting in sewer backups which have negative effects on the environment.
- Economic Growth and Competitiveness, Factor 3: Infrastructure. A properly functioning sewer system adds value to land by permitting higher productive uses.
- Improved Mobility, Factor 2: Traffic Flow. By performing proactive condition assessment of sewer pipes prior to pavement overlay significantly reduces the chance of a sewer system failure that would cause emergency road closures and impact traffic flow, increasing traffic congestion even further.
- Responsive Government, Factor 4: Exceptional Service, Efficient and Effective Delivery. Proactive condition assessment identifies defects prior to failure and lowers the need for emergency repairs.

Citywide Purchasing Strategies:

- Provide the *best value* in meeting the community needs by minimizing life cycle costs through effective asset management and minimizing claims due to sewage backups
- Provide for *gains in efficiency* and/or cost savings and ensure that services are "right sized" by optimizing preventive maintenance schedules and prioritizing repairs
- Considers *best practices* which include minimizing life cycles costs and risk avoidance though condition assessment
- Promote *environmental stewardship* by minimizing sewage blockages and related environmental impacts

2011-2012 Budget Proposal

- Ensure *sound management* of resources and business practices through effective asset management.
- Enhance *Bellevue's image* – “Beautiful View” by minimizing sewer backups and overflows into the environment.

C. Short- and long-term benefits of this proposal:

Short-term: This proposal provides emergency response, claims investigation, and pipe condition assessments. These services help to identify problems needing immediate repairs and avoid imminent failures and associated claims; identify system issues/responsibility (public or private), and identify potential failures. Efforts from this program help with the assessment, recommendation, and design of proposed overlay streets. Environmental impacts due to sewage overflows and/or costly property damage claims due to blockages can be averted.

Long-term: Condition assessment establishes a long range view of our sewer system. This information is vital to the Asset Management team as they develop long term renewal and replacement capital programs for the wastewater system. It provides quality control on the wastewater preventive maintenance activities and helps to provide information needed for continual improvements to the scheduling and cleaning of the system which improves efficiency and effectiveness.

D. Performance metrics/benchmarks and targets for this proposal:

Linear feet of condition assessment performed Target = 338,695 2009 Actual = 447,552

E. Describe why the level of service being proposed is the appropriate level:

A study by Black & Veatch in 2004 recommended that the City inspect 10% of the sewer collection pipes annually. The City currently has over 650 miles of sewer pipe. The proposed service level addresses the need for reliable and effective wastewater removal to minimize blockages, overflows and claims while minimizing life cycle costs. These goals are balanced against the cost of providing services and meeting regulatory requirements. Totally eliminating failures and blockages is cost prohibitive. However, given the high consequence of sewer system failures, condition assessment service levels work to balance best maintenance practices and support renewal and rehabilitation of the infrastructure for these long lived assets.

Section 8: Provide Description of Supporting Revenue

These activities are entirely supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: Increased impacts to the environment and public health will increase the potential for fines levied by Federal/State agencies due to sewage overflows to lakes and streams.
2. Customer Impact:
 - Citizens would be impacted by frequent and costly failures, overflows, and service interruptions; economic impacts to businesses without sewer service (restaurants). Mobility in Bellevue would be reduced due to disruptions associated with emergency repairs within the street right of way.
 - The natural environment and public health will be negatively impacted with overflows and exposure to raw sewage on the ground surfaces and in the waters of Bellevue.
 - Reduction of system reliability and increased claims due to failure; costs to perform system maintenance will increase if needed repairs are not identified;
3. Investment/Costs already incurred: Two condition assessment vehicles estimated at \$300,000 each
4. Other: Reduced level of system reliability; increased claims; reduced confidence, understanding, and tracking of asset conditions. City and neighboring CIP projects would be negatively impacted due to the lack of information needed for planning and repairs ahead of CIP projects; lack of information to plan renewal and rehabilitation CIP.

B. Consequence of funding at a lower level: Similar to those described above.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Sewer Mainline Preventive Maintenance Program		Proposal Number: 140.20NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Stacey Morales, x4889, or Dave Dickson, x4359		One-Time/On-Going: On-Going
Fund: Sewer	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Raw sewage contains viruses, bacteria, chemicals and other pathogens that are an extreme threat to public health and the environment when not managed and contained within the sewage collection system. The City's sewer collection system is aging and pipe blockages due to root intrusion, grease, debris, and joint problems have been trending up over the last decade. This proposal provides preventive maintenance cleaning services on the sewer collection system to keep the lines clear. Preventive maintenance services lower service interruptions due to blockages and associated claims due to backups, and minimize overflows which impact the environment and public health. This preventive maintenance program allows us to maximize the life cycle of the sewer system for the least long-term cost.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$448,788	\$472,550
Other	239,900	239,938
	<u>\$688,688</u>	<u>\$712,488</u>

Supporting Revenue

	\$688,688	\$712,488
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LTE/FTE

FTE	5.40	5.40
LTE	0.00	0.00
Total Count	<u>5.40</u>	<u>5.40</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnership/Collaboration: *External:* Via franchise agreements Bellevue Utilities provides sewer service to the following communities: King County, Clyde Hill, Medina, Beaux Arts, Yarrow Point, Hunts Point, and Issaquah (South Cove). Overflow reporting and response are coordinated with King County Public Health and the Department of Ecology. *Internal:* Utilities works with Bellevue Parks to coordinate response and provide cleanup work when an overflow occurs requiring a beach closure.

Efficiencies/Innovations: In concert with the Wastewater Condition Assessment program, staff have targeted specific high maintenance pipelines to evaluate and adjust the frequency of maintenance (cleaning) to ensure adequate but not excessive maintenance levels. These efforts have reduced the amount of reoccurring workload on "high maintenance pipes" and allowed the start of a system-wide cleaning program that is projected to clean the entire infrastructure on a 10-year cycle. "Low connection surveys" were completed to identify homes and businesses at higher risk if sewer backups occur. Survey results help prioritize preventive maintenance activities using consequence of failure as a criterion.

2011-2012 Budget Proposal

Section 5: Budget Proposal Description

This proposal provides necessary preventive maintenance services for dependable sewage collection service for over 36,000 residential and commercial customer accounts. These services include root sawing to remove root intrusion, pipe cleaning using high pressure jetting, power mechanical flex rodding and flushing to remove grease, solids and other debris that collect in sewer pipes and cause blockages and overflows. These sediments build up due to a variety of factors which include: cracked joints, broken service taps, low slope/low flow, and grease from residences and businesses. Some pipes have higher maintenance needs than others. Condition assessment inspections and past experience are used to establish maintenance intervals for high maintenance pipes.

Other services under this proposal include emergency response to clear blockages and address overflows, manhole inspection, and treatment of fats, oil, and grease. These services minimize the potential for sewage blockages and overflows that impact the customer with loss of service and backups into homes and businesses. Overflows have negative impacts on the environment including our lakes and streams.

Lake Washington and Lake Sammamish Submerged Sewers (Lake lines): To reduce failures and minimize impacts to public health, property and the environment, staff also provide maintenance services on the submerged sewer "lake lines" in Lake Washington and Lake Sammamish. Automatic flush stations are used to remove sediment and convey flow in the lake lines on a routine preventive basis. If blockages and overflows occur, cleaning the lake lines manually is an extremely labor intensive process and represents an unplanned workload pulling resources from other programs. The 15-mile Lake Washington submerged sewer lake line was thoroughly cleaned in 2007 in response to a number of blockages and related overflows. The Lake Sammamish submerged sewer lake line was thoroughly cleaned in 1988 but has not experienced the blockages that have occurred in the Lake Washington line. As infrastructure ages, maintenance ensures sewer pipe works while extending the useful service life of the asset. This buys time to plan for replacement. Staff are assessing alternatives to how best rehabilitate or replace the lake line. In the meantime, staff provide uninterrupted service to lakefront properties and protect the environment.

Staff also have key roles in responding to disasters and major emergency events. Having in-house staff performing the work in this proposal maintains 24/7 availability of a skilled and trained workforce with technical system knowledge, experience and incident command system (ICS) training. Possible events include extreme rain/flooding, snow/ice events, windstorms, and earthquakes, as well as other unforeseen disasters.

Section 6: Mandates and Contractual Agreements

- **WAC 246-271-020**: Prohibitive methods of sewage disposal: No sewage or industrial waste, or components thereof, shall be placed or permitted to flow onto the surface of the ground, or into any waters of the state.
- **WAC 173-240-060**: The Washington Depts. of Ecology and Health require sewer system operators to minimize overflows to surface water bodies.
- **National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Stormwater Permit** (a federal Clean Water Act mandate) requires Bellevue to reduce the discharge of pollutants to surface water to the maximum extent practicable.

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Preventive maintenance services ensure flow of sewage and reduce environmental impacts. By performing preventive maintenance we reduce the potential for backups, overflows, and related claims. On average there are 9 sewer backup claims per year which average \$138,000 in total claims paid. Targeted preventive maintenance services keep known problem areas conveying flow and return service to customers in a reasonable amount of time in the event a blockage occurs. Furthermore, it provides a proactive approach to extend the life of assets prior to complete failure.

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- Factor 1: Water Resources/ Reduced Pollutants, Water Removal and Control
- Factor 2: Clean Living/ Waste Management.
- Factor 3: Nature Space/ Lakes, Streams and Wetlands

Containment of sewage and the reduction of overflows protect the environment from pollutants, protecting our lakes, streams, and wetlands. Reliable sewer infrastructure is essential to the conveyance of sewage to King County treatment facilities. Sewer management provides the infrastructure and services to reliably remove sewage from homes, businesses, and neighborhoods. Protection from environmental hazards through a reliable sewer system reduces the potential of overflows during a natural event like wind and rain storms.

Purchasing Strategies in the Healthy and Sustainable Environment Outcome:

- Deliver results in an environmentally sensitive and sustainable way: Sewer preventive maintenance services ensure system performance to provide safe and reliable removal of sewage from homes and businesses and minimize the impacts of sewer blockages and overflows on the environment.
- Programs emphasize proactive maintenance (planned maintenance routes identified through condition assessment and past experience) and effective response and mitigation where unavoidable (emergency mainline cleaning identified through blockages, restrictions and overflows). Risk Management and claims reduction can be attributed to preventive maintenances activities.
- Address multiple factors: This proposal directly affects multiple factors as explained above.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

- Safe Community, Factor 1: Prevention. Preventive maintenance activities reduce failures resulting in sewer backups/overflows which have negative effects on the environment.
- Economic Growth and Competitiveness, Factor 3: Infrastructure. A reliable sewer system is an essential part of the City's economic competitiveness, and advances the standard of living for the community. A properly functioning sewer system adds value to land by permitting higher productive uses.
- Improved Mobility, Factor 2: Traffic Flow. Preventive maintenance helps to avoid crisis situations where sewer line emergencies can disrupt traffic impacting mobility. Closing roads or diverting traffic during an unplanned sewage repair or emergency can contribute to more traffic congestion.
- Responsive Government, Factor 4: Exceptional Service, Efficient and Effective Delivery. Preventive maintenance activities reduce the need for reactive maintenance and cleanup as the result of blockages and overflows.

Citywide Purchasing Strategies:

- Provide the best value in meeting the community needs by minimizing life cycle cost with effective maintenance services and minimizing claims due to sewage backups; extends the useful life of the collection system.
- Provide for gains in efficiency and/or cost savings and ensure that services are "right sized" by optimizing preventive maintenance schedules in order to maintain the collection system prior to blockages, backups and overflows.
- Consider best practices by establishing levels of service that manage risk related to failures, claims, and the environment.
- Promote environmental stewardship by reducing sewage blockages and related environmental impacts.
- Enhance Bellevue's image – "Beautiful View" by minimizing sewer backups.

C. Short- and long-term benefits of this proposal:

Short-term benefits: Effective and efficient function of the City's sewer system, provides citizens and businesses with reliable sewer service necessary for domestic and commercial business uses and prevents disruption to of the City's traffic flow related to unplanned system blockages and overflows that require street closures.

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Long-term benefits: A proactive approach to maintenance extends the useful service life of the collection system. In addition, these activities contribute to Utilities' stated objective of managing the City's sewer infrastructure to provide the service levels expected by the community and required by regulators, while minimizing the cost of operating, maintaining, renewing and replacing the infrastructure.

D. Performance metrics/benchmarks and targets for this proposal:

- Number of sewer blockages per 100 miles of collection pipe. Target TBD; 2009 Actual 7
- Number of claims paid. Target TBD; 2009 Actual 6
- Percentage of planned pipe cleaned. Target is 100%; 2009 Actual 90%

E. Describe why the level of service being proposed is the appropriate level:

The service levels balance the need to ensure the safe and reliable removal of sewage from homes and businesses, minimize economic impacts of blockages and service interruptions to the customer, and minimize the impacts of overflows on the environment against the costs to provide sewer system preventive maintenance and relative risks associated with service failures. As indicated by the performance measures, an adequate level of preventive maintenance services is required to effectively operate the sewerage system. Due to the high consequences of failure when preventive maintenance services are not provided, these service levels support the goals for reliability and performance.

The activities aid in prolonging the infrastructure and are vital in providing sewer services to the homes and businesses of Bellevue and the neighboring franchise areas. By keeping sewage flowing through the collection system we minimize the potential for overflows that would harm the natural environment and public health and can result in economic hardship to residents and businesses and major claims to the City. Proactive maintenance activities contribute to the claims reduction program by ensuring system flows prior to failure and overflow.

Section 8: Provide Description of Supporting Revenue

Activities are entirely supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

In April 2006 staff discovered a blockage near North Creek in north Bellevue. Rocks in the sewer main caused a blockage resulting in an overflow to the creek. Crews spent 10 days and 448 labor hours cleaning up debris and performing condition assessments to identify the cause of the blockage. Costs were approximately \$20,000 but keeping the sewage in the system would have been much less expensive and would not have impacted the environment. As a result of this overflow, O&M created an enhanced manhole inspection route to assess all manholes within 100 feet of a creek or waterway. From 1997 – 2007, Utilities averaged 9 claims paid per year at an average total annual cost of \$138,389. While the average number of claims has been relatively flat, the dollar amounts of those claims have risen slightly.

A. Consequence of not funding the proposal at all:

1. Legal: Lack of maintenance of the Bellevue wastewater system would violate NPDES Phase II permit requirements and could result in fines, imprisonment, and/or 3rd party lawsuits (NPDES Permit enforcement options).
2. Customer Impact:
 - Citizens would experience more obvious, frequent, and costly failures and overflows. Mobility in Bellevue would be reduced due to disruptions associated with blockages, backups, and overflows.
 - The natural environment and public health will be negatively impacted with overflows and exposure to sewage on the ground surfaces and in the waters of Bellevue. The reduction of system reliability will increase claims due to failure. Costs to perform system maintenance will increase when needed repairs are deferred.
3. Investment/Costs already incurred: N/A
4. Other: N/A

B. Consequence of funding at a lower level: Similar to those described above.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Sewer Pump Station Maintenance, Operations, and Repair Program		Proposal Number: 140.21NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Stacey Morales x4889, Dave Dickson x4359		One-Time/On-Going: On-Going
Fund: Sewer	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Raw sewage contains viruses, bacteria, chemicals and other pathogens that are an extreme threat to public health and the environment when not managed and contained within the sewage collection system. Sewer pump station failures cause sewer backups and overflows to the environment that can result in beach closures and surface water quality concerns. In addition, sewer backups into homes often require the homeowner to move out or a business to close until cleanup is completed and claims can exceed \$100,000. Bellevue's unique topography with elevations ranging from sea level to 1,440 feet requires a diverse and complicated system of pump stations to provide continual service 24 hours a day/365 days a year. This proposal provides staff, vehicles, tools, equipment, and supplies for maintenance, operations, and repair services for sewer pump stations in the sewer collection system. These services ensure the 46 sewer pump stations, many located along Lake Washington and Lake Sammamish, are adequately maintained and operating properly to minimize sewer blockages and overflows which impact customers, public health, and the environment.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$404,852	\$425,925
Other	343,924	343,958
	<u>\$748,776</u>	<u>\$769,883</u>

Supporting Revenue	2011	2012
	\$748,776	\$769,883

LTE/FTE	2011	2012
FTE	4.75	4.75
LTE	0.00	0.00
Total Count	<u>4.75</u>	<u>4.75</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnership/Collaboration: *External:* Via franchise agreements Bellevue Utilities provides sewer service to the following communities: King County, Clyde Hill, Medina, Beaux Arts, Yarrow Point, Hunts Point, and Issaquah (South Cove). Overflow reporting and response are coordinated with King County Public Health and the Department of Ecology. *Internal:* Utilities works with Bellevue Parks to coordinate response and provide cleanup work when an overflow occurs requiring a beach closure.

Efficiencies/innovations: Utilities uses Telemetry/Supervisory Control and Data Acquisition (SCADA) to remotely operate sewer pump stations and troubleshoot if any problems arise. Remote operations result in savings by reducing the need for service personnel to do on-site visits for data collection and/or minor adjustments.

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Section 5: Budget Proposal Description

This proposal provides services to maintain, operate and repair the 46 sewer pump stations in the City's sewer collection system. Services in this program include repair/replacement of pumps, motors, pump ventilation equipment, valves, piping, and wet well cleaning. Also included are repairs to address electrical systems failures, including diagnosing problems and replacing electrical parts. These services are critical to ensure that pump stations operate reliably to support uninterrupted flow for an average 11 million gallons per day of sewage to King County. Pump stations operate 24 hours a day/365 days a year to prevent backups to homes and avoid overflows. Electricity to power the pump stations makes up \$95,000 of this proposal and is based on demand.

The criticality of these facilities requires multiple pumps at the pump station and backup power supplies. Staff ensure portable and onsite backup power generators are maintained and available for effective response during localized and city-wide power outages.

Staff included in this proposal also have key roles in responding to disasters and major emergency events. Having in-house staff performing the work in this proposal maintains 24/7 availability of a skilled and trained workforce with technical system knowledge, experience and incident command system (ICS) training. Possible events include extreme rain/flooding, snow/ice events, windstorms, earthquakes, as well as other unforeseen disasters.

Section 6: Mandates and Contractual Agreements

- **WAC 246-271-020:** Prohibitive methods of sewage disposal: No sewage or industrial waste, or components thereof, shall be placed or permitted to flow onto the surface of the ground, or into any waters of the state.
- **WAC 173-240-060:** The Washington Depts. of Ecology and Health require sewer system operators to minimize overflows to surface water bodies. Repeated overflows can lead to enforcement action or state-mandated capital projects.
- **RCW 90.48,** Washington Water Pollution Control
- The National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Stormwater Permit (a federal Clean Water Act mandate) requires Bellevue to reduce the discharge of pollutants to surface water to the maximum extent practicable.

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

This proposal relates to a Healthy and Sustainable Environment by providing the necessary inspection, maintenance, and repair of sewer pump stations to minimize failures and to prolong the life of the asset. Problems are identified during the inspection of the pump stations and repairs are completed prior to failure. If identified problems are critical, repairs are completed at the time of the inspection to prevent failure.

Factors in the Healthy and Sustainable Environment Outcome:

- Factor 1: Water Resources/ Water Removal and Control. Effective removal and control of sewage and conveyance of sewage to the King County treatment facilities protects water resources.
- Factor 1: Water Resources/ Reduced Pollutants, Factor 3: Nature Space, and Factor 5: Conservation/ Conservation of Natural Resources and Protect from Environmental Hazards. Containment of sewage and the reduction of sewage overflows into the environment reduce pollutants, and protect our lakes, streams, and wetlands. A reliable wastewater system with redundant pumping capability and backup power supplies protects the environment by reducing the potential of overflow exposures during high impact events such as power outages and rain storms.
- Factor 2: Clean Living. Reliable sewage system operation provides the infrastructure and services to reliably remove sewage from homes, businesses, and neighborhoods.

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Purchasing Strategies in the Healthy and Sustainable Environment Outcome:

- When sewer pumps are operating efficiently, the sewer system is able to effectively, remove sewage from homes and businesses and maintain a clean living environment.
- By focusing on preventive maintenance, these programs deliver results in an environmentally sensitive and sustainable way by emphasizing *proactive* repairs where possible with planned repairs identified through condition assessment, avoiding a crisis. The programs also address *multiple HSE outcome factors* including protecting our environment and our water resources from pollution (see Factor 1 above).
- Proper operation of the sewer system has a direct relationship to the quality of Bellevue's natural environment (especially waterways), providing Bellevue's citizens with beautiful, healthy nature space opportunities to take advantage of. It also conserves valued natural resources by preventing the release of pollutants into the existing environment, avoiding any cleanup scenarios.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

- Safe Community, Factor 1: Prevention. Pump station maintenance and repair activities reduce failures resulting in sewer backups/overflows which have negative effects on the environment.
- Economic Growth and Competitiveness, Factor 3: Infrastructure. A properly functioning sewer system adds value to land by permitting higher productive uses.
- Responsive Government, Factor 4: Exceptional Service, Efficient and Effective Delivery. Proactive condition assessment identifies defects prior to failure and lowers the need for emergency repairs.

Additional factors:

- It is important to note that some of the components (pumps) in these aging stations are no longer available or have to be custom built to keep the pump station in service. The result of not having replacement parts increases down time and adds burden to the backup systems within the station. Furthermore, this eliminates the redundant safety feature of the backup pump and increases the risk of service interruption.
- Pump Operations are necessary to move sewage from lower elevations to a gravity system which transports sewage to King County's system. Many of these stations are located along Lake Washington and Lake Sammamish.

Citywide Purchasing Strategies:

- Provide the best value in meeting community needs, ensure sound management of resources and business practices, and provide for gains in efficiency and/or cost savings and ensure that repair and replacement services are "right-sized" by minimizing life cycle costs thru effective asset management, optimizing preventive maintenance schedules, and minimizing claims due to sewage backups.
- Consider best practices which include minimizing life cycles costs and risk avoidance. Use of the SCADA remote operations system is an industry best practice.
- Promote environmental stewardship and enhance Bellevue's image – "Beautiful View" by minimizing sewer backups and overflows into the environment, and the related environmental impacts.
- Consider short- and long-term financial impacts by developing needed information for risk based decision-making on station/component assets.

C. Short- and long-term benefits of this proposal:

Short-term benefits: (1) Ensures that pump stations are operational and that defective equipment and components are repaired or replaced prior to failure; (2) Reduce overflows into the environment due to station failure; (3) Many of the stations are located on or in close proximity to lakefront properties and this maintenance maintains good customer relations in these locations.

Long-term benefits: (1) Contributes to the longevity of the stations and reduces power consumption by keeping the station running efficiently; (2) Station reliability keeps the cost associated with after hour callouts to a

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minimum; (3) Documents station performance which is used in planning station rehabilitation; and (4) Keeps station easement clear for emergency access to sewer infrastructure.

D. Performance metrics/benchmarks and targets for this proposal:

Performance measures:

- Non-weather related pump station overflows per 100 miles of pipe Target = 0 2009 Actual = 0
- Weather related pump station overflows per 100 miles of pipe Target = 0 2009 Actual = 0
- % of pump station inspection and maintenance services completed Target = 100% 2009 Actual = Data not tracked in 2009

E. Describe why the level of service being proposed is the appropriate level:

Sewer pump stations are located at low spots in the sewer collection system next to Lake Washington and Lake Sammamish. While rare, pump station overflows discharging directly to these lakes have significant impacts to public health, the environment, customers and result in claims.

Service levels proposed address the need for reliable and effective sewer removal to minimize blockages, overflows, and claims while minimizing life cycle costs. These goals are balanced against the cost of providing services and meeting regulatory requirements. The price to provide a 100% guarantee of no failures and blockages would be exorbitant, and this cost would be passed on to our ratepayers. The proposed level of service represents an effective balance between preventing sewer system failures and keeping rates low for our customers. From 1997 – 2007, Utilities averaged 9 claims paid per year at an average total annual cost of \$138,389. While the average number of claims has been relatively flat, the dollar amounts of those claims have risen slightly.

Section 8: Provide Description of Supporting Revenue

Activities are supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all

1. Legal: Increased violations/fines levied from environmental regulatory agencies. Most overflows directly outfall to Lake Washington, Lake Sammamish, or creeks/streams. By law, overflows are reportable to the Department of Ecology and public health agencies, and are subject to substantial fines.
2. Customer Impact: Reduced level of system reliability – more pump station failures, backups, overflows; increased blockages, backups and overflows and related beach closures; reduced customer confidence in the Utility to provide service; reduced level of service in during power outages and emergencies/claims; increased claims; increased public health risks; business disruption and related economic impact.
3. Investment/Costs already incurred: N/A
4. Other: Wastewater pump station structures will become unacceptable in appearance resulting in a negative public perception, especially from the property owners where the stations are located; overall shortened lifecycle of wastewater infrastructure, buildings/grounds and security.

B. Consequence of funding at a lower level: Similar to those described above.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Storm and Surface Water System Repairs and Installation Program		Proposal Number: 140.22NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Don McQuilliams, x7865		One-Time/On-Going: On-Going
Fund: Surface Water	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

The Storm and Surface Water System Repair and Installation program repairs system components to ensure that the municipal storm drainage system functions as designed in order to protect life, property, and the environment during major storm and flooding events, and to reduce pollution entering streams and lakes. The system includes over 20,000 storm drains and manholes, 365 water quality facilities, nearly 400 miles of underground drainage pipes, and over 15 miles of streams located on City property or within public easements. The overall goal of the program is to perform repairs on drainage facilities when they break and to fix problems on aging infrastructure to maintain the designed function of the system.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$479,708	\$504,882
Other	\$350,770	\$350,925
	\$830,478	\$855,807

Supporting Revenue

	\$830,478	\$855,807
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LTE/FTE

FTE	5.65	5.65
LTE	0.00	0.00
Total Count	5.65	5.65

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

The Repair and Installation program inspects and prioritizes each request before sending crews out to perform the work. System repairs that are more cost effectively completed by in-house crews within a relatively short time frame are scheduled based on parts availability, equipment needed and appropriate time of day to conduct the work. Larger, more costly repairs are referred to the CIP Program. It is not uncommon to find crews working very early in the morning, at night, or on weekends to accomplish jobs that would otherwise be time-consuming and far more difficult during regular working hours. These schedule shifts also reduce traffic impacts during peak commute periods.

Section 5: Budget Proposal Description

On average, the Surface Water System Repair and Installation Program repairs 172 structures (catch basins, manholes, vaults, and tanks) and 502 feet of pipe per year, in addition to 2650 labor hours spent annually repairing water quality facilities and streams.

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This program also provides installation of new drainage structures in response to public drainage and/or flooding problems. Installations include lot connections (connecting downspout lines and footing drains to the City's piped system), catch basins and pipe installations that improve surface water flow through the drainage system. On average, the installation portion of the program provides 4 lot connections, 6 new structures and 430 feet of *new* pipe annually. Program services reduce flooding of homes and businesses and resulting customer claims and economic losses to the City as well as reducing environmental impacts to streams and lakes.

Staff included in this proposal also have key roles in responding to disasters and major emergency events. Having in-house staff performing repair and installation work maintains 24/7 availability of a skilled and trained workforce with technical system knowledge, experience and incident command system (ICS) training. Possible major events include extreme rain/flooding, snow/ice, earthquakes, as well as other unforeseen disasters.

Section 6: Mandates and Contractual Agreements

- Clean Water Act/ National Pollutant Discharge Elimination System Phase II Municipal permit: The NPDES permit establishes repair requirements and timelines.
- **RCW 173.201A**, Water Quality Standards for Surface Waters of the State of Washington: applies to repairs conducted to achieve water quality standards.

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome

Factors in the Healthy and Sustainable Environment outcome:

- Factor 1: Water Resources, Reduced Pollutants.
- Factor 1: Water Resources; Water Removal and Control.
- Factor 2: Clean Living Environment/Clean Streets and Codes and Compliance:
- Factor 3: Nature Space: Lakes, Streams, and Wetlands.
- Factor 5: Conservation/Conservation of Natural Resources.
- Factor 5: Conservation/Protection from Environmental Hazards.

The Storm and Surface Water Repair and Installation Program provides ongoing repairs and new installations that ensure the stormwater system is functioning correctly. Cracked or broken pipes and structures designed to trap sediment may not be functioning as designed if needed repairs are not completed. Repair and installation of drainage structures, pipes and storage areas helps to ensure the drainage system is operating at designed capacity during heavy rains, providing storage and controlled release of run-off to reduce the likelihood of flooding. A portion of the repair and installation program focuses on managing the banks of streams to prevent or reduce erosion. Areas subject to heavy erosion can produce large amounts of sediment building up in our waterways and increasing the risk of flood and/or damage to aquatic habitat (i.e., sedimentation of gravel salmon spawning beds).

The final discharge for all drainage in Bellevue is to our streams and lakes. Ongoing repair of drainage facilities helps prevent pollutants from traveling past a structure that is designed to trap the pollutants. Installation of new structures allows for improvements to the drainage system that further the reduce pollutants reaching streams and lakes.

Purchasing strategies in the Healthy and Sustainable Environment outcome:

- Ensure that surface water quality and quantity are adequate to provide a suitable environment for plants and wildlife, and to meet the recreational needs of our community. The repair and installation program aids in the reduction of sediment entering our streams and lakes and helps to reduce potential environmental degradation of our streams by addressing erosion and water quality concerns as applicable.

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- Ensure that storm and surface water runoff is controlled to minimize negative impacts such as erosion and flooding. In combination with other maintenance related activities, an ongoing repair and installation program ensures that the drainage system is functioning properly during heavy rain events which minimize potential flooding.
- Provide services for keeping our living environment clean and free of waste, debris and toxic materials. Proper maintenance of the drainage system, including water quality components, assists in keeping our living environment clean and free of waste, debris and toxic material

B. Other Factors/Purchasing strategies addressed by this proposal

Citywide purchasing strategies:

- Provide the best value in meeting community needs. The repair and installation program ensures that the system is kept in good working condition to reduce flooding during heavy rain events. Additionally, repairs are often conducted to reduce road hazards such as loose manhole covers or deteriorating catch basin inserts.
- Provide for gains in efficiency and/or cost savings and ensure that services are “right sized.” Resources within this program are sized to meet repair and installation needs. If a repair job has a large scope of work or will take several days to complete, it is often referred to Utilities Engineering to be contracted out. This allows in-house maintenance staff to make necessary smaller repairs/installations throughout the City without long term delays. Contracting jobs of this type is costly due to mobilization charges, immediate need and related permits that contractors must obtain.
- Consider best practices. Crews contained in this proposal coordinate workload to achieve the most effective and efficient results. Taken into account are several considerations such as the location to be worked in, time of day, impacts from traffic and other job specific concerns.
- Promote environmental stewardship. A major goal of the Storm and Surface Water section is to reduce sediment loading and pollutants from road run off into our streams and lakes. The repair and installation program aids in this process by ensuring that the drainage system is functioning as designed.

Other factors addressed by this proposal:

- Improved Mobility, Factor 2: Traffic Flow. With the majority of catch basins, pipes, manholes and vaults located within the footprint of the roadway, repairs are often conducted within the lane of travel. Loose covers, minor sinkholes and loss of pavement around structure frames cause defects within the roadway that can travel problems and potential claims. This proposal insures these defects are repaired in a timely manner.
- Responsive Government, Factor 4: Exceptional Service, Efficient and Effective Delivery. The reliability of the drainage system in Bellevue has come to be the expectation of the citizens and business owners. It is expected that even during heavy rains, the drainage system will continue to operate in an effective manner to minimize the impacts of localized flooding.
- Responsive Government, Factor 5: Stewards of the Public Trust, Well Designed and Maintained Publicly-Owned Systems and Assets. The repair and installation program quickly fixes minor repairs and installs upgrades that allow the system to continue to function correctly and provides for quick follow up to customer issues.
- Economic Growth and Competitiveness, Factor 3: Infrastructure. A properly functioning drainage system adds value to land by permitting higher productive uses of that land.
- Safe Community, Factor 1: Prevention. Proactive repair of the drainage system reduces threats to public safety and property during severe storm events.

C. Short- and long-term benefits of this proposal:

Short-term: reduction of flooding, property damage, customer claims and economic losses to the City. Long

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term: protection of surface water quality, support of fish and wildlife habitat, protection of the environment, and maintenance of the City's compliance with the NPDES permit and other regulatory requirements.

D. Performance metrics/benchmarks and targets for this proposal:

Evidence and logic supporting this proposal:

- The best evidence supporting the value of this program is the lack of serious, widespread flooding in Bellevue over the last several years. Despite severe storms, there has been only minor flooding in the City. Avoidance of flooding reduces property damage and claims, and reduces impacts to business and transportation.
- Aging infrastructure drives the need for this program. Most of the system is well past its mid-life. Not properly maintaining the system will eventually lead to increased failures and higher cost replacements.
- It is cheaper and more efficient to perform repairs when defects are small compared to performing repairs after catastrophic failure has occurred.

Performance measures:

- Percentage of flow restriction/ blockage calls mitigated within 2 hours during flood and/or storm events; target = 80%. This measure is new and has not been tracked previously.
- Percentage of mandated NPDES repairs completed on time; Target is 100%. This measure has not been tracked previously.

E. Describe why the level of service being proposed is the appropriate level:

- Surface water crews perform repairs on a priority basis. To date, crews have kept current with high priority repairs and those repairs necessary for compliance with the NPDES Permit. However, there is a backlog of lower priority repairs. Installations of new structures are not mandated under NPDES, but are conducted as needed to reduce flooding in identified problem areas.
- NPDES Municipal Stormwater Permit mandates this program and specific timelines for completing repairs. The NPDES permit requires that all typical maintenance repairs discovered during NPDES inspections are to be addressed within one year for drainage structures and facilities other than catch basins. Catch basin repairs are required to be completed within 6 months. Large repair projects up to \$25,000 are to be completed within two years.

Section 8: Provide Description of Supporting Revenue

Activities are supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all

1. Legal: Lack of repairs to the Bellevue drainage system will violate the NPDES phase II permit, resulting in fines and potential criminal actions under WAC 173-201A, and exposure to 3rd party lawsuits.
2. Customer Impact: More flooding of homes and businesses resulting in property losses and impaired traffic circulation.
3. Investment/Costs already incurred: N/A
4. Other: Increased flooding during heavy rainstorms will result in more claims against the City due to failure to properly maintain the system. Surface water failures can be catastrophic, such as a plugged pipe in 2001 that caused flood damage claims in excess of \$250,000.
Further consequences of not funding this proposal:
 - Reduced level of system reliability
 - Reduced confidence and documentation of system performance
 - Increased public health risks
 - Potential degradation of stream channels
 - Need for more costly replacement of structures that do not receive timely repairs

B. Consequence of funding at a lower level: Similar to those described above.

2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Storm and Surface Water Infrastructure Condition Assessment Program		Proposal Number: 140.23NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Don McQuilliams, x7865		One-Time/On-Going: On-Going
Fund: Surface Water	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Under the Storm and Surface Water Infrastructure Condition Assessment Program, Closed Circuit TV (CCTV) equipment is used to provide digital images of the inside of drainage pipes that are evaluated to identify defects that need repair. Undetected defects can cause catastrophic blockages resulting in flooding and damage to roadways and down-slope properties. The overall goal of this program is to locate and repair defects within the drainage pipes before a failure occurs and to assess the system for long-term R&R needs.

Section 3: Required Resources

OPERATING

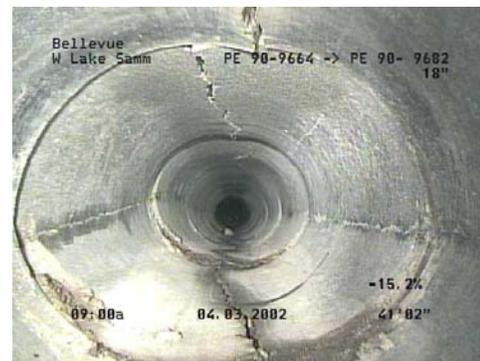
Expenditure	2011	2012
Personnel	\$75,018	\$78,950
Other	84,493	84,500
	<u>\$159,511</u>	<u>\$163,450</u>

Supporting Revenue

	\$159,511	\$163,450
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LTE/FTE

FTE	0.75	0.75
LTE	0.00	0.00
Total Count	<u>0.75</u>	<u>0.75</u>



Condition Assessment screenshot showing multiple fractures and ovaling of the pipe indicating signs of a potential collapse.

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/collaboration: Utilities Engineering Division, Transportation Department, External Video Contractor

Efficiencies/innovations: CCTV video equipment that is utilized to perform the tasks within this program is expensive to purchase, requires significant upkeep and requires dedicated staff to use. At the current assessment level of 2% of the system per year, it is not cost effective for the Storm and Surface Water Utility to purchase and operate this equipment in house. Use of an external contractor for these tasks is an efficient and innovative way to conduct the work at a reasonable cost.

Section 5: Budget Proposal Description

The Storm and Surface Water Infrastructure Condition Assessment Program captures CCTV images of the inside of drainage pipes to find deficiencies that can lead to system failures. Utilities works closely with the Transportation Department to prioritize video inspection of pipes under streets to be overlaid so that necessary repairs can be undertaken prior to paving. It is more cost-effective to repair defects before repaving than to

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incur costly grind and overlay expenses to repair failures that occur after roadway resurfacing. Other drainage pipes inspected under this proposal include “critical pipes” (e.g., large diameter pipe, pipes under main arterials) and older pipes that are more likely to fail. Most of the work completed under this proposal is done by an outside contractor. A small portion of this work is done by in-house staff to investigate individual, localized problems.

As the contractor performs video review of the pipes, ratings for significant defects are given to each segment reviewed. In 2009, the contractor inspected 53,800 linear feet (out of a total of 390 miles) of underground drainage pipe and found 148 significant defects. These defects are assessed by City staff, classified, and scheduled for repair. Many defects are handled by an in-house crew. However, larger defects are referred to Utilities Engineering for correction by an outside contractor.

Section 6: Mandates and Contractual Agreements

N/A

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factors in the Healthy and Sustainable Environment outcome:

- Factor 1: Water Resources/ Water Removal, and Control. Condition assessment of the drainage system proactively identifies defects within the system that will cause blockages or system failures if unaddressed. These defects are located and repaired, minimizing the impacts of high volume flows and flooding.
- Factor 3: Nature Space/, Lakes, Streams, and Wetlands. Condition assessment leads to repairs that prevent pollutants from entering the surface water system, and lakes, streams and wetlands, through cracks or failures in the pipelines.
- Factor 5: Conservation. Undetected defects and failures of underground pipes can block the flow of surface water runoff increasing the risk of flooding, erosion, and environmental degradation during heavy rains.

Healthy and Sustainable Environment purchasing strategies:

- Ensure that storm and surface water runoff is controlled to minimize negative impacts such as erosion and flooding. Condition assessment of the drainage system proactively detects needed repairs before problems cause blockages of the pipeline and flooding during heavy rain events.
- Ensure that surface water quality and quantity are adequate to provide a suitable environment for plants and wildlife, and to meet the recreational needs of our community. Detection and repair of defects prior to failure reduces the potential for erosion and sedimentation of streams and lakes, habitat degradation, and recreational water quality impacts.
- Provide services for keeping our living environment clean and free of waste, debris, and toxic materials. A properly functioning drainage system can intercept, store and treat forms of waste, debris, and toxic materials.

B. Other Factors/Purchasing strategies addressed by this proposal:

Factors in other outcomes:

- Improved Mobility, Factor 2: Traffic Flow. Blockage or failure of drainage pipes during heavy rains can cause flooding of roadways. Condition assessment and repair of diagnosed defects reduce the possibility of flooding.
- Responsive Government, Factor 4: Exceptional Service, Efficient and Effective Delivery. Bellevue citizens and business owners expect that even during heavy rains, the drainage system will operate in an effective manner to minimize localized flooding. The condition assessment program aids in the reliability of the drainage system by proactively identifying and scheduling repairs for deficiencies as they are located.

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- Responsive Government, Factor 5: Stewards of the Public Trust, Achieve Results. Failures of the aging drainage system would increase without active condition assessment and repair programs. Condition assessment in particular promotes stewardship of surface water system infrastructure on behalf of the public.
- Economic Growth and Competitiveness, Factor 3: Infrastructure. A properly functioning drainage system adds to land value by allowing higher productive uses.
- Safe Community, Factor 1: Prevention. Proactive maintenance of the drainage system, including ongoing condition assessment, reduces threats to public health, safety, property and the environment due to severe storms.

Citywide purchasing strategies:

- Provide for gains in efficiency and/or cost savings and ensure that services are “right sized”. A 2004 study by Black & Veatch recommended that the City clean and inspect 10% of the drainage pipes annually. The City has over 390 miles of stormwater pipes and it was decided that 10% was not necessary because the piped drainage system was not seeing a high rate of failure and the consequences of failures were being managed and prioritized based on the potential impacts should a failure occur. As a result, the target of assessing 2% of the system annually was established based on the evidence at the time. This percentage will likely need to be adjusted upwards into the future.
- Consider best practices. Synchronizing surface water condition assessment plans with the Transportation Department’s pavement overlay program creates substantial cost savings. Incremental cost to repair underground pipes *before* planned paving is substantially lower than the expense to cut and repair a street segment *after* repaving.
- Promote environmental stewardship. Proactively evaluating the drainage system and repairing deficiencies prior to failure decreases flooding and erosion.
- Considers short and long-term financial impacts. *See subsection C below*.
- Ensures sound management of resources and business practices. Contracting out the majority of the condition assessment work allows in-house staff to concentrate on preventive maintenance and repairs.

C. Short- and long-term benefits of this proposal:

- Short-term: The Condition Assessment Program reveals needed repairs that cannot wait, mitigates potential failures by proactively repairing deficiencies, and saves rate payers costly pavement repairs and liability claims.
- Long-term: Condition assessment provides valuable asset management information for the Utilities Repair and Replacement program by identifying and documenting trends in pipe condition. This is essential information when gauging long-term replacement funding for aging infrastructure.

D. Performance metrics/benchmarks and targets for this proposal:

Evidence and logic supporting this proposal:

The best evidence supporting this proposal is the lack of unexpected system failures within the piped drainage system that has been reviewed under the Condition Assessment program.

Performance measures:

- Percentage of drainage pipe inspected annually; target is 2% (50,000 linear feet) annually. In 2009, 55,681 linear feet of pipe was evaluated.
- Cost per foot of drainage pipe inspected. Target is to be determined as this is being tracked differently than it has been in the past. In 2009, the cost per foot was \$1.06/foot.

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This program is scalable, but it is not recommended to reduce the funding. The number and the severity of defects identified under this program have been significant. Reducing the level of service would increase the risk of paving over storm system components that are on the verge of failure resulting in higher costs to repair those components when failures do occur. In addition, failures have the potential to flood homes and businesses increasing the risk of expensive claims.

E. Describe why the level of service being proposed is the appropriate level:

This proposal will conduct video assessment of storm drainage pipes ahead of Transportation Department asphalt overlay projects and at rate of about 2% of the underground piped drainage system per year. Working ahead of the Transportation overlay allows defects to be repaired before the road surface is re-paved and helps to coordinate repairs so roadways do not have to be cut open after paving has occurred. In addition, video assessment is used to inspect critical pipes and culverts at prioritized locations Citywide. Critical pipes and culverts are pipes segments that could result in significant or catastrophic damages should a failure occur. Utilization of outside contractors provides the Utility with flexibility and minimizes ongoing in-house staffing requirements. As proposed, this program is both proactive and cost effective in locating problem areas that can be repaired prior to failure.

Damage claims related to pipe failures are monitored to ensure that the program is right sized. To date, this level of service has resulted in virtually zero failures within the piped drainage system that has been inspected through CCTV. As infrastructure ages, the 2% proposed target will likely need to adjusted upwards in the future should damage claims begin to increase as a result of failures.

Section 8: Provide Description of Supporting Revenue

Activities are supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: N/A
2. Customer Impact: (1) increased risk of flooding and more frequent interruptions in mobility and drainage services for Bellevue residents and businesses and (2) higher utility costs and resulting rate impacts from more costly repairs and replacements due to increasing drainage pipeline failures.
3. Investment/Costs already incurred: N/A
4. Other: Lack of reliable data on the condition of critical underground drainage pipes for the Utilities Department's Asset Management Program. More likely/ earlier degradation of Transportation's newly paved roadway due to stormwater system defects that are undetected.

B. Consequence of funding at a lower level: Similar to those described above.

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Section 1: Proposal Descriptors

Proposal Title: Storm & Surface Water Preventive Maintenance Program		Proposal Number: 140.24NA
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Don McQuilliams, x7865		One-Time/On-Going: On-Going
Fund: Surface Water	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

For the drainage system to function correctly and provide adequate flood control, it must be kept free of excessive debris and sediment. Debris and sediment buildup in vaults and other storage areas reduces storage capacity and can cause blockages of catch basins and pipes during heavy rains leading to flooding, property damage claims, and environmental degradation. Sediment is also a pollutant to fish and other aquatic organisms. Beyond sediment removal, the drainage system contains a variety of water quality facilities that trap oils and other pollutants from roadways and allow for their removal through during maintenance. Because the final discharge for all drainage in Bellevue is the City’s streams and lakes, system maintenance is needed to keep them free of the sediment and pollutants generated from roadways and other impervious surfaces.

The Maintenance Program services include: inspecting and cleaning the City’s drainage system per maintenance standards and schedules specified in the NPDES Permit, responding to pollutant spills and flooding events, investigating drainage issues reported by citizens, and performing a myriad of other operational and maintenance activities necessary for optimal performance of the City’s surface water system.

Section 3: Required Resources

OPERATING		
Expenditure	2011	2012
Personnel	\$716,639	\$754,428
Other	620,345	621,090
	<u>\$1,336,984</u>	<u>\$1,375,518</u>
Supporting Revenue		
	\$1,336,984	\$1,375,518
LTE/FTE		
FTE	8.60	8.60
LTE	0.00	0.00
Total Count	<u>8.60</u>	<u>8.60</u>



Drainage crew members cleaning a storm drain with an Eductor truck

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Efficiencies/innovations: Over time, efficiency studies resulted in shifting operations from a route-based cleaning cycle to an “inspect and clean as needed” process that removes more sediment from fewer catch basins at a lower cost. Proactively inspecting before cleaning identifies any needed repairs and prioritizes cleaning operations resulting in a more efficient and effective use of staff time and resources.

Section 5: Budget Proposal Description

The surface water system maintained by this Maintenance Program includes structural and natural drainage components located within Bellevue’s 26 drainage basins; all of which ultimately discharge either to Lake Washington or Lake Sammamish. The structural components include over 20,000 catch basin and manhole structures, approximately 400 miles of underground drainage pipe, 86 miles of open ditch, 365 water quality

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facilities, and 10 large regional detention facilities. The natural elements include portions of the over 60 miles of streams and 800 acres of protected wetlands which are municipally owned and/or located in public easements.

System inspection and cleaning operations entail entering structures to measure the amount of sediment, then scheduling and completing structure cleaning based on inspection results. Cleaning of structures is typically conducted through the use of a high powered vacuum truck that removes the sediment from the system and transports it to an approved disposal facility. During inspections, structures are examined for cracks, loose joints, broken or missing parts and other deficiencies dependant on the type of structure being inspected. Deficiencies that are found during inspections are forwarded to the repair program for follow up.

Natural systems such as the streams are also inspected to identify blockages that can lead to flooding or erosion problems and result in discharge of pollutants to streams. Streams in Bellevue flow through a mixture of public and privately owned properties. Maintenance is performed within the streams on public properties and easements and is closely coordinated with Utilities water quality staff and with Development Services Department to ensure all critical areas regulations are met. Maintenance can consist of relocating large logs, adding rocks or erosion control fabric to stream banks or clearing debris jams that can cause flooding.

Staff included in this proposal also have key roles in responding to disasters and major emergency events to maintain or return utility and streets systems to service. Having in-house staff performing this work maintains 24/7 availability of a skilled and trained workforce with technical system knowledge, experience and incident command system (ICS) training.

Section 6: Mandates and Contractual Agreements

- Federal Clean Water Act (aka Federal Water Pollution Control Act) Title 33 U.S. Code, Section 1251 et seq.
- RCW 90.48, Washington Water Pollution Control Law
- The National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Stormwater Permit (a federal Clean Water Act mandate) – Specifies surface water system maintenance standards and timelines.
- WAC 173-175 (Dam Safety) – Requires the City to inspect and conduct needed repairs and maintenance to eight out of ten regional detention facilities with the potential to impound more than 10 acre feet of water.
- Legal Settlement – The City is obligated under direction of the court by a prior 3rd party settlement to annually remove sediment from two existing sedimentation ponds within the Coal Creek basin. A third pond is scheduled to come online in the summer of 2010, increasing the costs and obligations.

Section 7: Proposal Justification/Evidence.

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factors in the Healthy and Sustainable Environment Outcome:

- Factor 1: Water Resources/ Reduced Pollutants, Reliable Water Supply, Water Removal and Control
- Factor 3: Nature Space/ Lakes, Streams and Wetlands
- Factor 5: Conservation/ Conservation of Natural Resources

The Storm and Surface Water Preventive Maintenance Program (Maintenance Program) is responsible for maintaining Bellevue's public drainage system in order to:

- Minimize the risk of flooding and resultant public safety, home, business and environmental impacts;
- Protect water quality and fishable, swimmable uses of Bellevue's streams, lakes and wetlands; and
- Maintain National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit requirements.

The Maintenance Program activities include: inspecting and cleaning the City's drainage system per maintenance standards and schedules specified in the NPDES Permit, responding to pollutant spills and flooding events, investigating drainage issues reported by citizens, and performing numerous other maintenance services necessary for optimal performance of the City's surface water system.

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Purchasing strategies in the Healthy and Sustainable Environment Outcome:

- Ensure our water resources are effectively managed to meet the needs of the environment and our community, that storm and surface water runoff is controlled to minimize negative impacts such as erosion and flooding, and that surface water quality and quantity are adequate to provide a suitable environment for plants and wildlife, and to meet the recreational needs of our community.
- Maintain a clean living environment which includes properties, streets and open spaces.
- Provide services for keeping our living environment clean and free of waste, debris, and toxic materials.

Preventive maintenance of the drainage system preserves storm water runoff control and minimizes negative impacts by keeping storage areas free of sediment and debris allowing the system to operate as designed during a rain event. Proper maintenance of the drainage system, including water quality components, assists in keeping Bellevue's living environment clean and free of waste, debris and toxic materials.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed in this proposal:

- Improved Mobility, Factor 2: Traffic Flow. During heavy rains, traffic flow can be impeded by clogged storm drains causing standing water in the roadways. The drainage preventive maintenance program reduces these occurrences.
- Economic Growth and Competitiveness, Factor 3: Infrastructure. A properly functioning drainage system adds value to land by permitting higher productive uses.
- Safe Community, Factor 1: Prevention. Proactive maintenance of the drainage system reduces the threat of the loss of life and property due to severe storm events and provides minimum staffing for major weather events and other disasters.

Citywide purchasing strategies addressed:

- Provide the best value in meeting community needs. The preventive maintenance program provides ongoing services to reduce the threat of flooding and potential pollution of our waters.
- Provide for gains in efficiency and/or cost savings and ensure that services are "right sized". The Storm and Surface water utility proactively inspect the drainage system before cleaning is scheduled. This ensures that we only clean what needs to be cleaned, that sediment is removed from the system before it reaches streams and lakes and that infrastructure is cleaned before blockages occur.
- Consider best practices. A preventive maintenance program represents best practices by providing proactive upkeep and inspection of the system.
- Promote environmental stewardship and Enhance Bellevue's image – "Beautiful View." Sediment removal is a major part of the proactive preventative maintenance program. Sediment is a pollutant and its removal through the Maintenance Program protects Bellevue lakes and streams. This program helps preserve streams, and wetlands in a natural state.

C. Short- and long-term benefits of this proposal:

Short and long term benefits of this proposal are to provide a storm and surface water system that controls damage from storms, protects surface water quality, supports fish and wildlife habitat, and protects the environment. Immediate short term benefits provide for identification of structural repairs per NPDES best practices that aid in flood prevention and reduce pollutants entering the system. Long term benefits ensure that sediment and pollutants are removed from the system before they can enter streams and lakes.

D. Performance metrics/benchmarks and targets for this proposal:

Evidence and logic supporting this proposal

The best evidence supporting continued funding for the Maintenance Program is the lack of serious, widespread flooding in Bellevue over the last several years. Even though the region has experienced severe storms, there has been only minor flooding in the City. In addition, the surface water infrastructure is aging, with most of the

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system well past its mid-life; this makes systematic preventive maintenance increasingly important to reduce infrastructure failures that result in higher costs for repairs replacements and flooding claims.

Performance measures

Thirty-six performance measures are related to this proposal. The majority of these track the types and number of structures inspected, cleaned, and associated costs. All of these performance measures can be rolled up into two measures that are designed to meet NPDES maintenance mandates and ensure that known problem locations are inspected annually.

- Percentage of NPDES inspection and cleaning requirements met annually; target = 100% compliance with permit requirements. In 2009, this target was achieved.
- Percentage of Preventative Maintenance (PM) activities completed annually; target = 100% close out of all known PMs. This was accomplished in 2009.

E. Describe why the level of service being proposed is the appropriate level:

This program must meet the minimum NPDES mandated requirements. Current/proposed service level is necessary to continue to meet NPDES requirements. Because this proposal is requesting funding exceeding one million dollars, alternate proposal 140.24.NB has been provided, but is not recommended.

NPDES requirements:

- Inspections of all catch basins within the five year permit term.
- Cleaning catch basins with sediment buildup in the sump is 60% or greater, within 6 months of inspection.
- Annual inspection of all other drainage structures and facilities, other than catch basins.
- Cleaning, within 12 months, of drainage structures and facilities where sediment buildup exceeds 6 inches in depth or greater than 10% of designed storage capacity.
- Inspection and cleaning, as needed, for publicly owned pipes, culverts, ditches and stream segments.

Other service levels:

- Inspection and cleaning, as needed, of all known underground piped problem locations prior to winter storm season.
- Routine inspection and cleaning, as needed, of storm drains.
- Management of publicly owned stream segments during salmon runs to remove potential blockages.

Section 8: Provide Description of Supporting Revenue

Activities are supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: Lack of maintenance of the Bellevue drainage system would violate NPDES phase II permit requirements and result in fines, imprisonment and/or 3rd party lawsuits (NPDES enforcement options).
2. Customer Impact: Increased risk of flooding during heavy rain events and resulting property damage and claims from failure to properly maintain the system. Surface Water failures have the potential to be catastrophic, such as the failure that occurred in 2001 when a plugged pipe flooded several homes resulting in claims in excess of \$250,000. Another impact would be reduced mobility due to an increased frequency of flooded streets due to system blockages.
3. Investment/Costs already incurred: N/A
4. Other: Reduced system reliability, reduced documentation of system performance, increased risk of pollutants entering streams and lakes, and increased public health risks (e.g., a West Nile virus).

- B. Consequence of funding at a lower level:*** Similar to those described above. Refer to alternate proposal 140.24 NB.



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Section 1: Proposal Descriptors

Proposal Title: Utilities Telemetry and Security Systems		Proposal Number: 140.25NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Ron Bredl, x7940		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

This proposal provides for maintenance, operation, and repair of utilities telemetry (sensing and measurement of information at remote pump stations/reservoirs and transmission of that information to a central location), SCADA (Supervisory Control & Data Acquisition), and security components of the water, sewer, and surface water systems. Use of telemetry and SCADA equipment enables continuous automated monitoring and control of utility systems and significantly reduces operational staff needs. In addition, security systems continuously monitor water reservoirs and pump stations for signs of intrusion and notify operators of any security breaches 24 hours a day/365 days a year. These systems work to maintain drinking water quality, supply and security, avoid sewer overflows, and effectively manage regional stormwater facilities.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$418,738	\$440,677
Other	91,270	76,873
	<u>\$510,008</u>	<u>\$517,550</u>

Supporting Revenue

	\$510,008	\$517,550
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LTE/FTE

FTE	3.95	3.95
LTE	0.00	0.00
Total Count	<u>3.95</u>	<u>3.95</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Efficiencies/innovations: Automated Telemetry, SCADA and Security Systems provide significant long term cost savings by reducing operational staffing needs by 5+ FTEs on an ongoing operational basis and 10+ FTEs when emergency conditions would otherwise require manual operations of reservoirs, pump stations and flood control gate settings. Telemetry and security systems also provide for remote after-hours control of the piped systems and security avoiding drive time and delay. Telemetry and SCADA lower electricity use at pump stations by monitoring drinking water quality at reservoirs and optimizing the amount of reservoir turnover.

Section 5: Budget Proposal Description

Imagine operating 27 water reservoirs, 23 water pump stations, 46 sewer pump stations and 11 regional detention facilities manually. "Driving" these facilities would be a significant challenge without centralized systems in place to monitor and adjust system performance. Telemetry and SCADA systems are the "brains, command and control" of the City's piped utilities, and allow staff to operate and regulate the flow and pressure of drinking water; to control sewage pump stations; and to regulate the stormwater flows at the Regional

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Detention Facilities (RDFs) for stormwater management. After the events of 9/11, Utilities undertook additional efforts to secure water reservoirs and pump stations from deliberate contamination. All of this equipment requires installation, repair, replacement/upgrade, preventive maintenance, calibration, programming, and testing.

Telemetry and SCADA components permit automated monitoring and control of the water, sewer, and surface water systems. This equipment warns in real time around the clock (24/7) when systems are operating outside normal parameters and allows operations staff to make system adjustments and decisions based on real-time data using remote access and control. Most system problems can be detected and addressed with minimal time lost. Examples include high water reservoir level or high “wet well” sewage level. To ensure the effective performance of telemetry and SCADA equipment, ongoing installation, maintenance, and repair activities are required:

- Telemetry (remote monitoring and data transmittal): Preventive maintenance, repair, monitoring, condition assessment, and testing of the communications/ control system for 14 water inlet stations, 23 water pump stations, 25 water reservoirs, 37 sewer pump stations, 12 stormwater structures, and 11 rain gage monitoring sites. The communications and control system infrastructure consists of remote telemetry units at each site, fiber optics, and a leased data line and network that provide two-way data and control to all remote sites, City Hall, and the BSC.
- SCADA: refers to the centralized system which controls the pump stations, reservoirs and regional detention facilities. In addition, data is acquired from the sites to support decision-making. Preventive maintenance, repair, monitoring, upgrading, programming, and operational support for the Graphical User Interface, the SCADA data collection system, and the Programmable Logic Controller (PLC) Control systems. These systems require 2 servers, 5 client computers and 2 PLCs.
- Instrumentation components: Preventive maintenance, repair, calibration, and testing of field devices used for monitoring pressure, level, flow, temperature, water quality, power monitoring, and other variables as required at all remote sites.
- Electrical apparatus: Preventive maintenance, repair, monitoring, condition/efficiency assessment, programming, and testing of electrical and control systems at all utility pump stations and monitoring sites.

The FTEs requested under this proposal also have key roles in responding to disasters and major emergency events. Having in-house staff performing this work maintains 24/7 availability of a skilled and trained workforce with technical system knowledge, experience and incident command system (ICS) training. Possible events include extreme rain/flooding, windstorms, earthquakes, as well as other unforeseen disasters.

Section 6: Mandates and Contractual Agreements

- Public Health Security and Bioterrorism Preparedness and Response Act, Public Law 107-188: Requires drinking water utilities to conduct vulnerability assessments and use the results to develop emergency response plans. The Telemetry, SCADA and Security systems lessen the possibility of a terrorist/ intentional attack and the impacts if an attack occurs.

Section 7: Proposal Justification/Evidence

This proposal directly supports the operations of and security for the water, sewer, and surface water systems that ensure the safe, reliable supply of drinking water and the effective removal of sewage from homes and businesses. These systems also support the control of surface water runoff to minimize flooding and environmental damage.

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factors in the Healthy and Sustainable Environment outcome:

- Factor 1: Water Resources. Telemetry and security systems are critical to the delivery of reliable, safe, and sufficient clean drinking water, efficient and reliable removal of sewage, and management of stormwater

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runoff to prevent flooding, stream erosion, and in a manner that protects stream habitat for fish and other species. These systems allow for central control of the water and sewer systems on a day to day basis.

- Factor 2: Clean Living Environment. Telemetry and security systems support “waste management” by controlling the infrastructure and services to reliably remove waste from homes and businesses.
- Factor 5: Conservation. Telemetry/SCADA systems conserve water and energy while promoting optimal drinking water quality. Water reservoir turnover is monitored and controlled by SCADA to benefit water quality while minimizing pumping costs to the ratepayer. Pump run times in sewer systems operate in the same manner saving energy and costs.

Healthy and Sustainable Environment purchasing strategy:

- Deliver results in an environmentally sensitive and sustainable way: Telemetry and security maintenance and repair optimize system operations and performance to ensure reliable delivery of drinking water, removal of sewage, management of stormwater runoff, and protection of Bellevue streams. Telemetry/SCADA systems maintenance is proactive and flags issues that could otherwise result in environmental damage (flooding, erosion, sewer overflows, and insufficient water for emergencies). Telemetry also reduces FTE needs, equipment and fuel costs.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

- Safe Community, Factor 2: Response. Telemetry systems support fire fighting response by allowing operators to maintain or if needed, increase water supply to the hydrants used to fight the fire. Security systems alert operators to signs of intrusion and provide critical information to ensure appropriate levels of response.
- Responsive Government, Factor 4: Exceptional Service, Efficient and Effective Delivery. Telemetry and security systems provide excellent operational control of piped systems and save labor and operating costs.

Citywide purchasing strategies:

- Value, efficiencies and cost savings: Telemetry, SCADA and security systems leverage technology to operate the water, sewer, and surface water components very reliably with minimal labor costs and an estimated savings of 5+ FTE's.
- Best practices: Industry best practices encourage the use of telemetry/SCADA to operate water reservoirs/pump stations and sewer stations.
- Promote environmental stewardship: Utility service interruptions often result in environmental impacts from broken water mains, sewage spills into streams or low spots, or flooding and erosion damage. Telemetry/ SCADA systems provide immediate alarms that allow faster response times resulting in less environmental damage.

C. Short- and long-term benefits of this proposal:

- Short term: (1) delivery of drinking water where and when it is needed for customer daily use, to fight fires, and to cope with local or regional water supply system failures; (2) conveyance of sewage from homes and businesses without overflows into homes, businesses or the environment; and (3) management of stormwater to minimize flooding of streets, homes and businesses.
- Long term: With the proper level of preventive maintenance and repair, the telemetry/SCADA system will continue to perform as designed and prevent premature failure of expensive pumping systems, valve control systems, and monitoring equipment. The historical data provided by telemetry and SCADA systems allows for trend analysis on system and equipment usage for asset management purposes. These systems also aid in minimizing energy usage and optimizing drinking water quality. Cost savings are associated with needing fewer FTE's for ongoing operations of these facilities.

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D. Performance metrics/benchmarks and targets for this proposal:

Evidence and logic supporting this proposal:

- The automated telemetry/SCADA systems save the Utility the cost of 5+ FTEs that would be required to manually operate the complex water, sewer, and surface water systems at current service levels. It would not be possible to meet efficiency and reliability targets without a functioning telemetry/SCADA system.
- Automated telemetry/SCADA systems improve the agility of operational response. For example, during the Masin's Fire on Main Street, operations staff was able to remotely increase water supplies to the reservoirs providing fire flows to the central business district in support of Bellevue Fire's response.
- The value of the telemetry, SCADA and security systems was demonstrated during the December 2006 windstorm which cut power and communications to pump stations and reservoirs city-wide for 6 days. Reservoirs and pump stations were operated via remote telemetry units to maintain pressures and flow. These units, coupled with emergency generators, proved to be very reliable during this event. As a result, water and sewer service was uninterrupted during the power and communications outage over the 6 days.

Performance measures:

- Number of water/sewer service interruptions caused by SCADA/Telemetry system failures (Target = 0)
- Number of security breaches discovered but not detected at the time of the intrusion (Target = 0)
- Number of water/sewer failures caused by SCADA/Telemetry system failures (examples include water reservoir overflows and sewer pump station overflows) (Target = 0)

E. Describe why the level of service being proposed is the appropriate level:

The service levels proposed balance the need for reliable delivery of safe and sufficient drinking water, efficient and reliable removal of sewage, and management of stormwater runoff to prevent flooding with the costs to provide telemetry, SCADA and security services and the relative risks associated with service failures. As indicated by the performance measures above, a very high level of service is required to effectively operate these systems. Because telemetry, SCADA and security system failures have high consequences of failure, these service levels support the aggressive goals for reliability.

Section 8: Provide Description of Supporting Revenue

Activities are supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: Increased risk of violations/fines levied from environmental regulatory agencies due to system failures and slower response times.
2. Customer Impact: Increased risks to the drinking water supply; increased sewer overflows; compromised fire flows affecting hydrant operations.
3. Investment/Costs already incurred: Substantial past investments in Telemetry, SCADA and Security Systems equipment would be negatively impacted if the equipment is not maintained and repaired. Since 2001, Utilities has invested over \$550,000 to secure reservoirs and pump stations through fencing, upgrading hatches and installing surveillance equipment. CIP investments since 2000 include \$360,000 in Water telemetry and \$383,000 in Wastewater telemetry. In-service process instrumentation, transducers, flow meters and other miscellaneous equipment are valued at over \$300,000.
4. Other: If telemetry/SCADA equipment becomes unreliable, automated and remote monitoring and control functions will be compromised. This loss will quickly overwhelm operations staff that will have to manually adjust system settings in the field. It would not be possible to meet efficiency and reliability targets. Water quality monitoring would be compromised and the security of drinking water supplies would be at greater risk. There could be increased failures and claims for all three piped utilities.

B. Consequence of funding at a lower level: Similar to those described above.

2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Water Quality Regulatory Compliance and Monitoring Programs		Proposal Number: 140.26PN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Mike Graves, x 2030		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): Parent of 140.27DN, Private Utility Systems Maintenance Programs, and 140.31DN, Surface Water Pollution Prevention		

Section 2: Executive Summary

Water Quality Regulatory Compliance and Monitoring Programs minimize the risk of drinking water supply contamination and resultant human illnesses and/or deaths, and protect surface water quality and the uses of Bellevue’s streams, lakes, and wetlands. They are the primary means of managing Citywide compliance with the federal Safe Drinking Water Act, the Clean Water Act, and the National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Stormwater Permit. These programs also ensure compliance with an array of other state requirements and contractual agreements. They encompass a wide range of activities from field work to Citywide coordination to Council policy support.

Section 3: Required Resources

OPERATING			
Expenditure	2011	2012	
Personnel	\$479,932	\$489,511	
Other	237,162	237,204	
	<u>\$717,094</u>	<u>\$726,715</u>	
Supporting Revenue			
	\$717,094	\$726,715	
LTE/FTE			
FTE	4.40	4.40	
LTE	1.00	0.00	
Total Count	5.40	4.40	



Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/Collaboration:

- Drinking water program. Key external agency partnerships and collaborations include Cascade Water Alliance, Seattle Public Utilities, State Department of Health, and King County Public Health.
- Storm and surface water quality programs (including NPDES): Citywide NPDES permit manager works collaboratively with 12 City departments to ensure compliance with over 100+ permit requirements. Utilities Conservation and Outreach staff collaborate to provide local and regional education. Outside agency collaborations include other permittees, Department of Ecology, Environmental Protection Agency, state and federal legislation lobby groups, Puget Sound Partnership and Salmon Recovery Council, King County Flood Control District, Endangered Species Act Regional Road Maintenance Program, and King Co. Public Health.

Efficiencies/Innovations: Providing Citywide NPDES permit coordination and support fosters a collaborative “One City” compliance effort, and provides significant efficiencies for the City, relieving many departments of the need to request duplicative resources. Centralized oversight also ensures that departmental business practices meet legal mandates.

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Section 5: Budget Proposal Description

This proposal fulfills the City's water quality monitoring and compliance requirements by:

- **Managing the quality of the City's drinking water supply** through mandated regular monitoring and analysis of the drinking water system, including source water, storage (reservoirs), the distribution system, and emergency wells. Programs also include maintaining awareness of upcoming regulations, monitoring water quality parameters to protect against terrorism or intentional water system contamination, coordinating water system operations and maintenance best practices to ensure optimal operation of the water system, and completing reports and documentation required by federal and state laws.
- **Managing Citywide implementation of the NPDES Municipal Stormwater Permit** to protect surface water quality and ensure on-going compliance, while containing costs. The Permit applies to all city departments and is revised and reissued every 5 years (a "forever" permit). Annual reports document City's compliance status. Compliance is a moving target because requirements are phased-in over a 5-year permit term. Centralizing NPDES administration provides significant City resource savings to general fund departments.
- **Implementing surface water quality field programs** required by the NPDES Permit, public health department, and/or water quality goals established by the Clean Water Act for streams and lakes, including: Illicit Discharge Detection and Elimination Program (IDDE): (1) response, containment and clean-up of reported illicit discharges (pollutant spills), and (2) field assessment and sampling of discharges from drainage pipes into waterways to detect, trace (to the source), and eliminate illicit discharges (such as paint, oil, sediment, etc.). Includes locating and mapping drainage outfalls, reporting illicit discharges to Department of Ecology, enforcement, documentation, and Citywide support for illicit discharge training and response.

Surface Water Monitoring: Field sampling of lakes and streams and data analysis to support water resource management decisions and resolution of water quality issues. Includes response to customer water quality concerns and oversight of response planning activities for West Nile Virus.

- **Providing support to City Council and Departments on policy, legislative and regulatory matters** to protect Bellevue's interests and advocate for solutions in future stormwater programs and legislation. Includes monitoring and analysis of on-going actions and legislation; coordination with partners; and providing Council with options and recommendations. Outcomes directly impact stormwater dollars paid by Bellevue citizens. For example, King County Flood Control District imposed a 0.10 per \$1000 property tax for regional flooding issues with no allocation for Bellevue. Staff ensured a portion of the tax was re-allocated to Bellevue, totaling almost \$1 million to date returned to Bellevue tax payers.

The staff in this proposal also have key roles in responding to disasters and major emergency events.

Section 6: Mandates and Contractual Agreements

Drinking water quality mandates:

- **Federal Safe Drinking Water Act**, Title 42, compliance with maximum contaminate levels in drinking water.
- **Homeland Security Presidential Directive 10**-Biodefense for the 21st Century, to protect against intentional contamination.
- **State Administrative Code (WAC) 246, Drinking Water Regulations**, programmatic sampling, monitoring, and reporting of multiple drinking water parameters.
- Contractual Agreement, Cascade Water Alliance and Seattle Public Utilities, requires adherence with all above.

Storm and surface water quality mandates:

- **Federal Clean Water Act Title 33**, programs for eliminating or reducing pollution of surface waters.
- **Federal National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Stormwater Permit** requires compliance and reporting on 100+ programmatic activities to protect and enhance surface water.
- State of Wash., **RCW 90.48** activities required by cities to protect and enhance lakes, stream, and wetlands.



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Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factor 1: Water Resources

- Clean Drinking Water. Ongoing water quality monitoring and proactive maintenance activities ensure Bellevue's drinking water is safe, free from contaminants, and aesthetically pleasing. Drinking water laws mandate increasingly stringent water quality standards. Monitoring and testing/sampling frequently identifies if standards are being achieved.
- Education. Drinking water regulations require educating the public and, funded through this proposal, Bellevue provides customers with a mandated annual drinking water quality report. NPDES Permit implementation activities also promote modification of citizen and business behavior to protect water resources through on-site educational opportunities.
- Reduced Pollutants. The NPDES Permit's Citywide Stormwater Management Program reduces pollutants discharged to streams, lakes, and wetlands. The IDDE Program reduces the negative impacts of pollutants through immediate response to reported pollutant spills and programmatic investigation activities. Ongoing surface water monitoring helps to ensure the environment is consistently safe from harmful contaminants.

Factor 3: Nature Space: Key subfactors are Lakes, Streams, and Wetlands; Land in its Natural State. Ongoing water quality monitoring and management protects, preserves, and enhances natural lakes, streams, and wetlands. This proposal provides holistic preservation of these assets through a range of activities such as policy support for decision making, Citywide compliance coordination, and field reconnaissance.

Factor 5: Conservation: Key subfactors are Conservation of Natural Resources; Protection from Environmental Hazards. Reduction of environmental pollution is a direct result of the IDDE Program. The IDDE Program protects the environment from immediate hazards and reduces the threat of pollution by eliminating potential future pollutant hazards.

Purchasing strategies in the Healthy and Sustainable Environment outcome:

- Fosters a change in method of service delivery through community collaboration and partnership. Implementation of the NPDES mandate requires a citywide partnership and includes involvement of citizens to promote a healthy natural environment and personal health. This proposal champions "One City" service delivery.
- Places more emphasis on proactive versus reactive actions. Proposal emphasizes proactive actions. Proactive monitoring, sampling, cleaning, and operation of the drinking water system help to ensure a safe, reliable supply of drinking water; this "multiple barrier approach" is an industry standard proactive program. Citywide NPDES oversight is a proactive approach to ensuring compliance with federal mandate
- Considers the diversity of residents and businesses in educational materials and programs. The annual drinking water quality report is translated and available to citizens in six languages.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed:

- Safe Community. Proposal contributes to protection of public health via safe drinking water and surface waters.
- Quality Neighborhoods. Proposal protects neighborhood lakes, streams, and wetlands.
- Economic Growth & Competitiveness. Having clean and safe natural areas and reliably safe drinking water, results in higher property values, a more attractive place to live, and contributes to economic vitality.
- Responsive Government. Promotes the citizen's voice in surface water issues on a regional and federal level, and delivers a service model that maximizes resource efficiency and meets the minimum legal requirements of mandates.

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Citywide purchasing strategies: Programs in this proposal meet the following citywide strategies.

- Provide the best value in meeting communities needs, provide for gains in efficiency and/or cost savings and ensure that services are “right sized,” leverage collaboration or partnerships with other departments and/or external organizations, are innovative and creative, promote environmental stewardship, consider short and long term financial impacts, and ensure sound management of resources and business practice.

This proposal provides sound management and the best value in meeting community needs by devoting an appropriate level of resources to Citywide management of the NPDES Municipal Stormwater Permit. Efficiencies include the centralized administration for 12 City departments that provides general fund resource savings consistent with the One City philosophy. Local and regional partnerships ensure that Bellevue interests are promoted at the regional, state, and federal level to minimize the amount of surface water taxes and fees paid and maximize their use, such as the KC Flood Control District Tax. Environmental stewardship through the reduction and elimination of pollutant sources is the primary intent of surface water quality programs.

C. Short- and long-term benefits of this proposal:

Short-Term:

- Protect public health by ensuring the delivery of high quality, safe drinking water.
- “One City” centralized coordination of NPDES requirements reduces costs to general fund
- Reduces pollutant discharges, improving sustainability of water resources.

Long-Term:

- Supports proactive maintenance activities that prolong the useful life of the City water supply assets.
- Safeguards the public from acts of accidental and intentional contamination of the water supply.
- Addresses citizens’ priority to protect and restore Bellevue’s streams, lakes, and wetlands.
- Shapes surface water regulations and provides policy advice to the Council on issues affecting citizens.

D. Performance metrics/benchmarks and targets for this proposal:

- Annual number of violations of state and federal drinking water regulations. Target is 0 (zero in 2009)
- Number of drinking water quality complaints per thousand service connections. Target is 0 (<1 in 2009).
- City compliance with 100 NPDES permit conditions; target is 100% compliance (100% compliance in 2009).
- Annual number of violations of state and federal surface water regulations. Target is 0 (zero in 2009).
- Number of illicit discharges detected and corrected annually. Target TBD (two cases in 2009).

E. Describe why the level of service being proposed is the appropriate level:

The requested resources are the minimum level of support needed for compliance with mandated activities.

Section 8: Provide Description of Supporting Revenue

Activities are supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: Violation of (1) drinking water mandates and potential fines and loss of water system operating permit, (2) NPDES Permit with potential for fines, imprisonment, (3) 3rd party lawsuits resulting in costs and exposure in the millions of dollars with no benefit to the environment.
2. Customer Impact: Increased risks of (1) water borne disease outbreaks from contaminated drinking water, (2) “boil water” or “do not use” orders due to drinking water contamination, (3) public health problems from exposure to contaminated/polluted wetlands, lakes, and streams, (4) more park and beach closures.
3. Investment/Costs already incurred: N/A
4. Other: Increased risk of degradation and destruction of wetlands, lakes and streams, the cities natural environment.

B. Consequence of funding at a lower level: Similar to those above, but to a lesser degree.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Private Utility Systems Maintenance Programs		Proposal Number: 140.27DN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Mike Graves, x2030		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): Child of 140.26PN Water Quality Reg. Compliance and Monitoring Programs		

Section 2: Executive Summary

Private Systems Maintenance Programs (PSMP) provide inspection and compliance for private utility systems to minimize the risk of illnesses and/or deaths from drinking water contamination; protect streams, ponds, and lakes from pollutants and minimize flooding threats to property; and minimize sewage overflows affecting health, homes, businesses, and the environment. These mandated programs include Cross Connection Control (CCC), Private Drainage Inspection (PDI), and Industrial Waste/Fats, Oils, and Grease Abatement (FOG). PSMP provide regulatory oversight of private systems to ensure protection of public health and the environment and to protect the public infrastructure from premature failure or degradation.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$335,394	\$353,279
Other	52,068	53,488
	<u>\$387,462</u>	<u>\$406,767</u>

Supporting Revenue

	\$387,462	\$406,767
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LTE/FTE

FTE	3.40	3.40
LTE	0.00	0.00
Total Count	<u>3.40</u>	<u>3.40</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Efficiencies and Innovations: The service delivery improvements described below are being implemented or evaluated:

- **Inspection Staff Integration:** Integrating inspection processes to include multiple “types” of inspections (inspecting private water, storm, and sewer systems in one site visit). This is creating a more agile and flexible staff, improving resource efficiencies, and enhancing professional development opportunities through cross training.
- **PDI Privatization:** Partnering with regulatory agencies, other area utilities, and the business community to develop an industry-standard certification program for a “Private Drainage System Inspector.” This will eventually reduce the burden on utilities inspection services, create new employment opportunities in the industry, and align this program with other previously privatized inspection programs (CCC and FOG). This is complex long-term goal and progress has been slowed by the current economic situation.
- **Data Management:** Continuing process improvement and program evaluation includes future development of an integrated data management system. The result will be one stop shopping database for all private system certifications (nearly 12,000 per year and 90% of all commercial sites). This will significantly improve customer service and reduce costs to Utilities. An early estimate includes eliminating nearly 3,000 notification letters per year.

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Partnerships/Collaboration:

- *Internal:* City partners include Parks, Civic Services and Fire (system owners), Development Services (plan review, plumbing, clear and grade, code compliance), City Manager's Office (Environmental Stewardship Initiative), IT (database process improvement), and Fire (for spill response).
- *External:* U.S. EPA, WA Depts. of Ecology and Health (state and federal mandates and emergency response), King County (Wastewater Treatment, Industrial Waste, Public Health, and Natural Resources). Partner cities include Seattle and most Eastside cities including the Points Communities. Organizations include Cascade Water Alliance, Puget Sound Partnership, Washington Environmental Resource Training Center, Association of Boards of Certification, American Public Works Association PREFOG subcommittee, Western Washington Cross Connection Prevention Professionals.

Section 5: Budget Proposal Description

The Private Systems Maintenance Programs implement federal, state, and county requirements, primarily through annual inspection and certification services for 90% of Bellevue's businesses and 4000 residential properties to verify proper function and maintenance of private utility systems. PSMP activities include customer notification, inspection, enforcement, database management, and regulatory compliance reporting.

- **Cross-Connection Control:** A privatized state mandated testing and certification program of over 10,000 backflow assemblies connected to the drinking water system. Backflow assemblies protect the water supply by preventing backflow (reversal of the normal direction of water flow) from a contaminated source into the drinking water system. For example, water flowing from a hose-end pesticide applicator back into the water pipes could poison drinking water. On average, CCC Program demand has been increasing 10% per year since 2003.
- **Private Drainage Inspection:** A mandated program to protect lakes, streams, and wetlands. Utilities staff conduct periodic field inspections of over 1500 privately-owned storm drainage systems for compliance with required maintenance standards. Private systems are connected to the public system and represent over 17,000 individual flow control, water quality treatment, and conveyance drainage structures, accounting for about half of the total drainage system in Bellevue. Source control inspections (inspecting outdoor storage of potential pollution sources such as bags of fertilizer) are also conducted.
- **Industrial Waste/Fats, Oils, and Grease Abatement:** The FOG certification program ensures that discharges to the public wastewater system do not contain prohibited chemicals or materials that prematurely degrade sewer pipes, endanger wastewater personnel, create FOG-related blockages and sewage overflows, or cause disruption of regional treatment systems. FOG systems owners are required to report maintenance activities by private vendors to PSMP annually to ensure compliance with King County Industrial Waste regulations. In addition to quality control site inspections, the FOG Program provides public education and training.
- **Emergency Response:** Emergency response to pollutant discharges, sewage overflows, or potential backflow incidents that threaten public health or the environment. In 2009, staff responded to over 60 potential pollutant spills into lakes and streams and 2 sewage overflows threatening Lake Washington beaches. PSMP staff also have key roles in responding to natural disasters and major emergency events.

Section 6: Mandates and Contractual Agreements

- **CCC Program:** Federal Safe Drinking Water Act Title 42 US Code, Chapter 8a; Homeland Security Presidential Directive 10-Biodefense for the 21st Century; WAC 246, Drinking Water Regulations; 2006 Uniform Plumbing Code (WA Building Code Council); Contractual Agreement, Cascade Water Alliance & Seattle Public Utilities.
- **PDI Program:** Federal Water Pollution Control Act (Clean Water Act) Title 33 US Code, Section 1251 [PDI Program is a NPDES Permit requirement]; State of Wash. Water Pollution Control Law, Chapter 90.48 RCW.
- **FOG Program:** State of Wash. Water Pollution Control Law, RCW 90.48; King County Code, Title 13, Water & Sewer Systems, Discharge Limitations; Contractual Agreement, King County Dept. of Natural Resources, Wastewater Treatment Division; KC prohibits FOG and certain industrial facilities & construction discharges.

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Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - Healthy, Sustainable Environment Outcome:

Factor 1: Water Resources:

- Clean Drinking Water and Reliable Water Supply: The CCC Program protects the drinking water supply by reducing the risk of backflow contamination from over 10,000 connections to the water supply. There have been hundreds of incidents of illness or death from cross connections in the U.S, but there has never been a single known cross connection incident in Bellevue. The PDI Program helps prevent pollutants in surface water from entering lakes and streams for the safety of citizens and habitat.
- Education: Information and training are provided by inspection staff during field visits to system owners for proper operations and maintenance, their legal obligations and the impacts that failure of their private systems can have on people, property, and water resources.
- Reduced Pollutants: Ongoing inspections and proper maintenance of private utility systems ensures that they prevent pollution and properly treat, or dispose of, harmful byproducts. The programs minimize discharges that introduce pollutants into our water resources or create blockages or backups that may spill raw sewage into streets or homes.
- Water Removal and Control: PSMP ensure that water discharges are pre-treated to control pollutants at the source and managed to reduce the incidences of flooding and property damage.

Factor 2: Clean Living Environment: Codes and Compliance. PSMP ensures proper use and operation of private systems and the public water and wastewater systems, contributing to the goal of protecting public health, habitat, and the environment.

Factor 5: Conservation/Conservation: Being Green. The PDI Program includes performance inspection of natural drainage practices (NDPs) and low impact development. NDPs reduce the impact of the built environment on water resources. Inspections of NDPs ensure they function as intended to provide the environmental benefits of reduced urban runoff and water quality treatment necessary for a healthy and sustainable environment.

Healthy and Sustainable Environment Purchasing Strategies:

- Deliver results in an environmentally sensitive and sustainable way: Combining inspections produces fewer field visits, reducing fuel consumption and City vehicle emissions. Combining databases saves about 3000 mailings in the first year.
- Foster changes in method of service delivery through community collaboration and partnership: Future privatization of drainage inspections via a professional certification program developed in collaboration with other agencies and the private sector will change the surface water industry. It will provide relief to public agencies burdened with unfunded mandates.
- Places more emphasis on proactive verses reactive actions: Private system inspections promote proactive maintenance for the protection of public health, drinking water, lakes, and streams, instead of reactive response to public health and environmental emergencies.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed:

- Safe Community, Prevention Strategy. Feeling safe by knowing that private systems impacts on public health and the environment are being monitored and responded to in emergencies.
- Quality Neighborhoods, Facilities and Amenities and Public Health and Safety Strategies. Keeps neighborhood lakes, streams, and wetlands safe for contact by families and children.
- Economic Growth and Competitiveness, Quality Community and City Brand Strategy. A community with clean, safe natural areas and safe, reliable drinking water is a more attractive place to live, promote a business, and has higher property values.
- Responsive Government, Exceptional Service and Stewards of the Public Trust. Offering innovative service delivery improvements contribute resource savings and provide enhanced customer service.

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Citywide Purchasing Strategies:

- Provide the best value in meeting community needs; provide for gains in efficiency and/or cost savings and ensure that services are “right sized;” leverage collaboration or partnerships with other departments and/or external organizations; are innovative and creative; promote environmental stewardship; and ensure sound management of resources and business practice

This proposal addresses Citywide strategies by promoting environmental stewardship. Future privatization will transfer the cost and burden of inspection of private drainage systems to the owners, providing the best value for the larger community. The innovative combination of three independent notification, inspection, and documentation systems into one will eventually develop “one stop shopping” customer mailings and will save City resources, provide a customer service benefit, shrink the appearance of “burdensome” government, and reduce the City’s environmental footprint.

C. Short- and long-term benefits of this proposal:

Short-term: Ensures ongoing oversight of private utility systems reducing the likelihood of impacts to public health, the environment, and public infrastructure.

Long-term: Continued protection of public health, the environment, and utility infrastructure through ongoing inspection and certification of private utility systems.

D. Performance metrics/benchmarks and targets for this proposal:

Evidence and logic supporting this proposal:

- The EPA listed cross connections as the #1 public health risk to drinking water systems.
- Grease is the second leading cause of sewage overflows in Bellevue. Monitoring over 300 food producers and other potential FOG dischargers minimizes this threat.
- A 2008 survey of customers indicated that 86% were satisfied or very satisfied with City inspection services.

Performance measures:

- Number of drinking water system contamination events due to backflow. Target is zero (zero in 2009).
- Percentage of planned private drainage systems inspected per year. Target is 100% (100% in 2009).
- Percentage of private drainage systems compliant with maintenance. Target is 100% (100% in 2009).
- Percentage of FOG pretreatment systems reporting on time. Target is 100% (35% in 2009).

E. Describe why the level of service being proposed is the appropriate level:

This proposal is not scalable.

Section 8: Provide Description of Supporting Revenue

Activities are supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: The City risks violation of (1) state and federal drinking water regulations that could result in sanctions, fines, and loss of its operating permit, (2) state and federal stormwater mandates, including the NPDES Permit that could lead to fines, third party lawsuits, and imprisonment, and (3) King County wastewater contractual agreements.
2. Customer Impacts: Increased likelihood of: (1) drinking water contamination as a result of backflow, (2) increased stormwater flooding and property damage, (3) sewage overflows into homes, businesses, public lands and lakes, (4) environmental degradation, fish kills, and beach closures, and (5) FOG-related sewer system failures with resulting customer claim costs and increased emergency maintenance calls.
3. Investment/Costs already incurred: N/A
4. Other: Greater health threats to Utilities maintenance workers from exposure to toxic substances illegally discharged into the sewer system.

B. Consequence of funding at a lower level: Similar to those described above.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Solid Waste, Waste Prevention & Recycling		Proposal Number: 140.30PN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Susan Fife-Ferris, x5216		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): Parent to proposal 140.50DN, Solid Waste Contract Recycling Incentive Program		

Section 2: Executive Summary

City customers generate approximately 115,000 tons of solid waste annually, 71,000 tons of which is garbage that must be hauled to the landfill. Efficient and effective management of solid waste (garbage, recyclables and organic waste) is critical to the health and appearance of the City, its continued economic viability, and the sustainability of both the local and global environment. This proposal provides for the management of the solid waste collection contract with Allied Waste and the continuation of the City's successful waste prevention and recycling programs.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$368,372	\$387,813
Other	589,643	588,612
	\$958,015	\$976,425

Supporting Revenue

	\$958,015	\$976,425
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LTE/FTE

FTE	3.38	3.38
LTE	0.00	0.00
Total Count	3.38	3.38

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Innovative/Creative: The City is considered a leader in many solid waste management programs, including the City's innovative food waste recycling programs, which reach single-family residences, schools, and businesses.

Partnerships/Collaboration (also a Citywide Purchasing Strategy): *Internal:* Parks (parks recycling); Civic Services and other departments that operate City facilities (in-house recycling; solid waste collection); Development Services (commercial solid waste space requirements); Finance (green purchasing); Environmental Stewardship Initiative (coordination); *External:* Allied Waste (solid waste contractor); King County Solid Waste Division (regional planning coordination; Interlocal Agreement; granting agency); Department of Ecology (granting agency); Local Hazardous Waste Management Program (granting agency); Bellevue School District (program partner); Puget Sound Energy (program partner); Point Cities (grant cooperation).

Section 5: Budget Proposal Description

This proposal will provide:

Contract Management: Staff manages the Citywide Comprehensive Garbage, Recyclables, Yard Debris, and Organic Waste Collection Contract with Allied Waste. The contract, which costs approximately \$22M annually,



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provides all garbage collection services, a variety of recycling, organic, and litter collection services, and billing/customer services. Managing the contract includes troubleshooting issues, reviewing, analyzing and making recommendations on Allied requests, working to improve existing and add new services, handling customer issues, conducting annual contract performance surveys and compliance audits, reviewing annual rate adjustment requests, addressing regional solid waste issues, and conducting research and analysis. In 2011, staff will begin the 2- to 3-year process to develop a new contract with implementation scheduled for 2014.

Waste Prevention and Recycling Program Delivery: Programs effect every resident and employee in the City, and include outreach, education and technical assistance to single-family, multifamily and commercial customers, in-house recycling assistance at City facilities, community special recycling collection events, emergency debris management, and regional coordination for garbage, recycling and organic waste issues. Waste prevention and recycling preserves natural resources and helps keep customer garbage rates low by prolonging the useful life of the King County landfill - the cheapest disposal option available. The overall goal is to decrease the amount of garbage generated Citywide, increase waste prevention and recycling efforts, and comply with State mandates and the requirements set forth in the King County Comprehensive Solid Waste Management Plan. Staff provides both internal and external coordination and collaboration to ensure that the City Council and Utilities have an efficient and centralized means of maintaining an effective voice at the regional, state, and federal level on issues that directly impact rates, taxes, and fees paid by City customers. Funding for most programs comes from grants, where fees collected from customers are returned to the City to be used for waste prevention and recycling programs. The grants include the 2-year King County Waste Reduction and Recycling Grant, the 2-year Department of Ecology Coordinated Prevention Grant, and the 1-year Local Hazardous Waste Management Program Grant issued by the Seattle-King County Department of Public Health. Grant funds not used revert to the granting agency and are allocated to other jurisdictions.

Section 6: Mandates and Contractual Agreements

- **Contract with Allied Waste** (through June 2014) obligates the City to provide contract management, oversight, and outreach. Under State statute, the City undertakes the regulatory role for solid waste collection.
- **RCW 70.95:** The City assumes primary responsibility for citywide solid waste management, and provides waste prevention and source separation strategies for the collection of solid waste in an environmentally safe and economically sound manner.
- **RCW 70.95C:** Directs the City to protect public health, safety and the environment through outreach, education, and programs that encourage reduction in the use of hazardous substances and generation of hazardous waste.
- **RCW 70.95I:** Requires the City to have a used motor oil recycling program that includes a plan for public education, and tracks the number of used motor oil collection sites and the quantity of household used motor oil recycled.
- **King County Solid Waste Interlocal Agreement (through 2028):** Requires the City serve as the designated operating authority for solid waste collection services within its boundaries.
- **King County Comprehensive Solid Waste Management Plan (SWMP):** Obligates the City to comply with the requirements set out in the SWMP under the terms of the Interlocal Agreement and State law.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

- **Factor 2 and Outcome Specific Purchasing Strategy: Clean Living Environment:** Waste prevention, recycling, efficient and effective solid waste collection, and education to influence people's behaviors all support a clean living environment. Litter is regularly removed from City streets. The natural yard care program and demonstration garden educate homeowners on how to pick the right plants for their yards and how to

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properly maintain the landscape, resulting in less need for hazardous chemicals and pesticides, and less yard debris being generated. Less toxic options are promoted through the household hazardous waste program.

- **Factor 3 and Outcome Specific Purchasing Strategy: Nature Space:** Natural yard care programs teach the value and importance of and techniques to maintain nature space. Programs enhance the community's awareness of the value of nature spaces as part of an integrated ecosystem, and that these spaces can be managed in a way that prevents waste and uses less toxic materials.
- **Factor 5 and Outcome Specific Purchasing Strategy: Conservation:** Waste prevention and recycling outreach, education, and technical assistance teach that the natural environment is the source of all materials used by residents and businesses. An adequate supply of raw materials requires judicious use of existing non-renewable materials and healthy ecosystems to produce renewable materials year after year. Conservation of resources is the foundation of the education and programs that are provided under this proposal.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Economic Growth and Competiveness: Quality of Community and City Brand; Innovative, Vibrant and Caring Community: Built Environment and Involved Citizens; Quality Neighborhoods: Sense of Community; Facilities and Amenities; Public Health and Safety; and Schools; Responsive Government: Strategic Leadership; Exceptional Service; and Stewards of the Public Trust.

Citywide purchasing strategies addressed by this proposal:

- **Best Value.** The contract provides customers excellent value for their rate dollars. In a 2009 comparison, City solid waste rates were found to be close to the lowest in the region and service levels were among the highest. Waste prevention and recycling keep customer rates low by extending the useful life of the King County landfill, avoiding the costs of a new disposal option, which would be passed on to City customers.
- **Increasing Citizen Participation/Support.** Programs increase participation in waste prevention and recycling activities, including providing support to school-based and business-based "green teams" that promote conservation activities within their organizations. Materials are developed in a variety of languages to reach diverse communities.
- **Best Practices.** Programs are based on solid waste industry best practices, and follow the theory that behavior change will only come with continued education, raised awareness, and making doing the "green thing" convenient and easy.
- **Environmental Stewardship.** Educational programs not only teach customers how to prevent waste and recycle, but also help them understand their own role in environmental stewardship.
- **Sound Resource Management.** All programs are either rate- or grant-funded, and are subject to review by Council, the Environmental Services Commission, and granting agencies providing funds. Staff works closely with partners to leverage resources and outreach activities wherever possible.
- **Bellevue's Image.** Garbage is ugly, and can compromise the City's reputation as a beautiful city. This proposal funds the continuation of successful waste reduction programs, including activities that keep the City on the cutting edge for recycling and being a leader in the region when it comes to waste prevention, recycling and solid waste collection services, all of which enhance the City's image.

C. Short- and long-term benefits of this proposal:

Providing efficient and effective solid waste collection on a regular schedule is essential to ensuring a healthy and sustainable environment. Less garbage results in an extension of the useful life of the local landfill, which results in lower disposal costs since this is the cheapest method of disposal. Continual outreach, education, and technical assistance are the keys to successful waste prevention and recycling efforts. When such efforts are stopped, waste increases, recycling rates decrease, and customer garbage costs rise. From a long-term perspective, recycling materials reduces the need for new materials that otherwise would have been harvested/extracted, saving those resources for the future. Recycled materials also require less energy to be used in the manufacture of a new product. City customers currently generate approximately 115,000 tons of solid waste annually, 71,000 tons of which is garbage hauled to the landfill. Future growth in the area's

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population will significantly increase the amount of solid waste. To prepare for that eventuality, solid waste management remains a top priority and requires leadership by the City.

D. Performance metrics/benchmarks and targets for this proposal:

- Maintain a contract customer satisfaction rating of 80% or better.
 - 2009 customer satisfaction rate was 96% for single-family and 94% for multifamily/commercial customers.
- Meet state recycling rate goal of 50% of generated solid waste.
 - 2009 combined single-family, multifamily, and commercial recycling rate was 38%.
- Meet the recycling goals set forth in the King County Comprehensive Solid Waste Management Plan.
 - Goals to be finalized by King County by December 2011.

E. Describe why the level of service being proposed is the appropriate level:

Current contract management and waste prevention and recycling programs provide the service levels required to comply with contract, interlocal agreement, and state statutory mandates requirements. Continued compliance and success of these programs depends on keeping awareness levels high and customers engaged through constant and consistent messaging and information.

Section 8: Provide Description of Supporting Revenue

All revenues are restricted and must be used for expenses as follows:

- Contract revenue that must be used for administrative and programmatic expenses related to the contract: 2011 - \$523,654; 2012 - \$557,079.
- Grant funds must be used for waste prevention and recycling-related program expenses, or returned to granting agency for distribution to other jurisdictions: 2011 - \$302,250; 2012 - \$302,250.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: The City would fail to comply with the State requirements of RCW 70.95, 70.95C and 70.95I, and the terms of the King County Comprehensive Solid Waste Management Plan as required by the Interlocal Agreement. The City would also not be able to manage the \$22 million/year contract, conduct the annual customer service survey and contract performance audit, or spend funds collected in accordance with contract requirements.
2. Customer Impact: The City would not be able to regulate the contractor for the customer, respond to customer requests, or provide extremely popular programs, such as the special recycling collection events and commercial on-site technical assistance. The City would fail to invest grant funds currently received on local waste prevention and recycling efforts, allowing funds collected from City solid waste customers to revert to the granting agency and be allocated to other jurisdictions. Not participating in regional planning and coordination efforts would make the City unable to advocate for City customers for regional services (e.g., transfer station services).
3. Investment/Costs already incurred: N/A
4. Other: The City would not comply with the City's Environmental Stewardship Initiative Strategic Plan calling for a reduction of material consumption in City operations and a reduction of garbage taken to the landfill.

B. Consequence of funding at a lower level:

Costs cannot be adjusted downward without reducing the quality of solid waste services currently provided, and would disrupt the City's compliance with the terms of the contract. Opening up the contract to renegotiation would cause customer rates to increase. The City's progress towards achieving state, local and City goals would slow or stop, and the City would fall out of compliance with mandates and contractual requirements. Failure to expend allocated grants would also result in the money being reverted to the granting agency, meaning that funds collected from City customers would not be spent in the City. The City would fail in its fiduciary duty of being a good steward of customer funds.



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Section 1: Proposal Descriptors

Proposal Title: Surface Water Pollution Prevention		Proposal Number: 140.31DN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Susan Fife-Ferris, x 5216		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): Parent is 140.26PN, Water Quality Regulatory Compliance and Monitoring Programs		

Section 2: Executive Summary

On an average day, tens of thousands of pounds of toxic chemicals enter Puget Sound’s waterways, most of which is carried by storm and surface water that runs off roads, driveways, rooftops, yards, and other developed land. Most people are not aware that water flowing into storm drains is not treated. Under this proposal, staff provides mandated public education and outreach to residents and businesses as required by the National Pollutant Discharge Elimination System (NPDES) Permit, increasing understanding of storm and surface water issues and promoting behaviors that prevent pollution locally and regionally.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$339,239	\$356,962
Other	646,883	176,837
	\$986,122	\$533,799

Supporting Revenue

	\$986,122	\$533,799
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LTE/FTE

FTE	3.03	3.03
LTE	0.00	0.00
Total Count	3.03	3.03

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Innovative/Creative/Cost Savings (also a Citywide Purchasing Strategy): Providing on-site technical assistance and education, staff educates the private sector to prevent pollutants from entering drainage systems. This proactive approach is far less expensive than cleaning up pollution spills or repairing damage to waterways caused by pollution. Examples of innovative and creative activities include the Carbon Yeti educational campaign, which has been replicated state-wide by the Department of Ecology and other organizations, and the volunteer Stream Team model, which is widely adopted across the region.

Partnerships/Collaboration (also a Citywide Purchasing Strategy): *Internal:* Parks (stream restorations and education); Development Services (NPDES education, outreach coordination; and critical areas and stream-side property owner assistance); Environmental Stewardship Initiative (coordination); *External:* Department of Ecology (NPDES Permit oversight; granting agency); Local Hazardous Waste Management Program (granting agency); King Conservation District (granting agency); Bellevue School District (program partner); Puget Sound Energy (program partner); Points Communities (grant cooperation); “STORM” - Stormwater Outreach for Regional Municipalities (cooperative multi-jurisdictional surface water runoff educational program); “Puget Sound Starts Here” (cooperative public educational campaign); “SOGies” (East & North Lake Washington cities’ Stormwater Outreach Group); Glendale Golf Course, and other private stream-side Owners (program partners).

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Section 5: Budget Proposal Description

Toxic chemicals flowing off roads, driveways, rooftops, yards, and other developed land impact storm and surface water quality and can have devastating impacts on the health of local lakes, streams and wetlands, and the fish and wildlife populations that depend on them. Many people remain unaware of the threat it poses to the health of our water. A 2005 City survey showed almost half of residential respondents did not know storm drains connect directly to waterways or that water flowing down storm drains is not treated. Other surveys have shown many people are unaware how simple changes in everyday behaviors can significantly reduce pollutants. Surveys also show a direct connection between increased education and assistance with an awareness of surface water pollution issues and changed behavior. This proposal directly targets increasing public awareness through outreach, education, and technical assistance programs. Some activities and programs covered under this proposal include Stream Team restorations, salmon monitoring, education and workshops; storm drain markers; natural yard care; car wash kits; used motor oil recycling; school curriculum and workshops; commercial source control technical assistance; posters, displays, and other outreach materials; media outreach including news stories, public service announcements, and public presentations; STORM; and “Puget Sound Starts Here.” While most elements of this proposal are rate funded, some funding comes from grants, including the Dept. of Ecology Grant, which requires the City to provide on-site audits of businesses and commercial properties to provide storm and surface water pollution prevention education, the King Conservation District Grant, where funds are collected from City property owners pursuant to a local special assessment and then made available for City water pollution prevention programs, and the Local Hazardous Waste Management Program Grant, which is a one-year grant issued by the Seattle-King County Department of Public Health.

Section 6: Mandates and Contractual Agreements

- **NPDES Permit, issued January 2007:** Requires the City to provide public education and outreach aimed at a variety of customer classes to reduce or eliminate behaviors and practices that cause or contribute to adverse storm water impacts.
- **RCW 90.48 (State’s Water Pollution Control Law):** Requires the City to maintain the highest possible standards to ensure the purity of all State waters consistent with public health and enjoyment, through educating the public that it is unlawful to discharge pollutants into local waters.
- **Federal Water Pollution Control (Clean Water) Act, Title 33 United States Code, Section 1251 et seq.:** Requires the City to educate the public to eliminate the discharge of pollutants into the Nation’s waters.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factor 1 and Outcome Specific Purchasing Strategy: Water Resources. Preventing pollutants from flowing into the City’s waterways is critical to maintaining their health and is directly connected to the health of the local community and its economic viability. This proposal provides educational programs and materials to increase community awareness of their choices and the consequences of those choices on local waterways.

Factor 2 and Outcome-Specific Purchasing Strategy: Clean Living Environment. Preventing pollutants from flowing into the City’s waterways supports a clean and healthy living environment in the City. Through natural yard care programs, residents are taught to choose the right plants, and to build healthy soil, resulting in less need for garden chemicals and pesticides. This proposal provides education and technical assistance to businesses and homeowners to maintain stream-side property, resulting in a cleaner living environment.

Factor 3 and Outcome-Specific Purchasing Strategy: Nature Space. Programs and materials are developed to enhance the community’s awareness of the importance and value of the City’s nature spaces, and how these spaces are all part of an integrated ecosystem. Stream Team volunteers do stream-side habitat restorations and fish and insect monitoring, and learn the importance of these indicators of waterway health.

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Factor 5 and Outcome-Specific Purchasing Strategy: Conservation. Through hands-on programs, such as the Stream Team and natural yard care workshops, participants learn about preservation, restoration, and efficient use of local natural resources. Water resource conservation and stewardship is the foundation of this proposal.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Economic Growth & Competiveness: Quality of Community; and City Brand; Innovative, Vibrant & Caring Community: Opportunities for Interaction; and Involved Citizens; Quality Neighborhoods: Sense of Community; Facilities and Amenities; Public Health and Safety; and Schools; Responsive Government: Strategic Leadership; Exceptional Service; and Stewards of the Public Trust.

Citywide purchasing strategies addressed by this proposal:

Best Value. This proposal provides City customers excellent value for their rate dollars. Many of the programs use volunteers or focus on teaching the public how to prevent surface water pollution, leveraging the public to “do it themselves” to prevent pollution of the City’s waterways. It also leverages partnerships with other cities and regional programs that reduce overall outreach costs.

Efficiency. Programs support pollution prevention rather than remediation. It is far less expensive to stop pollution at its source and to educate people to become pollution prevention partners, than it is to repair the damage done by pollutants.

Increasing Citizen Participation/Support. Public volunteer opportunities include Salmon Watchers, stream restoration & demonstration garden care, and educational programs focus on increasing public awareness and participation in prevention efforts.

Best Practices. City programs are based on programs that have proven successful either here or in other jurisdictions, and follow the theory that behavior change will only come with continued education and making doing the “green thing” convenient and easy. City programs have been awarded the 2009 National Association of Flood and Stormwater Management Agencies Excellence In Communications Award (1st place for the stormwater posters, ads and theater ad); 2009 Big Book of Green Design (Carbon Yeti Smaller Footprint Pledge Book, and a series of stormwater BMP posters); and, 2008 American Water Works Association Excellence in Communications and Conservation Award (brochure for large Utilities category).

Environmental Stewardship. Educational programs teach customers how to prevent surface water pollution and appreciate natural resources, and helps them understand their role in environmental stewardship.

Sound Resource Management. All programs are either rate- or grant-funded, and are subject to review by the Council, Environmental Services Commission and granting agencies. Staff works closely with partners to leverage resources and outreach activities wherever possible.

Bellevue’s Image. The City’s beautiful natural environment is integrated with our lakes, streams, and wetlands. Programs make a significant contribution by protecting local waterways now and for future generations.

C. Short- and long-term benefits of this proposal:

Many activities in the Utilities’ storm and surface water pollution prevention program have a direct and immediate impact on the local environment, helping to make it more healthy and sustainable. Examples include:

- Car Wash Kits and Education: The average six-hour fundraising car wash generates 3,600 gallons of soapy, dirty water - enough water to fill 180 bath tubs! The average driveway car wash uses ~ 116 gallons of water. All the cars being washed across the City on a sunny day produces tens of thousands of gallons of waste water washing directly into local waterways. Proper practices can prevent this pollution.
- Natural Yard Care Workshops: Residents that learn natural yard care techniques use less fertilizer, chemicals, and other toxic materials, and pass these practices to neighbors. All this adds up to less toxics being washed off during storms.
- Motor Oil Recycling Program: One gallon of motor oil can contaminate one million gallons of lake water, and clean-up costs can be significant. Opportunities to recycle used motor oil and education about the potential environmental damage caused by improperly disposing of motor oil reduces water pollution.

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- **Proper Spill Management:** Local businesses and residents are taught to properly manage a spill, preventing contaminants from making their way to the storm drain system and contaminating local waterways.
- **Commercial Source Control Technical Assistance:** Educating commercial and industrial customers on best practices and providing on-site technical assistance results in less pollution of our local waterways.
- **Stream Team Volunteer Programs:** Stream-side restoration projects done by volunteers give citizens a direct, hands-on education about the habitat necessary to provide a healthy ecosystem for fish and other wildlife. Streams and wetlands are restored. Volunteers supplement professional services, assisting with salmon surveys and insect collections.
- **“Scoop the Poop” Messaging:** Pet waste is raw sewage containing bacteria that can wash into local waterways. Educational outreach teaches citizens to scoop up pet waste, bag it, and put it in the garbage.

In the long term, the focus of many activities is to increase awareness and plant the seed of knowledge that will result in changing the public’s behavior, such as school workshops and the storm drain marker program that identifies the destination of water in a particular drain, raising public awareness to decrease pollution.

D. Performance metrics/benchmarks and targets for this proposal:

- Achieve 100% compliance with the car wash kit requirements for fundraising car washes on an annual basis. Car wash auditors have documented 100% compliance but are limited to circulating only 12 days/year.
- Mark all 20,000 public storm drains by the end of 2014. As of the end of 2009, 9,000 have been marked.
- Increase the public’s awareness that storm and surface water is not treated from 55% to 75% over the next 5 years; according to a 2009 survey, 55% know that storm and surface water is not treated.
- Reach over 5,000 residents annually through Stream Team volunteer and educational activities.

E. Describe why the level of service being proposed is the appropriate level:

Current programs provide service levels required to comply with the mandates of the City’s NPDES Permit, the State’s Water Pollution Control Law and the Federal Clean Water Act. Continued compliance and success depends on keeping customers engaged and aware through constant and consistent messaging and information.

Section 8: Provide Description of Supporting Revenue

Activities are rate- and grant-funded.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. **Legal:** The City would fail to comply with its NPDES Permit, resulting in monetary fines to the City, and providing a foundation for third-party lawsuits. The City would also fail to comply with the requirements of the State’s Water Pollution Control Law and the Federal Clean Water Act.
2. **Customer Impact:** The City would not invest grant funds received, allowing funds collected from City customers to revert to the granting agency to be allocated to other jurisdictions. Extremely popular programs, such as Stream Team volunteering, storm drain marking, and on-site education and technical assistance would no longer be available to customers. Not participating in regional planning and coordination efforts would make the City unable to advocate for City customers at the regional level.
3. **Investment/Costs already incurred:** Approximately \$50K has been invested in marking public storm drains Citywide, and \$26K has been spent identifying best approaches to changing car washing behavior. Participants in recent customer surveys have stated this is an excellent use of public funds.
4. **Other:** The City would fail to comply with the City’s Environmental Stewardship Initiative Strategic Plan calling for the preservation and renewal of our local waterways.

B. Consequence of funding at a lower level:

Funding at a lower level would slow or cause the City to fail to comply with federal, state, local and City goals, and other mandates, which will have a negative impact on local water quality. Failure to expend allocated grant money would also result in the money being reverted back to the granting agency, meaning that funds collected from City customers would not be spent in the City.



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Section 1: Proposal Descriptors

Proposal Title: Water Conservation		Proposal Number: 140.32NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Susan Fife-Ferris, x5216		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Conserving water resources to ensure an adequate supply of clean, safe drinking water into the future is critical to human health, the City's continued economic viability, and the sustainability of both the local and global environment. The City leverages resources by collaborating with Cascade Water Alliance and other partners to provide public education, outreach, and technical assistance to encourage the wise use of water and elimination of waste in order meet the City's adopted water conservation goal.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$200,465	\$211,109
Other	180,228	176,980
	\$380,693	\$388,089

Supporting Revenue

	\$380,693	\$388,089
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LTE/FTE

FTE	2.0	2.0
LTE	0.0	0.0
Total Count	2.0	2.0

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Innovative/Creative (also a Citywide Purchasing Strategy): Innovative and creative programs include a "science of water" curriculum developed jointly by the City and the Bellevue School District for integration into the 4th grade science classes, which introduces kids to the concept that water is a resource that has value and needs to be conserved. This instruction is introduced in 4th grade and reinforced in the 6th grade "Powerful Choices for the Environment" curriculum. A water curriculum to be integrated into all high school biology classes is under development. These programs plant the seed for current and future behavior changes.

Partnerships/Collaboration (also a Citywide Purchasing Strategy): *Internal:* Parks (water conservation via the Waterwise Garden); Civic Services/Facilities and Development Services (water conservation); Environmental Stewardship Initiative (coordination); *External:* Cascade Water Alliance (Interlocal Agreement); Washington Dept of Health (Water Use Efficiency Rule oversight); Seattle Public Utility (water supply agency); Dept of Ecology (granting agency); Bellevue School District (program partner); Puget Sound Energy (program partner); Point Cities (grant cooperation); Partnership for Water Conservation (cooperative regional educational programs); Bellevue Botanical Garden Society (program partner); Environmental Protection Agency WaterSense® program (program partner).

Section 5: Budget Proposal Description

Without an adequate clean, safe drinking water supply, neither the City's economic prosperity nor its high quality of life can be sustained into the future. In compliance with state requirements and under the City's

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agreement with Cascade Water Alliance (Cascade), the City Council adopted its first six-year water conservation savings goal in 2007. The City is annually required to report on progress towards the goal. The City's water conservation goal is to save 355,000 gallons per day (gpd) by the end of the six-year (2008-2013) period, an average of 59,000 gpd of new water savings each year. The City manages numerous water conservation programs offered through Cascade, including clothes washer and irrigation system upgrade rebates; toilet, urinal, pre-rinse spray head, showerhead and faucet aerator replacements; irrigation system audits; and leak detection dye strip and water conservation kit distributions. Comprehensive youth education programs reach approximately 4,500 students annually. The Waterwise Demonstration Garden, situated in the heart of the Bellevue Botanical Garden, educates the community about landscape water conservation. Seasonal natural yard care classes, displays, and how-to resources are available throughout the year. The City is an active participant in the Partnership for Water Conservation (PWC), a regional non-profit, benefiting from regional conservation advertising campaigns, the Northwest Flower and Garden Show outreach, and bulk purchasing services. The City also promotes the Environmental Protection Agency WaterSense® program, a voluntary partnership program designed to help customers save water and protect the environment by choosing water efficient products and services. While most elements of this proposal are rate-funded, some funding comes from grants, including the Department of Ecology Coordinated Prevention Grant, a two-year grant where Ecology returns funds collected from City customers to be used for various programs such as Bellevue's natural yard care program.

Section 6: Mandates and Contractual Agreements

- **Washington State Department of Health Water Use Efficiency Rule:** Requires the City to establish a water conservation goal every 6 years. Progress towards the goal must be reported annually.
- **Cascade Interlocal Contract:** Requires the City to participate in Cascade's mandatory conservation program to reduce both base and peak season water use.
- **Cascade-Seattle Public Utility Contract:** The Contract includes a calculation of a "block" of water and potentially severe financial penalties if the terms of the block are exceeded. Ratepayers would incur those penalties based on the City's percentage interest in Cascade.
- **Cascade Transmission Supply Plan (TSP):** The Washington Department of Health requires public water systems to prepare and submit a water system plan every 6 years. The TSP addresses water supply and transmission needs, and looks to water conservation efforts as a way to reduce future water demand.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

- **Factor 1 and Outcome-Specific Purchasing Strategy: Water Resources.** This proposal targets water conservation opportunities and activities, and promotes the value of water as a resource to the community. Educational programs and materials are provided to enhance customer awareness of their choices and the consequences of those choices on drinking water resources. A proactive approach is taken through community collaboration and partnerships to conserving water resources.
- **Factor 3 and Outcome-Specific Purchasing Strategy: Nature Space.** Volunteers work in the nationally-recognized Waterwise Garden to demonstrate best practices for planning, planting, and caring for landscapes to conserve and protect water resources. The landscaping examples are used to educate and raise the awareness of the public, who can then apply those ideas to their own homes. Programs and materials, which are extremely popular with local residents, are developed to enhance community awareness of the importance and value of nature spaces around the City and how these spaces are all part of an integrated ecosystem.
- **Factor 5 and Outcome-Specific Purchasing Strategy: Conservation.** Water conservation programs teach about the value of water resources and how they can be protected, how the entire water cycle works, and how water is an integral part of all ecosystems. Through hands-on programs and community events people

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learn how important water is to their everyday lives and how conservation of water is essential to guaranteeing a sustainable supply.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Economic Growth and Competiveness: People and Partnerships; Innovative, Vibrant and Caring Community: Opportunities for Interaction; Built Environment; and Involved Citizens; Quality Neighborhoods: Sense of Community; Facilities and Amenities; and Schools; Responsive Government: Strategic Leadership; Exceptional Service; and Stewards of the Public Trust.

Citywide purchasing strategies addressed by this proposal:

- **Best Value.** City customers receive excellent value for their water rate dollars. Through conservation, customers can reduce their water use, often allowing them to drop into a lower water rate bracket and saving them money. Rebate programs provide another savings opportunity. Reducing overall water usage by the community can mean delaying regional supply development, reducing operational costs, and keeping overall water rates down.
- **Efficiency.** It is far less expensive to educate people about the need to use less water than it is to develop new water sources and the accompanying infrastructure.
- **Increasing Citizen Participation/Support.** Public outreach programs increase participation in water conservation activities. Customers learn how conservation can reduce their water bill. Providing opportunities to volunteer in conservation efforts such as the Waterwise Garden increases their involvement and support of the conservation effort, and builds community enthusiasm.
- **Best Practices.** Activities are based on proven successful programs, which follow the theory that behavior change will only come with continued education, raised awareness, and making doing the “green thing” convenient and easy.
- **Environmental Stewardship.** By understanding the impact water use has on the environment, customers gain a sense that they are directly involved in environmental stewardship.
- **Sound Resource Management.** All programs are either rate- or grant-funded, and are subject to review by the Council, Environmental Services Commission and the granting agencies providing funds. The City pays no additional money to participate in the highly successful Cascade conservation programs. Leveraging volunteer participation provides valuable labor resources for free.

C. Short- and long-term benefits of this proposal:

In the short-term, conserving water saves money, and helps customers control their utility bills. Many actions, such as using water wisely outdoors and taking shorter showers are free and easy to do. Other actions such as buying a resource-efficient washing machine or putting on a low-volume showerhead will cost money up-front, but will more than pay for themselves in just a few years. Reducing water use can also lower wastewater and energy costs. In the long-term, regional water supplies are being stretched to their limit due to population growth, climate change and other factors. The area’s population is expected to increase by 27% between 2000 and 2020, and studies show that the region is facing significant challenges in meeting the water needs for people and fish habitat. Water conservation stretches the current supply, delaying the need to develop additional water sources and infrastructure. By promoting the wise use of water, the City helps to ensure an adequate supply for environmental and economic development needs. With an understanding of where water comes from, how it’s treated and delivered, and how important having clean, safe water is to our public health, economy, and quality of life, customers gain an appreciation for the value of the water they drink. When customers value the resource, they are more likely to conserve and protect it and support rate increases needed to maintain water infrastructure for future generations.

D. Performance metrics/benchmarks and targets for this proposal:

- Achieve the City’s goal to save 355,000 gpd at full implementation of the 2008-2013 Water Conservation Program.

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- Maintain a local demonstration garden with the support of volunteers. In 2009, the Waterwise Garden at the Bellevue Botanical Garden reached approximately 300,000 visitors, and was successfully maintained with the support of 31 volunteers donating ~600 hrs.
- Conduct seasonal natural yard care workshops, reaching an average of 40 attendees per workshop and achieving an overall satisfaction rating of 80%. In 2009, 13 natural yard care workshops were offered to City residents, reaching an average of 60 attendees per class and with an overall satisfaction rating of 97%.
- Reach every student in the 4th and 6th grade in the Bellevue School District with a comprehensive water conservation education program annually. In 2009, education programs including training, resources, and field trips reached approximately 4,500 students, including all students in the 4th and 6th grades.

E. Describe why the level of service being proposed is the appropriate level:

The current programs provide the service levels required to comply with the mandates of the State's Water Use Efficiency Rule, Interlocal Contract, Cascade/SPU Contract and Cascade Transmission Supply Plan, and continued compliance and success depends on keeping awareness levels high and customers engaged through constant and consistent messaging and information.

Section 8: Provide Description of Supporting Revenue

Programs are rate- or grant-funded.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: The City would –
 - Not comply with requirements of the Cascade Transmission Supply Plan, which the City is a party to.
 - Not meet ongoing obligations with program partners, including the Bellevue School District, Parks Department, and Bellevue Botanical Garden Society.
 - Not make progress towards meeting its Council-adopted water conservation goal, as required by state law, and fail to comply with goals adopted by Cascade via resolution that the City is a party to.
2. Customer Impact:
 - The City would contribute to exceeding the block allocation set forth in the Cascade-Seattle Public Utility Contract, resulting in financial penalties that would have to be passed on to City ratepayers.
 - The City would not invest grant funds received, allowing funds collected from City customers to revert to the granting agency and be allocated to other jurisdictions. Extremely popular programs customers demand would no longer be available, including natural yard care workshops, the Waterwise Garden, on-site technical assistance, and water use audits. Not participating in regional planning and coordination efforts would make the City unable to advocate for customers at the regional level.
3. Investment/Costs already incurred: The Waterwise Garden, opened in 1994, was developed to highlight various conservation practices that residents can apply to their yard, including water conservation. A significant investment has been made over the years in the Waterwise Garden, including approximately 4,000 volunteer hours and \$50K for development, maintenance, and educational components.
4. Other: The City would fail to comply with the City's Environmental Stewardship Initiative Strategic Plan calling for the conservation of drinking water resources.

B. Consequence of funding at a lower level:

Funding at a lower level would slow or cause the City to fail to make progress towards complying with state, regional and City goals, and other mandates. Severe consequences can result, such as exceeding the water block allocation set forth in the Seattle Public Utilities Contract, which can result in large monetary fines that will be passed on to City ratepayers. Failing to make progress towards water conservation goals required by state law can lay the foundation for third-party lawsuits and large financial judgments against the City. Failure to expend allocated grant money would also result in the money being reverted to the granting agency, meaning that funds collected from City customers would not be spent in the City.



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Section 1: Proposal Descriptors

Proposal Title: Utilities Customer Service/Billing		Proposal Number: 140.33PA
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Virginia Barrett, x5368		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): Parent of proposals 140.46DN, CIS Automation Support, and 140.45DN Utility Water Meter Reading		

Section 2: Executive Summary

Utilities Customer Service and Billing bills and manages the accounts of 38,000 customers in Bellevue and surrounding communities. Utilities bills for water, wastewater, and storm drainage services, accounting for rate revenue of over \$85 million for Utilities and utility taxes of \$5 million for the General Fund. Utilities rate revenue is needed for the continued provision of essential utilities services for the community.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$680,572	\$718,597
Other	338,858	345,819
	\$1,019,430	\$1,064,416

Supporting Revenue	2011	2012
	\$1,019,430	\$1,064,416

LTE/FTE	2011	2012
FTE	8.95	8.95
LTE	0.00	0.00
Total Count	8.95	8.95

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/Collaboration: *Internal:* Service First, Mini City Hall, and Utilities Operation and Maintenance Staff are partners in providing billing and customer service. Parks, Civic Service, PCD, and Transportation are utilities customers; Utilities collaborates with them to ensure the optimal use of City resources and to avoid water waste. *External:* Social service agencies such as Overlake Service League, Hopelink, St. Vincent de Paul, and the Salvation Army provide assistance to customers who have difficulty paying a utility bill.

Efficiencies / Innovations: Payment processing and bill printing and mailing are outsourced. Utilities is working with other City departments who have utility accounts to streamline the billing process to make it more efficient and save paper by switching to electronic billing. Savings to the General Fund are approximately \$2,000 per year. Utilities is implementing software that will expedite customer payments through their bank's bill pay service. Utilities offers multiple options for customers to pay their bill, including automatic payment from a checking account, payment through the mail, in person at City Hall or Mini City Hall, using a debit or credit card online through MyUtilityBill, or over the phone using MyUtilityBill by Phone. Customers can also access a wealth of account information online or by phone.



2011-2012 Budget Proposal

Section 5: Budget Proposal Description

Bellevue Utilities serves residents within the City and in several neighboring communities. In this proposal, Customer Service/Billing staff provides timely and accurate billing of 36,000 residential and 2,000 commercial customers for water, wastewater, and storm drainage services and the management of those customer accounts. Staff are responsible for collecting over \$85 million in annual rate revenue for Utilities and over \$5 million in annual utility taxes for the General Fund. The rate revenues collected are used to operate, maintain, and replace the complex water, wastewater, and stormwater systems that provide service to utility customers. Services included in this proposal are Billing, Customer Service and Account Management, and Collections.

Billing

Accounts are grouped into eight billing cycles based on water meter reading routes, and customers are billed bimonthly. Each week, the Customer Information System (CIS) generates approximately 5,000 bills. Accuracy in billing is essential, and each Customer Service Representative (CSR) is responsible for providing quality control on approximately 1200 bills per week. Staff must manually review bills for errors prior to releasing them. Commercial accounts, particularly those that have multiple or large meters require extra scrutiny due to the high volume of water consumption.

Customer Service and Account Management

Customer Service is not a call center. While CSRs are the first point of contact for our 38,000 customers, they are responsible for far more than answering customer calls. Their responsibilities include:

- Researching and documenting account adjustments
- Documenting account inquiries and adjustments with a recap of each customer call, creating new accounts, processing move in/out information, and calculating final bills
- Coordinating with field staff regarding meter reads, service disconnects and other customer issues
- Processing delinquent accounts for collections and following up on customers who have left the area
- Assisting delinquent customers with payment arrangements or referrals to social service agencies
- Providing technical support for customers requiring assistance making online or phone payment

CSRs handle 150 calls per day, process up to 50 moves per day, make up to 50 outgoing customer calls per week, produce an average of 150 notices of pending water service disconnect per week, and coordinate an average of 25 service disconnect/reconnects per week.

Collections

Collections are critical to maintaining Utilities' cash flow. CSRs must follow very specific procedures in order to meet legal requirements for debt collection. Failure to adhere to the prescribed collections process means the Utility loses the ability to collect when a customer defaults. Creating pending disconnect notices and lists of accounts for service disconnect is time-consuming and the information must be accurate. CSRs must also work with distraught customers while still acting in the City's best interest to collect money owed for services provided.

Section 6: Mandates and Contractual Agreements

- **Washington State constitution, Article VIII, section 7; RCW 4.16.080; WAC 480.110.375; Bellevue Ordinance 4751** define Utilities' responsibility to provide and bill for service.
- **RCW 32.21.290 and WAC 480.110.355** govern the collection and lien processes.
- **WAC 480.110.365 and WAC 480.110.385** define the responsibilities of both the customer and Utilities regarding equipment, service interruptions, and dispute resolution.
- **RCW 35.92.010** provides customer and rate classification guidelines.
- **RCW 43.09.210** prohibits the co-mingling of utilities funds.



2011-2012 Budget Proposal

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal for a Healthy and Sustainable Environment:

Factors in the Healthy and Sustainable Environment outcome:

- Factors 1 and 5: Water Resources and Conservation. A clean, reliable, and safe supply of drinking water, the removal and treatment of wastewater and management of stormwater is essential to the health and well being of Bellevue residents. This supply is dependent on our ability to purchase water and transport it to customers. Revenues generated by the billing and collection activity pay for the infrastructure necessary to accomplish this. Through their daily front-line contact, CSRs educate customers on a wide range of conservation issues and services. For example, a CSR might identify that a customer has high water consumption and provide information on how to troubleshoot for leaks and suggest measures to take for water conservation. Utilities advises/educates managers of accounts for City facilities on the efficient use of water resources and alert them if consumption looks high so they can investigate possible leaks as quickly as possible in order to preserve those resources. Utilities electronic payment options reduce paper use, and encouraging customers to receive e-bills saves both paper and postage.

Purchasing strategies in the Healthy and Sustainable Environment outcome:

Utilities delivers results in an environmentally sensitive and sustainable way by providing electronic alternatives. Customers can receive their bills via e-mail and pay online or over the phone, which saves paper. Service is provided through community partnerships by collaborating with social service agencies to get assistance for customers having trouble paying their utility bills. Rather than correct problems after they occur, the bills are proactively checked carefully for possible errors prior to sending them to customers, regularly scrutinize commercial accounts for accurate metering and consumption, and leave high consumption notices at single-family residences if metered usage looks abnormally high. Utilities considers the diversity of residents in the service delivery by providing a TTY service for the hearing impaired, using the City's language experts when assisting non-English speaking customers, and arranging meetings at Service First with customers who have mobility issues.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Citywide purchasing strategies addressed by this proposal:

- Best Value: By explaining how consumption is related to billing rate tiers, customers are encouraged to get the best value for their utility dollar. Offering conservation tips helps customers control their costs, and conserves resources.
- Gains in Efficiency. Utilities outsources bill printing and mailing and payment processing to vendors who offer the most competitive services. Our bill print/ mailing vendor sorts our bills to postal standards so that the City receives the best possible postage rate. Our payment processing vendor handles 15,000 payments per month and their same-day deposit of money received improves Utilities' cash flow. Utilities is implementing an electronic payment interface that will reduce float time between customer payment and receipt by the City from 7-8 days to 1-2 days, greatly improving Utilities' cash flow and saving \$10,000 per year. Savings obtained through these efficiencies help keep customer rates as low as possible.
- Collaboration/Partnerships. When a customer needs to pay in person to avoid service disconnect, Service First and Mini City Hall staff know to call us immediately when these accounts are paid to avoid disconnect. Utilities provides opportunities to other departments to include informational inserts with utility bills. We work with social service agencies, referring customer who need assistance paying their utility bills.
- Best Practices. Our collection policies and practices, first call resolution standard and customer satisfaction surveys conform to industry best practices.

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- Utilities promotes sound management of resources by monitoring high-volume accounts served by multiple meters to check for gradual meter slow-downs, indicating that the meter may be failing. If the meter is not recording consumption properly, the City loses revenue. If our monitoring shows a spike or other abnormality in usage, customers are quickly notified so that they can perform troubleshooting on their system, enabling them to save money and conserve resources.

C. Short- and long-term benefits of this proposal:

Safe and reliable drinking water, disposal of wastewater, and management of storm runoff are services that must be immediately and continuously available. Revenues received via the billing process support the continuous, reliable operation of these essential services without the risk of interruption. In the long term, Utilities must plan for replacing aging infrastructure and accommodate growth in order to maintain Bellevue's quality of life and protect public health and the environment. Revenues collected from utilities payments are essential to meet these needs. Without funds to improve the infrastructure, the City will face a utilities crisis; its citizens could face a future where water, wastewater, and drainage services are compromised or limited, and the quality of life would decline.

D. Performance metrics/benchmarks and targets for this proposal:

- (1) Weekly customer satisfaction survey. Performance target is response of 80% "good" or above.
- (2) Percentage of calls resolved on first contact: number of qualifying calls resolved in one interaction with the customer. Performance target is 60% of qualifying calls (industry standard).
- (3) Percentage of account adjustments that are back-bills or credits. Performance target is less than 3% of error-driven adjustments
- (4) Review all meters over 3" at least twice per year to avert potential revenue loss.

E. Describe why the level of service being proposed is the appropriate level:

Our current operations are highly efficient at this level of service, and both Utilities and customers benefit as a result. Industry best practices and state regulations indicate that bi-monthly meter reading and billing is an efficient way to monitor consumption, catch leaks in a timely manner and provide for a consistent, level, revenue stream. Any reduction in service level would degrade the quality of customer service and negatively impact Utilities' cash flow.

Section 8: Provide Description of Supporting Revenue

Programs are rate-funded.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: The City would be in violation of Article VIII, section 7, of the Washington State Constitution that directs that there can be no gift of public funds – the Utility must bill for the services it provides.
2. Customer Impact: Revenue to maintain, operate, and replace infrastructure would not be collected and the City would be unable to provide the safe and reliable utility services that are essential for public health.
3. Investment/Costs already incurred:
4. Other: N/A

B. Consequence of funding at a lower level: See alternate proposal 140.33PB.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Utility Taxes and Franchise Fees		Proposal Number: 140.34NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Bob Brooks, x7199		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

As a cost of doing business, Bellevue Utilities pays State Utility and Business and Occupation (B&O) taxes and, depending upon the customer's location, either City B&O tax or a franchise fee to the local jurisdiction.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$ -	\$ -
Other	9,052,436	9,558,162
	<u>\$ 9,052,436</u>	<u>\$ 9,558,162</u>

Supporting Revenue

\$ 9,052,436 \$ 9,558,162

LTE/FTE

FTE	0.0	0.0
LTE	0.0	0.0
Total Count	<u>0.0</u>	<u>0.0</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/Collaboration: Providing utilities services to the Points communities eliminates the need for duplicate utilities systems.

Section 5: Budget Proposal Description

The Utilities Department is required to pay taxes on its business activities to both the State of Washington and the City's General Fund. Services included in this proposal are monthly State and City tax remittance and quarterly Franchise Fee remittance.

The State collects excise taxes in the form of the public utility tax on the Utilities' sewer collection and water distribution activities, and a business & occupation tax on the remaining Utility business activities. These costs are included in utility rates and recovered from customers in their bi-monthly bills. The City's General Fund imposes a utility tax on the Water, Sewer, and Storm Drainage Funds' service revenues from customers inside City limits. The City passes these costs directly through to customers in their bi-monthly bills.

The towns of Clyde Hill, Hunts Point, Yarrow Point and the City of Medina have franchise agreements with the City of Bellevue that allow Bellevue to operate water and wastewater utilities in their jurisdictions. In those agreements, the City of Bellevue agrees to pay franchise fees, which are set by the city or town, equal to a percentage of the gross amount of the customer's bi-monthly water and sewer bills. The City of Bellevue passes these charges directly through to customers in their bi-monthly bills.

This proposal is not scalable. Utilities must pay 100% of taxes and franchise fees.



2011-2012 Budget Proposal

Section 6: Mandates and Contractual Agreements

- **RCWs 82.16.020 and 82.04.220** govern State taxes
- **Bellevue City Code 4.10.025** (established with Ordinance #4841) governs the City utility tax
- Separate **interlocal agreements** with the towns of Yarrow Point, Clyde Hill, and Hunts Point and the City of Medina specify that franchise fees must be paid based on rates established in each agreement or as amended by the jurisdiction.

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

How will this Proposal achieve a Healthy and Sustainable Environment (HSE)?

Meeting our tax and contractual obligations allows Utilities businesses to continue operating free of lawsuits and/or other legal proceedings which could divert resources away from core Utilities activities, impairing the City's ability to provide clean drinking water, safe wastewater disposal, solid waste collection, and protection from stormwater damage. Franchise agreements with the "Points Communities" allow us to provide service in areas adjacent to the City, thereby creating regional efficiencies, avoiding the need for duplicative facilities, and reducing rates by spreading fixed costs over a larger customer base.

Factors in the Healthy and Sustainable Environment outcome:

- Factor 1: Water Resources. This proposal addresses necessary costs associated with the provision of drinking water, storm and surface water, and wastewater services to customers.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Citywide purchasing strategies addressed by this proposal:

- Best Value. This proposal allows the City to operate its utilities outside City limits, which reduces rates to all customers by allowing us to spread fixed costs (e.g., administration) over a broader customer base.
- Collaboration/Partnerships. Under the terms of the franchise agreements, Bellevue provides utilities services in other jurisdictions. By partnering with other jurisdictions, we eliminate the need for duplicative utilities facilities such as reservoirs and pump stations, thereby minimizing costs to ratepayers.
- Best Practices. This proposal allows for the payment of state taxes and franchise fees as established by state law and/or contractual arrangement.

C. Short- and long-term benefits of this proposal:

This proposal provides a relatively stable source of revenues to the City's General Fund (City utility taxes), which reduces the need for tax revenues in both the short- and long-term.

D. Performance metrics/benchmarks and targets for this proposal:

% compliance with tax obligations. Goal is 100%

of penalties incurred for non-compliance. Goal is 0.

E. Describe why the level of service being proposed is the appropriate level:

An exception to an alternate level of services has been granted for this proposal. The recommended level of services meets the criteria for proposing efficiencies in the existing services while still meeting the intended outcome. Additional levels of service describing the impacts to operations may still be requested.



2011-2012 Budget Proposal

Section 8: Provide Description of Supporting Revenue

The payment of state taxes, City taxes, and franchise obligations is entirely supported by utility rates and charges. Money to pay for City taxes is collected from customers within Bellevue's city limits. Money to pay for franchise fees is collected from customers in the pertinent jurisdictions.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal:
If the City did not pay its taxes, it would be in violation of State Law and Bellevue City Code. Failure to pay franchise fees would violate our contractual obligations with other jurisdictions. If payments were not made, the possibility exists for interruption of utility services for citizens, which would endanger the City's healthy and sustainable environment.
2. Customer Impact: N/A
3. Investment/Costs already incurred: N/A
4. Other: N/A

B. Consequence of funding at a lower level: N/A



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Purchase of Water Supply		Proposal Number: 140.35NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Scott Pickard, x4587		One-Time/On-Going: On-Going
Fund: Water	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

The purchase of wholesale water supply from the Cascade Water Alliance allows Bellevue Utilities to provide water service to over 38,000 customers in the Bellevue Utilities service area, which includes King County (Eastgate area), Clyde Hill, Medina, Yarrow Point, Hunts Point, and Issaquah (South Cove area). In 2009, about 5.2 billion gallons of water were used by customers of Bellevue Utilities. Costs for this proposal are accurate as of September 1, 2010. Cascade will present its budget to its Board in October and will finalize budget at that time.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$ 70,774	\$ 74,601
Other	15,665,054	17,361,025
	<u>\$ 15,735,828</u>	<u>\$ 17,435,626</u>

Supporting Revenue

	\$ 15,735,828	\$ 17,435,626
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LTE/FTE

FTE	0.5	0.5
LTE	0.0	0.0
Total Count	0.5	0.5

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/Collaboration. *External:* Cascade Water Alliance. Members include the Cities of Bellevue, Issaquah, Kirkland, Redmond, and Tukwila, and the Covington, Sammamish Plateau, and Skyway Water/Water & Sewer Districts

Section 5: Budget Proposal Description

The City's Water utility provides potable drinking and irrigation water to customers within its service area. This proposal is for the wholesale purchase of water by the City of Bellevue from the Cascade Water Alliance (Cascade), of which it is a member. The required resources include projected rate increases from Cascade for wholesale water supply of 10% per year in 2011 and 2012.

By contract, the City of Bellevue is required to purchase 100% of its water supply that is not provided by wells or other city-owned resources. The City of Bellevue does not have the resources and/or water rights to provide necessary water for the needs of the community without purchasing water from an outside source.

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Cascade, a non-profit corporation, was formed through an interlocal agreement by eight public water systems in King County, Washington. Cascade serves as a regional water supplier to its eight members. Cascade develops, owns, maintains, and operates water supply facilities and contracts with water suppliers to purchase and provide water supply, transmission services, and other related services. Cascade is governed by a Board of Directors consisting of one elected official representative from each member, and member-elected official and staff participation in Cascade's decision-making process is key to Cascade's and Bellevue's ability to provide clean, safe, and reliable drinking water to residents now and in the future. Decisions made today will impact utility investments, utility rates, and Bellevue residents' quality of life for the next 50 to 100 years.

In addition to the cost of purchasing water, this proposal includes payment of a conveyance charge to the Coal Creek Utility District (CCUD). This charge compensates CCUD for use of their water distribution facilities to convey water from Bellevue's points of supply to customers otherwise isolated from Bellevue's distribution system (for example, City customers acquired in the recent partial assumption of CCUD's service area).

This proposal includes partial funding for an intergovernmental relations specialist focusing on issues directly related to water supply and Cascade Water Alliance issues. Services provided by this individual include both internal and external coordination and collaboration to effectively address emerging issues such as water supply planning and decisions regarding infrastructure investments, providing City Council and leaders with alternatives and recommendations, and implementing Council direction. This ensures that City Council and Utilities have an efficient, centralized means of analyzing and resolving issues and maintaining an effective voice in partnership with regional, state, and federal elected officials and staff. This individual provides policy support for decision-making concerning utility investments, utility system development, and all related political positioning for the water business line. These activities include:

- Advancing and advocating for City's water priorities in both state and federal legislative arenas as well as decisions made by other local and regional entities that impact Bellevue's interests.
- Monitoring and advancing the City water priorities and policy interests in Cascade and other regional organizations that directly impact rates, taxes, and fees paid by Bellevue stakeholders.

Section 6: Mandates and Contractual Agreements

- **Bellevue City Code 24.02.065 Duty to serve.** The utility is responsible for providing water service to all customers within the utility service area subject to the requirements of this code, other provisions of the Bellevue City Code and applicable state law.
- **Interlocal Contract, Cascade Water Alliance, December 15, 2004.** The City of Bellevue agrees to purchase water from Cascade based on historical water usage for the preceding three-year period.
- **Safe Drinking Water Act of 1974 (and subsequent amendments), United States Environmental Protection Agency.** The Safe Drinking Water Act is the principal federal law that ensures safe drinking water for the public. The Act authorizes the United States Environmental Protection Agency to set national health based standards for drinking water quality, and applies to all public water systems in the United States. Water purchased from Cascade Water Alliance meets or exceeds these water quality standards, thus avoiding additional costs for water treatment.

Section 7: Proposal Justification/Evidence

How will this Proposal achieve a Healthy and Sustainable Environment (HSE)?

The City of Bellevue currently provides a sufficient supply of high quality water to customers within the City's service area. An adequate supply of high quality water is essential for the health of the environment and the community. By purchasing water from Cascade, the City ensures a safe, clean, and reliable drinking water supply to meet current and future needs in a cost-effective and environmentally sensitive manner. Cascade also



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actively promotes water conservation to its customers. Conservation helps ensure a reliable supply of drinking water, and defers the need to develop new water supplies and infrastructure.

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factors in the Healthy and Sustainable Environment outcome:

- Factor 1: Water Resources. This proposal is needed to ensure that the City continues to have an adequate supply of high quality water for the health of the community, and that reliable drinking water supply is procured in a cost-effective and environmentally sensitive manner.
- Factor 5: Conservation. Cascade and City of Bellevue actively promote water conservation. Water conservation stretches the current water supply, delaying the need to develop costly new water supply and infrastructure. By promoting the wise use of water, we help ensure an adequate supply for environmental and economic development needs.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed by this proposal:

- Responsive Government, Factor 2: Strategic Leadership. This proposal is a major opportunity to partner and collaborate with other governments (Cascade members), organizations, and stakeholders to provide services to the community. This partnership allows City officials to advocate for the community's well being and interests outside the walls of City Hall and the boundaries of the jurisdiction.
- Responsive Government, Factor 5: Management of Risk and Liability. Utilities ensures that the City complies with contract and regulatory requirements (the interlocal contract).
- Economic Growth and Competitiveness, Factor 3: Infrastructure. A robust and strategic utilities infrastructure forms the foundation for the City's economic competitiveness and advances the standard of living in the community.

Citywide purchasing strategies addressed by this proposal:

- Collaboration/Partnerships. This proposal represents a collaborative effort with other Cascade members, which benefits the City in several ways. Cascade was formed by municipalities and water districts who worked collectively to find an alternative to the existing water contract with the City of Seattle. By forming the Alliance, Cascade is able to exercise control over water purchases and infrastructure that were previously handled only by Seattle. Due to our relative size, the City is able to have a more direct influence over its water supply as a member of Cascade than as a wholesale water purchaser from Seattle.
- Efficiency Gains/Cost Savings and Best Practices. Membership in Cascade gives the City a role in promoting water conservation. Conservation helps ensure a reliable supply of drinking water, keeps utility operating costs lower, and allows more water to stay in streams. Cascade's emphasis on water conservation and education helps to reduce water usage and extend the current supply of water and promotes environmental awareness and stewardship. Cascade promotes conservation through various methods including education and consumer rebates for energy-efficient products. The Cascade WaterSense Partnership Program distributes free high efficiency showerheads, aerators, and rain gauges. Lastly, by helping to manage its wholesale costs, the City is able to get the most value for our money, and we are able to pass the savings on to City customers.

2011-2012 Budget Proposal

C. Short- and long-term benefits of this proposal:

Short-term benefits: Cascade manages wholesale purchases and deliveries to the City. The City has no other source of water supply in the short term.

Long-term benefits: Cascade plans for future water supply requirements and the required infrastructure to deliver a reliable supply of high quality water to its members. The City benefits from this through Cascade's coordinated regional efforts and the associated economies of scale. The City does not have access to water supply to meet the needs of the community without purchasing water from an outside source.

D. Performance metrics/benchmarks and targets for this proposal:

There are no performance measures for this proposal.

E. Describe why the level of service being proposed is the appropriate level:

This proposal is not scalable. Water use could be restricted through rationing. However, limiting water use would reduce revenues received from customers by substantially more than the reduction in the cost of water supply. This in turn would jeopardize the City's ability to provide utility services, and could potentially impact the quality of life in the community. In addition, there would be no immediate cost savings from reduced water usage because the water purchase contract with Cascade determines wholesale water charges based on a 3-year history and not actual use for the period. Therefore, there would be a cash flow issue created by the drop in revenues without an offsetting reduction in expenses.

An exception to an alternate level of services has been granted for this proposal. The recommended level of services meets the criteria for proposing efficiencies in the existing services while still meeting the intended outcome. Additional levels of service describing the impacts to operations may still be requested.

Section 8: Provide Description of Supporting Revenue

This activity is entirely supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all

1. Legal: Under the interlocal agreement, the City is obligated to purchase its water supply from Cascade.
2. Customer Impact:
An adequate supply of good quality water is necessary for the health of the environment and the community. If this proposal is not funded, the City of Bellevue would be in violation of the terms of the Cascade Water Alliance interlocal contract and would face significant penalties. Changing the City's water supply would be disastrously expensive and a protracted political and legal issue. Failure to comply with the terms of the contract with Cascade Water Alliance not only jeopardizes the City's immediate water needs, but also endangers access to water for the future.
3. Investment/Costs already incurred: N/A
4. Other: N/A

B. Consequence of funding at a lower level:

Failure to comply with the terms of the contract with Cascade Water Alliance would not only jeopardize the City's immediate water needs, but also endanger access to water for the future. Bellevue is obligated to pay for its share of the water for which it contracts.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Sewage Treatment and Disposal		Proposal Number: 140.36NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Jennifer Dilley, X6963		One-Time/On-Going: On-Going
Fund: Sewer	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

The City of Bellevue provides sewage collection and transmission services for customers within its service area but does not provide treatment. The purchase of wholesale sewage treatment and disposal services from King County Metro allows Bellevue Utilities to provide sewer service to over 35,500 customers in the City of Bellevue and surrounding jurisdictions. In 2009, about 4.0 billion gallons of sewage was sent to King County for treatment and disposal by Bellevue Utilities on behalf of its customers.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$ 70,774	\$ 74,601
Other	27,430,595	27,505,543
	<u>\$ 27,501,369</u>	<u>\$ 27,580,144</u>

Supporting Revenue

	<u>\$ 27,501,369</u>	<u>\$ 27,580,144</u>
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LTE/FTE

FTE	0.5	0.5
LTE	0.0	0.0
Total Count	<u>0.5</u>	<u>0.5</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/Collaboration: External: King County Metro, Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC)

Section 5: Budget Proposal Description

The City of Bellevue provides sewage collection and transmission services for customers within its service area but contracts with King County Metro for treatment and disposal. This proposal funds the payment of fees levied by King County Metro for sewage treatment and disposal. The required resources include a projected rate increase from King County Metro for wholesale sewage treatment and disposal of 13.2% in 2011. King County Metro is not currently planning any rate increase for 2012.

The City has a long-term contract with King County Metro for the treatment and disposal of all sewage flows generated within the City's service area. The City owns and operates its collection system, which includes pipelines and pump stations to collect and carry sewage to the County's regional system for treatment and disposal. Metro owns and operates the regional treatment plants, pipelines, pump stations and other related facilities.

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King County Metro protects water quality and public health in the central Puget Sound region by providing high quality and effective treatment to sewage collected from local sewer agencies. Metro's Wastewater Treatment Division (WTD) processes sewage transmitted from 33 municipal participants and three non-municipal participants, providing retail sewer services in the service area of the King County Metropolitan Sewer System. King County Metro does not bill individual property owners for sewer services. Instead, it charges the City an amount based on the County's monthly rate and the number of single-family equivalents the City serves. By Council policy, this charge is passed through to customers by the City on its bimonthly utility bills.

The Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC) advises the King County Council and Executive on matters related to water pollution abatement. It was created by state law (RCW 35.58.210) and consists of representatives from cities and local sewer utilities that operate sewer systems within King County. Bellevue's participation in King County's decision-making process through MWPAAC is key to the City's ability to provide effective and reliable sewage treatment services. Decisions made today will impact utility investments, utility rates, and Bellevue residents' quality of life for the next 50-100 years.

This proposal includes partial funding for an intergovernmental relations specialist focusing on issues directly related to wastewater issues. Services provided by this individual include both internal and external coordination and collaboration to effectively address emerging issues, providing City Council and leaders with alternatives and recommendations, and implement Council direction. This ensures that City Council and Utilities have an efficient, centralized means of analyzing and resolving issues and maintaining an effective voice in partnership with regional, state, and federal elected officials and staff. This individual provides policy support for decision-making concerning utility investments, utility system development, and all related political positioning for the wastewater business line. These activities include:

- Advancing and advocating for the City's priorities in both state and federal legislative arenas as well as decisions made by other local and regional entities that impact Bellevue's interests
- Monitoring and advancing the City's priorities and policy interests in MWPAAC and other regional organizations that directly impact rates, taxes and fees paid by Bellevue stakeholders

Section 6: Mandates and Contractual Agreements

- *Agreement for Sewage Disposal* between the City of Bellevue and KC Metro, which establishes a contractual obligation for the City to utilize King County Metro sewage treatment services until July 1, 2036.
- Bellevue City Code- 24.04.065 Duty to serve. The utility is responsible for providing sewer service to all customers within the utility service area, subject to the requirements of this code, other provisions of this code and applicable state law.

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

How will this Proposal achieve a Healthy and Sustainable Environment (HSE)?

Sewage treatment and disposal are essential to ensure a clean and safe water supply, which is a necessity for the health of the environment and the community. By using the King County Metro sewage treatment and disposal services, the City ensures that the community has high quality and effective sewage treatment and disposal to protect public health and water quality in a cost-effective and environmentally sensitive manner.

Factors in the Healthy and Sustainable Environment outcome:

- Factor 1 – Water Resources. The City's sewer system efficiently and reliably removes sewage from homes and businesses. This proposal is needed to ensure that the sewage is processed and treated for safe release back into the environment.

2011-2012 Budget Proposal

- **Factor 3 - Nature Space:** King Country Metro enforces regulations to reduce harmful waste discharged from the system, and educates the public and businesses on ways to protect water quality. Metro's history of restoring the water environment of the Sound, lakes, and streams attests to its stewardship of the environment. Metro enforces regulations to reduce harmful waste discharged to the system, and educates the public and businesses on ways to protect water quality. By using Metro's services, the City joins with Metro in its mission of protecting public health and enhancing the environment.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed by this proposal:

- **Responsive Government Factor 2: Strategic Leadership.** This proposal is a major opportunity to partner and collaborate with King County and other governments (regional users of the King Country Metro system), organizations (such as MWPAAC), and stakeholders to provide services to the community. This partnership allows City officials to advocate for the community's well being and interests outside the walls of City Hall and the boundaries of the jurisdiction.
- **Responsive Government Factor 5: Management of Risk and Liability.** Utilities ensures that the City complies with contract and regulatory requirements (the Agreement for Sewage Disposal).
- **Economic Growth and Competitiveness Factor 3: Infrastructure.** A robust and strategic utilities infrastructure forms the foundation for the City's economic competitiveness and advances the standard of living in the community.

Citywide purchasing strategies addressed by this proposal:

- **Efficiency Gains/Cost Savings and Best Practices.** Our continuing contract with King Country Metro's Wastewater Treatment Division (WTD) allows the City to take advantage Metro's infrastructure and facilities, thereby eliminating any need for Bellevue to build its own separate, independent treatment facilities. As a result, the City avoids the huge expense associated with such a large public works project. The City is also able to take advantage of Metro's environmental stewardship efforts.
- **Collaboration/Partnerships.** This proposal represents a collaborative effort with King County and users of the King Country Metro system, which benefits the City in several ways, including the fact that decisions are made at a regional level rather than the local level, providing more environmentally sound practices as well as cost efficiencies due to economies of scale.

C. Short- and long-term benefits of this proposal:

In the short term, King Country Metro manages the treatment and disposal of sewage, which relieves City staff of this task. In the long term, King Country Metro plans for future sewer requirements and the required infrastructure to treat and dispose of sewage for the users of its system. The City benefits from this through King Country Metro's coordinated regional efforts and the associated economies of scale.

D. Performance metrics/benchmarks and targets for this proposal:

- % compliance with contractual obligation for payment for services. Goal is 100%.

E. Describe why the level of service being proposed is the appropriate level:

This proposal is not scalable since Utilities is contractually obligated to pay King Country Metro for services through 2036.

An exception to an alternate level of services has been granted for this proposal. The recommended level of services meets the criteria for proposing efficiencies in the existing services while still meeting the intended outcome. Additional levels of service describing the impacts to operations may still be requested.

Section 8: Provide Description of Supporting Revenue

This activity is entirely supported by utility rates.

2011-2012 Budget Proposal

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: The City would be out of compliance with the contractual obligation to pay King Country Metro for sewage treatment and disposal services through 2036.
2. Customer Impact: The City does not have the resources to properly treat and dispose of sewage flows. By contract, and due to regional policy that makes constructing a new sewage treatment facility virtually impossible, the City cannot treat its sewage through any other means. If this service is not provided, the back-up of sewage would seriously endanger the health and safety of the community.
3. Investment/Costs already incurred:
4. Other: N/A

B. Consequence of funding at a lower level: Similar to above.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Cascade Regional Capital Facility Charges		Proposal Number: 140.37NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Bob Brooks, x7199		One-Time/On-Going: On-Going
Fund: Water	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

The City's wholesale water supplier, Cascade Water Alliance, assesses "Regional Capital Facility Charges" (RCFCs) to allocate costs associated with providing new system capacity to accommodate growth to Cascade members requiring new capacity. To ensure that "growth pays for growth," Bellevue Utilities passes these charges directly through to customers connecting to the water system.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$ -	\$ -
Other	704,068	722,374
	\$ 704,068	\$ 722,374

Supporting Revenue	2011	2012
	\$ 704,068	\$ 722,374

LTE/FTE	2011	2012
FTE	0.0	0.0
LTE	0.0	0.0
Total Count	0.0	0.0

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/Collaboration: *External:* Cascade Water Alliance (Cascade). Members include the Cities of Bellevue, Issaquah, Kirkland, Redmond, and Tukwila, and the Covington, Sammamish Plateau, and Skyway Water/Water and Sewer Districts.

Efficiencies/Innovations: Cascade's RCFC charges to the City, in combination with the City's policy of directly passing through these charges to new and redeveloping customers, is an efficient means of ensuring that these customers pay their fair share of costs for the capacity to serve them (in other words, so that "growth pays for growth").

Section 5: Budget Proposal Description

This proposal covers the remittance of the Regional Capital Facility Charge (RCFC) to Cascade. The City is a member of Cascade, which is a regional water supplier to its eight members. Cascade develops, owns, maintains, and operates water quality facilities and contracts with water suppliers to purchase and provide water supply, transmission, and other related services. Cascade is also developing its own source of water supply. To allocate growth costs to those Members that require capacity increases, each member of Cascade is required to pay to Cascade a Regional Capital Facility Charge (RCFC) for each new Customer Equivalent Residential Unit (CERU) connected to their water distribution system. Based on City policy, the RCFC is collected from the customer(s) that are connecting to the system and the fee is remitted to Cascade.

2011-2012 Budget Proposal

Section 6: Mandates and Contractual Agreements

- Bellevue City Code 24.02.065 Duty to serve. The utility is responsible for providing water service to all customers within the utility service area subject to these code requirements, other provisions of the Bellevue City Code and applicable state law.
- Interlocal Contract, Cascade Water Alliance, December 15, 2004. The Interlocal agreement with Cascade requires the City of Bellevue to pay a Regional Capital Facility Charge for each new CERU connected to their water distribution system.

Section 7: Proposal Justification/Evidence

How will this Proposal achieve a Healthy and Sustainable Environment (HSE)?

A healthy and sustainable environment requires that citizens are able to connect to a clean, safe water supply. By allowing connection to the existing water distribution system, development and growth is accommodated in a sustainable way without adversely affecting the health of the environment. The RCFC ensures that new customers pay their fair share of the cost of existing resources that provide the capacity to serve them (i.e., “growth pays for growth”).

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factors in the Healthy and Sustainable Environment outcome:

- Factor 1: Water Resources. This proposal provides funding that enables Cascade to continue providing a reliable water supply.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed by this proposal:

- Economic Growth & Competitiveness Factor 3: Infrastructure. All customers wishing to connect to the water distribution system are allowed to do so, with the payment of the appropriate RCFC. This allows for the continued development and growth of the community.
- Responsive Government Factor 4: Exceptional Service. The funding mechanism inherent in this proposal aligns rates and resources; enables Cascade and the City of Bellevue to achieve organizational objectives of requiring growth to pay for growth; and allows both entities to adapt to changing circumstances and community needs by adjusting the pass-through charge as the costs of adding new capacity change.
- Responsive Government Factor 5: Management of Risk and Liability. Utilities ensures that the City complies with contract and regulatory requirements (the interlocal contract).

Citywide purchasing strategies addressed by this proposal:

- Best Value. This proposal supports a cost recovery mechanism that provides funding for Cascade. Without this proposal – and the corresponding charge to new customers, which *provides offsetting revenues* – rates to existing customers would need to be increased to cover the revenue shortfall.
- Efficiency Gains/Cost Savings. The funding mechanism inherent in this proposal ensures *an efficient means of recovering costs* associated with growth to customers causing those costs to be incurred.
- Best Practices. The funding mechanism inherent in this proposal is consistent with *best practices* in the utility industry, specifically, criteria for sound rate design that require rates to be based on cost of service (whereby “cost causers are cost payers”).

2011-2012 Budget Proposal

C. Short- and long-term benefits of this proposal:

This proposal supports a part of Cascade’s rate structure that is a key element in its short- and long-term financial plans. These plans benefit the City by requiring other jurisdictions, where the majority of long-term growth is projected to occur, to pay a greater portion of the long-term cost of providing capacity to serve new growth.

D. Performance metrics/benchmarks and targets for this proposal:

There are no performance measures for this proposal.

E. Describe why the level of service being proposed is the appropriate level:

This proposal is not scalable. Neither the price nor the quantity are under Bellevue Utilities’ direct control.

An exception to an alternate level of services has been granted for this proposal. The recommended level of services meets the criteria for proposing efficiencies in the existing services while still meeting the intended outcome. Additional levels of service describing the impacts to operations may still be requested.

Section 8: Provide Description of Supporting Revenue

This activity is 100% supported by direct charges assessed to new connections and redevelopments/upgrades to water services.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: N/A
2. Customer Impact: N/A
3. Investment/Costs already incurred: N/A
4. Other: If this proposal is not funded, new customers would not be able to connect to the existing water distribution system in order to obtain needed water. This would require customers to try and obtain water rights and acquire their needed water through the diversion of surface water and/or ground water, potentially impacting existing water flows and the environment. In addition, not funding this proposal would mean forgoing the revenue received from RCFC charges to connecting/redeveloping customers. There would be no direct rate impact associated with not funding this proposal. In the long-term, however, water and sewer rates would be higher since the City would not add new customers, who – if connected –would help reduce rates to all customers by allowing the utility to spread fixed costs over a broader customer base.

B. Consequence of funding at a lower level:

If this proposal is funded at a lower level, the City would need to limit the number of new customers connecting to the system, inhibiting growth and economic expansion. Revenues from customers, which completely offset these connection costs, would be reduced.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Debt Service		Proposal Number: 140.38NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Bob Brooks, x7199		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Utilities debt service represents repayment of principal and interest on outstanding loans. Low-interest Public Work Trust Fund loans have provided funding for capital improvement projects at the lowest possible cost to ratepayers. Payments for principal and interest on these loans continue through 2014.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$ -	\$ -
Other	58,467	37,676
	<u>\$ 58,467</u>	<u>\$ 37,676</u>

Supporting Revenue

	\$ 58,467	\$ 37,676
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LTE/FTE

FTE	0.0	0.0
LTE	0.0	0.0
Total Count	0.0	0.0

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

N/A

Section 5: Budget Proposal Description

This proposal pays for Utilities debt service, which represents repayment of principal and interest on outstanding loans.

Between 1987 and 1994, the City's water and stormwater utilities accepted several Public Works Trust Fund Loans (PWTFL) from the State Department of Community Development. PWTFLs provide low interest (1-3%) loans to local governments for repairing and replacing deteriorating infrastructure. Payments for principal and interest on these loans continue through 2014. Any future revenue bond issue and/or PWTFL principal and interest payments would also be made from these accounts.

Section 6: Mandates and Contractual Agreements

City of Bellevue Ordinances No. 4016, 4141, 4313, 4532, 4650, and 4887, authorizing PWTF loan agreements for the City's water and stormwater utilities.

2011-2012 Budget Proposal

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

How will this Proposal achieve a Healthy and Sustainable Environment (HSE)?

This proposal provides funding for capital replacement projects needed to replace infrastructure as it ages. Replacement of aging infrastructure is critical to achieving the outcome, particularly as it relates to water resources. This proposal represents a funding source for projects that help minimize water and sewer line breaks as well as flooding, each of which potentially have significant customer impacts.

Factors in the Healthy and Sustainable Environment outcome:

- Factor 1: Water Resources. This proposal provides funding for the replacement of infrastructure needed to deliver reliable, clean water supply to the community, protect surface water quality, remove wastewater/sewage from homes and businesses, provide for resource habitat management, and provide flood control.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed by this proposal:

- Economic Growth and Competitiveness: Infrastructure; Responsive Government: Stewards of the Public Trust, Financial Sustainability, and Management of Risk and Liability.

Reliable infrastructure is one of the foundations of economic competitiveness and growth. Managing debt in a fiscally prudent manner supports continued economic viability and creates financial sustainability.

Managing risk and liability by providing the means to replace aging infrastructure before it breaks and without undue impact on customers is key to earning the public's trust that their government is safeguarding their interests and managing their assets well.

Citywide purchasing strategies addressed by this proposal:

- Best Value and Financial Impacts. At the time they were applied for, accepting low-interest loans was determined to be in the best interest of ratepayers in providing funds for capital infrastructure improvements at the lowest possible cost over the long term.

C. Short- and long-term benefits of this proposal:

It is to the Utilities' short- and long-term benefit to pay its debt service as required by contract.

D. Performance metrics/benchmarks and targets for this proposal:

There are no performance measures for this proposal.

E. Describe why the level of service being proposed is the appropriate level:

This proposal is not scalable. Utilities is obligated to pay its debt service in its entirety to avoid defaulting.

An exception to an alternate level of services has been granted for this proposal. The recommended level of services meets the criteria for proposing efficiencies in the existing services while still meeting the intended outcome. Additional levels of service describing the impacts to operations may still be requested.

Section 8: Provide Description of Supporting Revenue

These activities are entirely supported by utility rates.



2011-2012 Budget Proposal

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: If payments are not made on PWTFLs, the City would be in violation of its contractual obligations and potentially subject to legal action by the State. This could also adversely affect the City's bond ratings.
 2. Customer Impact:
 3. Investment/Costs already incurred: \$2,738,431 (principal plus interest)
 4. Other:
- B. Consequence of funding at a lower level:** If PWTFL payments are not made in the amounts scheduled, the City would be in violation of its contractual obligations and potentially subject to legal action by the State. This could also adversely affect the City's bond ratings.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Operating Transfer to CIP		Proposal Number: 140.39A1
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Bob Brooks, x7199		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): This proposal is dependent to Utilities' Capital Reserves proposal 140.41PA, and Utilities' CIP proposals (140.02NA, 140.03NA, 140.04NA, 140.05NN, 140.07NN, and 140.08NA, as well as the alternates to these proposals).		

Section 2: Executive Summary

The vast majority of funding for Utilities' capital projects is provided by rate revenues through monthly transfers from rates to Utility CIP. Funding needs are determined by projecting cash flow requirements for capital programs for the year, while addressing short- and long-term rate impacts. In response to current economic conditions, this proposal defers the 2011 and 2012 rate increases and associated transfer from rates to the Utilities CIP. This would provide a short-term rate reduction during the 2011-12 biennium. If at some point Council chooses to return funding for these capital projects to previous levels, there would be a rate impact in the next biennium or over a longer period of time. If the reduction is permanent, this approach would reduce rates for current ratepayers at the expense of future ratepayers.

In addition, funding for W-82, Fire Hydrant Improvements, has been suspended in 2011 and 2012 at the request of the Safe Community Results Team, which reduces the proposal cost by \$113,485. This would provide a short-term benefit to the General Fund through a reduction in the charge for fire flow capacity. If at some point Council chooses to return funding for this capital project, there would be an increase in the charge to the General Fund for fire flow capacity.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$ -	\$ -
Other	15,331,844	22,634,239
	<u>\$ 15,331,844</u>	<u>\$ 22,634,239</u>

Supporting Revenue

	\$ 15,331,844	\$ 22,634,239
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LTE/FTE

FTE	0.0	0.0
LTE	0.0	0.0
Total Count	<u>0.0</u>	<u>0.0</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

This proposal suspends W-82, Fire Hydrant Improvements, in 2011 and 2012. The effect of this change reduces the cost to the General Fund for fire flow capacity by \$113,485 over the two-year period.

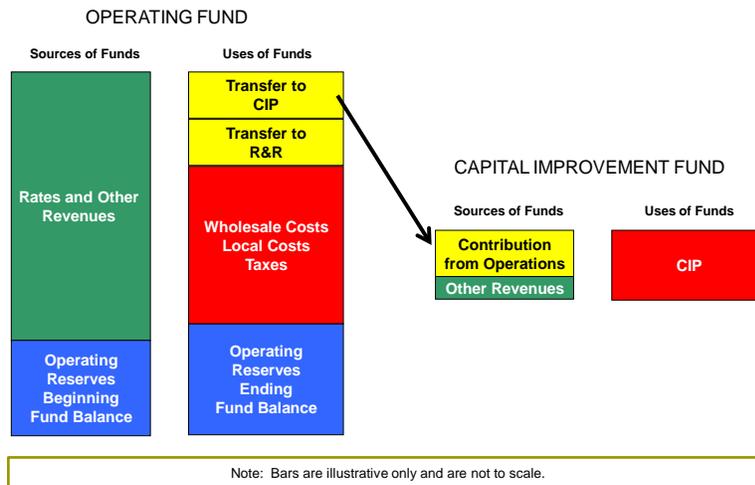
2011-2012 Budget Proposal

Section 5: Budget Proposal Description

This proposal represents the transfer of monies from rates to fund current and future CIP projects, as graphically illustrated in Figure 1.

The operating transfer provides virtually 100% of the funding for capital projects, with the balance coming from interest earnings and miscellaneous fees. Capital needs include ongoing capital improvements during the 7-year CIP window. Annual transfers are determined by the long-term financial forecast based on current revenues and expenses and CIP cash flows. The long-term financial forecast projects a certain funding level for the transfers to the CIP and rates are established consistent with this long-term financial plan to generate the funds needed for such transfers.

**Figure 1
Transfer from Utilities Operations (Rates) to
Utilities CIP**



Utilities' financial policies, as adopted by Council, guide the operating transfer to CIP and mandate the following levels of service:

- Funding for capital investments shall be sustained at a level sufficient to meet the projected 20-year (or longer) capital program costs;
- Funding from rate revenues shall fund current construction and engineering costs, contributions to the Capital Facilities Renewal and Replacement (R&R) Account, and debt service;
- Inter-generational equity will be assured by making contributions to and withdrawals from the R&R Account in a manner which produces smooth rate transitions over a 20 year (or longer) planning period; and
- On an annual basis, funding should not fall below the current historical cost (book) depreciation of assets less any debt principal payments.

The Financial Policies also state that Utilities should fund capital investment from rates and other revenue sources and should not plan to use debt except to provide rate stability in the event of significantly changed circumstances, such as disasters or external mandates.

2011-2012 Budget Proposal

Section 6: Mandates and Contractual Agreements

Resolution No. 5967 (1995) established the “Waterworks Utility Financial Policies.” Under these policies, “the Capital Investment Program (CIP) will provide sufficient funds ... for the implementation of both short- and long-term capital projects as identified in each Comprehensive Plan and the Citywide Capital Investment Program as approved by the City Council.”

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

How will this Proposal achieve a Healthy and Sustainable Environment (HSE)?

This proposal provides funding for capital projects needed to comply with mandates (e.g., relocation of utilities for the I-405 Braids project), accommodate growth, replace aging infrastructure, and provide environmental restoration. Each of these needs is important to achieving the outcome, particularly as it relates to water resources. This proposal funds projects that help minimize water and sewer line breaks as well as flooding, each of which potentially have significant customer impacts.

Factors in the Healthy and Sustainable Environment outcome:

- Factor 1: Water Resources. This proposal provides funding for capital projects needed to deliver reliable, clean water supply to the community, protect surface water quality, remove wastewater/sewage from homes and businesses, provide for resource habitat management, and provide flood control.
- Factor 3: Nature Space. This proposal provides funding for capital projects needed to provide for resource habitat management and provide environmental restoration such as removing barriers to fish passage, restoring degraded stream corridors, and controlling sediment sources to streams.

Purchasing strategies in the Healthy and Sustainable Environment outcome:

- Outcome Purchasing Strategy 5: Conserve and Protect Valued Natural Resources. This proposal provides funding for capital projects needed to provide for resource habitat management and provide environmental restoration such as removing barriers to fish passage, restoring degraded stream corridors, and controlling sediment sources to streams.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed by this proposal:

- Economic Growth & Competitiveness, Factor 3: Infrastructure. A key requirement of economic growth is that the underlying utility infrastructure is in place in advance of the need. This proposal funds capital improvements needed to accommodate growth. The timing of Utilities capital projects to meet growth is coordinated with Transportation to ensure minimal disruption of roadways.

Citywide purchasing strategies addressed by this proposal:

- Best Value. This proposal provides funding for capital projects during the 7-year CIP window. The funding plan utilizes interest earnings and miscellaneous revenues to the extent these are available. Revenues from rates are then used to provide the balance of the needed funding, but are “levelized” to provide a steady source of funds while avoiding unnecessary rate increases to fund temporary spikes in capital funding needs. This strategy avoids having rates that fluctuate to meet cash flow fluctuations.

C. Short- and long-term benefits and risks of this proposal:

Short-term benefit: In the short term, the operating transfer provides funding for capital improvements approved by Council for the 7-year CIP period.

2011-2012 Budget Proposal

Long-term benefits: Over the long term, funding for capital reinvestment is based on an approach that results in smooth rate transitions to ensure that current ratepayers contribute their fair share of replacement costs, thus providing for long-term equity. Utilities Financial Policies provide for financial planning for long-term capital investment that is based on principles that result in smooth rate transitions, maintain high credit ratings, provide for financial flexibility, and achieve inter-generational equity. In addition to rate funding for near-term projects, funding should be provided for long-term capital reinvestment in the system to help minimize large rate impacts as the systems near the end of their useful life and have to be renewed or replaced. Ordinance No. 4783 established a Capital Facilities Renewal & Replacement (R&R) Account for each Utility to provide a funding source for this purpose (see Proposal #140.48DN).

Short-term risk: Fire response in the vicinity of non-standard hydrants will remain sub-standard, taking longer for fire responders to connect hoses to the hydrants.

D. Performance metrics/benchmarks and targets for this proposal:

There are no performance measures for this proposal.

E. Describe why the level of service being proposed is the appropriate level:

This proposal is scalable only to the extent that, in order to reduce the cost associated with this proposal, capital projects requested in other proposals would need to be cut or reduced. For that reason, no alternate proposal is being submitted. To the extent that CIP projects are not funded, or funded at reduced levels, the costs shown in this proposal may be adjusted.

An exception to an alternate level of services has been granted for this proposal. The recommended level of services meets the criteria for proposing efficiencies in the existing services while still meeting the intended outcome. Additional levels of service describing the impacts to operations may still be requested.

Section 8: Provide Description of Supporting Revenue

- This proposal is partly funded by interfund revenues, which represent rental payments for the use of Utilities' properties by other departments. That portion of the funding therefore is paid for from General Fund revenues.
- The remaining proposal costs are entirely supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal:
2. Customer Impact:
The long-term financial forecast projects a certain funding level for the transfers for capital projects, and rates are established consistent with this long-term plan. Setting rates at lower levels would result in current ratepayers contributing less than their fair share for long-term equity.
3. Investment/Costs already incurred:
4. Other:
This proposal provides virtually 100% of the funding for capital projects. Not accepting this proposal would mean CIP would not be funded, requiring that capital projects included in other proposals be cut or alternative funding sources be identified.

B. Consequence of funding at a lower level:

This proposal provides virtually 100% of the funding for capital projects. Reducing this proposal would mean CIP would be under-funded, requiring that capital projects included in other proposals be cut or reduced.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Utilities Department Management & Support		Proposal Number: 140.42NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Denny Vidmar, x7675		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Utilities is a self-supporting enterprise operating within the City’s structure, dedicated to actively supporting public health and safety, the environment, a sustainable economy and neighborhood livability now and into the future. It does so by effectively and efficiently managing an annual budget of nearly \$100 million and 188 FTEs/LTEs (166.5 Utilities, 21.5 Streets Maintenance/Transportation) engaged in five distinct business lines: drinking water, wastewater, storm and surface water systems, street maintenance, and solid waste collection. Utilities provides service 24 hours a day, 365 days a year, to customers at their homes or businesses. Because of the long lives of utility systems, Utilities’ planning horizon extends 75 to 100 years. With its diverse portfolio, this large and complex department requires strong leadership, strategic vision, clear guidance, and thoughtful management. Positions included in this proposal are Department Director, Deputy Director, Management Assistant to the Director, and Administrative Assistant. The resources benefit all functions within the department and could not logically be assigned to an individual proposal.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$553,661	\$582,428
Other	43,910	44,435
	<u>\$597,571</u>	<u>\$626,863</u>

Supporting Revenue

	\$597,571	\$626,863
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LTE/FTE

FTE	4.0	4.0
LTE	0.0	0.0
Total Count	<u>4.0</u>	<u>4.0</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Efficiency/Cost Savings (also a Citywide Purchasing Strategy): As a result of both short- and long-term strategic planning and a focus on service, customers continue to express high satisfaction with Utilities’ services. Utilities’ Renewal and Replacement Accounts proactively set aside funds to replace the City’s utility infrastructure as it ages, thereby avoiding the need for large rate spikes and ensuring that each generation pays its fair share of replacing the system. This not only provides good value to our customers, it also attracts residents and businesses interested in relocating to Bellevue. This proposal eliminates Utilities’ participation in the American Public Works Association (APWA) reaccreditation process. All of the benefits associated with accreditation can now be better achieved via the One City and Budget One processes.

2011-2012 Budget Proposal

Partnerships/Collaboration (also a Citywide Purchasing Strategy): *Internal:* Leadership Team (participant); City Manager's Office (coordination; liaison); City Council (liaison); Environmental Services Commission (policy guidance and rate review); Environmental Stewardship Initiative (coordination); *External:* Cascade Water Alliance; King County Solid Waste Division; King County Metro; Department of Ecology.

Section 5: Budget Proposal Description

The Director and Deputy Director provide direction, leadership, and oversight to the Utilities Department and facilitate the development of strategy and policy in collaboration with the City Manager's Office and other City departments. They ensure that the City's mission, core values, and Council direction are incorporated into Utilities' operational activities and services. The Director represents the City in the community, the region, and nationally with regard to policy and operational initiatives and serves as a member of the City's senior leadership team. The Director and Deputy Director work closely with Assistant Directors to:

- Provide strategic and policy direction in operations and maintenance, engineering, and financial management; manage the day to day administration of the Department, including the budget, personnel, labor relations and customer requests; oversee the preparation and update of short- and long-range strategic plans to ensure Utilities' contribution to the City's overall plans and strategies; and direct ongoing research into new technologies and trends.
- Recruit and retain qualified personnel at all departmental levels, and establish and maintain a working environment conducive to positive morale, individual style, quality, creativity, and teamwork.
- Present Utilities' issues and recommendations on major issues requiring policy direction to appropriate advisory bodies and to the City Council; coordinate Utilities' activities with those of other City departments and offices to ensure a consistent approach on common projects and interests; represent the City on critical utility and environmental issues, such as water supply governance; serve as members of senior management on task forces and committees participating in the City's strategic planning efforts; and address City-wide policy and management issues.

A Management Assistant to the Director works closely with the Director, Deputy Director, and operating divisions to:

- Lead a variety of projects, strategic initiatives, and business process improvements with a department-wide impact, including developing requests for proposals, managing contracts and budgets, and overseeing consultants.
- Conduct in-depth qualitative and quantitative research and make recommendations for policy changes/implementation.
- Manage recruitments, department-wide training, standard operating procedures, and various grant programs.
- Assist in facilitating organizational development and change.

An Administrative Assistant provides clerical support, scheduling, and coordination of department meetings, and coordinates materials for the Environmental Services Commission.

Section 6: Mandates and Contractual Agreements

RCW 35.91, Municipal water and sewer facilities act, and **35.92**, Municipal utilities. Washington state laws pertaining to the operations of utilities. Numerous state and federal laws governing management of water resources (listed in detail in other Utilities proposals)

COB 24.02.060: Authority of the utility. Director will develop, adopt, and carry out procedures as needed to implement this code and to carry out other responsibilities of the utility.

COB 3.38.020: Director and organization, Waterworks Utility. The waterworks utility shall be administered as a part of the utilities department and the director of the Utilities department shall be responsible for its supervision and control.

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COB 3.40.020: Director – Responsibilities, Storm and Surface Water Utility. The director of the utilities department shall direct the operations of the utility, including, but not limited to, the administration, planning, design, construction, operation, maintenance, and regulation of the storm drainage system.

COB 3.41.020: Director – Appointment – Responsibilities, Utilities. The City Manager shall appoint the Director of the Utilities department who shall report directly to the City Manager. The Director shall direct the operations of the department, comprised of the water utility, the sanitary sewer utility and the storm and surface water utility, and solid waste and recycling collection.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors and Purchasing Strategies in the Healthy and Sustainable Environment Outcome:

- Factor 1 and Outcome Specific Purchasing Strategy: Water Resources. The Director's Office works with internal and external stakeholders to develop and implement a vision to ensure the City's water resources are effectively and efficiently managed to meet the needs of customers and the environment. The Director's Office provides the leadership and guidance necessary to ensure that a safe and reliable supply of drinking water flows to and sewage is removed from homes and businesses, storm and surface water runoff is controlled to minimize negative impacts, such as erosion and flooding, and surface water quality and quantity are adequate to provide a suitable environment for plants and wildlife and to meet community recreational needs.
- Factor 2 and Outcome Specific Purchasing Strategy: Clean Living Environment. The Director's Office oversees the development and implementation of the policies that help to keep our community clean through the management of the solid waste collection contract with Allied Waste, implementation of waste prevention and recycling programs, and maintenance of streets and rights-of-way.
- Factor 3 and Outcome Specific Purchasing Strategy: Nature Space. The Director's Office provides the leadership necessary to ensure that policies and strategies are in place to improve, preserve, and restore nature space and habitat.
- Factor 5 and Outcome Specific Purchasing Strategy: Conservation: The Director's Office works with internal and external stakeholders to develop the policies and vision necessary to promote conservation in all aspects of Utilities, including water conservation, preservation of nature space, reduction of greenhouse gas emissions through energy efficiencies, and waste prevention and recycling programs.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Economic Growth and Competiveness: Community Policy, Planning and Development; Infrastructure; Quality Neighborhoods: Public Health and Safety; Safe Community: Planning and Preparation; Responsive Government: Community Connections, Strategic Leadership, Engaged Workforce, Exceptional Service, Stewards of the Public Trust. The Director's Office provides the vision and strategic leadership to ensure:

- Consistent policies and exceptional customer service that encourage business growth and help make Bellevue an attractive place to do business;
- A reliable utilities infrastructure is available to support existing and future businesses;
- Effective streets maintenance helps keep neighborhoods clean and pleasant;
- Development and implementation of an extensive Emergency Response Plan helps the City address the situation and return to normal operations as quickly as possible after an event;
- Open, honest, and accountable business practices that enhance connection with the community;
- Strategic leadership and customer –driven excellence as the cornerstones of a high performing organization;
- Workforce development and succession planning to ensure exceptional service and engaged employees;
- Stewardship of the public trust through long-term planning that ensures financial sustainability, quality infrastructure, minimized life-cycle costs, and intergenerational equity.

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Citywide Purchasing Strategies addressed by this proposal:

- **Best Value.** By providing proactive leadership, short- and long-term strategic planning, and clear direction on how to achieve the Utilities' mission, the community receives more effective and efficient utilities operations and services that meet their needs.
- **Best Practices.** The Director's Office maintains professional contacts with similar enterprises throughout the nation, sharing ideas and strategies to ensure that Utilities implements best management practices department-wide. The Director's Office staff also maintains a centralized electronic library of all Utilities' standard operating procedures, which is regularly reviewed and updated. Standard operating procedures promote best practices, and result in improved efficiencies throughout the department.
- **Sound Resource Management.** Careful oversight of operations and capital projects, and consistent application of Utilities' financial policies contribute to maintaining competitive utility rates.

C. Short- and long-term benefits of this proposal:

The Director's Office provides Utilities with direction for the future, making strategic decisions and resource allocations for the short- and long-term benefit of Utilities' customers and the organization; identifies opportunities to partner and collaborate with other governments, organizations and stakeholders to provide services to the community; ensures the workforce is well trained and equipped to support the provision of quality service; delivers efficient and effective services to customers in a timely and predictable way; takes responsibility for measuring results; and, manages assets to ensure continued financial sustainability.

D. Performance metrics/benchmarks and targets for this proposal: N/A

E. Describe why the level of service being proposed is the appropriate level:

Competitive utilities rates, high customer satisfaction ratings, a strong financial position, and positive employee survey ratings all speak to the quality of current department leadership. Strong leadership provides Utilities with a clear vision and the guidance necessary to provide the services customers expect for their rate dollars, and helps to ensure that services are provided in a cost-effective and efficient manner that promotes environmental stewardship and places an emphasis on proactive as opposed to reactive actions.

Section 8: Provide Description of Supporting Revenue

This service is supported by utilities rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: Utilities would not comply with the City code or policies and state and federal laws governing water resource management.
2. Customer Impact: The City would fail to have clear leadership of the Utilities Department, resulting in ineffective and inefficient services, which ultimately would result in rate increases that negatively impact City ratepayers.
3. Investment/Costs already incurred: N/A.
4. Other: Utilities would fail to engage internal and external stakeholders in the development and implementation of its vision and strategic plan.

B. Consequence of funding at a lower level:

Utilities has a large and diverse portfolio and staff. Its services are immediate (24/7) and exceptionally long-range (75 to 100 years). Funding at a lower level would slow or cause the City to fail to comply with the City code, and make it more difficult to actively engage internal and external stakeholders. Without a vision that can be clearly articulated to the department-at-large, Utilities' operations and services would suffer, becoming less effective and efficient.



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Section 1: Proposal Descriptors

Proposal Title: Utility Locates Program		Proposal Number: 140.44NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Kathryn Lew, x4893		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

The City utility systems include 651 miles of sewer pipeline, 395 miles of storm drain pipeline, 620 miles of water pipeline and over 40,000 water service lines. The Locates Program protects the underground piped utilities from damage by accurately marking utility locations prior to construction excavation. The Locates Program safeguards utility assets, construction personnel, citizens and the environment from damages and service disruptions caused by broken or breached pipelines.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$286,085	\$301,135
Other	61,085	45,934
	<u>\$347,170</u>	<u>\$347,069</u>

Supporting Revenue

	\$347,170	\$347,069
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LTE/FTE

FTE	3.50	3.50
LTE	0.00	0.00
Total Count	3.50	3.50

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/collaboration:

One Call/Underground Utilities (a regional locates clearinghouse); Development Services Department (inspectors); and private contractors.

Efficiencies/innovations:

In late 2008, Utilities completed a Six Sigma evaluation of the Locates Program. Six Sigma is a business management strategy that seeks to improve the quality of process outputs. Previously, staff from each of the three piped utilities responded separately to locate requests all over the city. After considering alternative service delivery models, it was determined that training staff to conduct locates for *all three* piped systems grouped geographically would eliminate the need for three separate visits to the same site. The change resulted in reduced travel time, fuel use, and equipment wear. This shift contributed to a 41% reduction in overtime in 2009, greater depth/breadth of knowledge in the organization, quicker response times and a workload decrease equivalent to 0.5 FTE.

Potential automation efficiencies were also examined during the Six Sigma project. This proposal includes funding for three laptops and a web software subscription that will allow locators to access utility system information from the field. Additional time savings and efficiencies will be gained from fewer trips back to the

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office for information and the ability to respond to contractor questions in the field. Currently if a locator receives an emergency locate while he is out in the field, he must go back to the office to review the maps and plans. The laptops/software will eliminate this step because it has the ability to import GIS maps so the locator can access the information in the field.

Section 5: Budget Proposal Description

Locators mark underground City utilities, including water, wastewater, and surface water lines, found below public streets, utility easements and rights-of-ways. They rely on engineering plans, maps, blueprints, pipe locating equipment, and systems knowledge to accurately identify and mark utility locations. Responsibilities include:

- Responding to excavation notices during normal business hours and after hours for emergency locates.
- Contractors are required by law to notify the City when they plan any excavation that may affect underground facilities. Locators work closely with the contractors to assure the locate markings are done within the 48-hour time requirement or an agreed-upon schedule.
- Thoroughly searching for and marking underground utilities in a specified area with clearly visible paint marks and stakes.
- Maintaining records, including site sketches, and performing as-built corrections when there are discrepancies between as-built maps and the actual location.
- Attending pre-construction meetings and site meetings with contractors and inspectors on large excavation projects.
- Responding to emergency and callout situations 24 hours a day, 365 days a year.
- Documenting and photographing utility markings and stakes when contractors damage City utilities.

Sewer lake line locates are managed separately from normal locates due to the complexity and challenge of finding sewer mains submerged underwater. A database of as-built drawings for each property on lakeshores contains information on sewer line locations and lakeshore modifications such as dock pilings and bulkheads. Locators meet with contractors performing work along the lakeshores to ensure that the City's sewer lake line is not damaged and the environment is protected. The majority of the lake line locate work is done from a boat and working in the water.

Section 6: Mandates and Contractual Agreements

Revised Code of Washington mandates:

- **RCW 19.122.010** – Assigns responsibilities for locating and keeping accurate records of utility locations. Locates must be marked within two business days after the call.
- **RCW 19.122.030** – Notice of excavation to owners of underground facilities.
- **RCW 19.22.035** – Pipeline company duties after notice of excavation. The company shall ensure that the pipeline section of the excavation is examined for damage prior to being reburied.
- **RCW 19.122.050** – Damage to underground facility, notification by excavator.

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factors in the Healthy and Sustainable Environment outcome:

- **Factor 1: Water Resources/Reliable Water Supply.** Accurate and timely marking of water pipes before excavation work prevents accidental damage to the water system. When contractors cause breaches, water damages the work site and must be shut off for repairs, disrupting service to businesses and residences.
- **Factor 2: Clean Living Environment/Clean Streets and Codes and Compliance.** Usually work is in the rights-of-way creating dusty streets. Accurate and clear markings prevent the contractor from digging up additional roadway searching for pipe.

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- Factor 5: Conservation/Protect from Environmental Hazards. By providing accurate and clear markings, accidental damage to underground pipes is kept to a minimum. If damage occurs, it can flood homes, businesses and streets with water or sewage and disrupt water service. Sewer lake line locates are especially critical in preventing breaches that would send raw sewage into Lake Washington or Lake Sammamish and damages to Storm Facilities might not known until a storm occurs.

Purchasing strategies in the Healthy and Sustainable Environment outcome:

- Outcome Strategy 1: Ensure our Water Resources are effectively managed to meet the needs of the environment and our community, now and into the future:
- Outcome Strategy 2: Maintain a Clean Living Environment which includes properties, streets, and open spaces.
- Outcome Strategy 5: Conserve and protect valued natural resources through preservation, restoration and efficient use.

Accurate and timely response to locate requests prevents accidental dig ups of utility pipes which can result in water flow disruption, sewer backup, and contamination of lakes/beaches.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed in this proposal:

- Economic Growth & Competiveness, Factor 2: Community Policy, Planning, and Development. The volume of locate requests closely mirrors the rate of new construction and redevelopment. Timely response to contractor requests for locates help meet construction schedules and decreases costs for developers, contractors, etc. The economic downturn has resulted in less large development-related locate requests, however, Puget Sound, cable companies, and smaller development have remained steady.
- Improved Mobility, Factor 2: Traffic Flow. When a contractor is working in the right-of-way, traffic movement is temporarily impacted. Accidental damage to the piped utilities due to a mis-locate or contractor noncompliance with RCW 19.122.030 could damage the work site requiring closure of additional lanes of traffic and closure for a longer period of time while damage is mitigated and repairs completed.
- Safe Community, Factor 1: Prevention. Accurate markings prevent accidental damage to underground pipes which can cause flooding, sewer contamination, and loss of water service to customers. Less time exposed to construction repairs and traffic provides a safer working environment to workers.

Citywide purchasing strategies addressed:

- Best Value, Gains in Efficiency, Best Practices, Promote Environmental Stewardship, and Sound Management of Resources and Business Practices

Following the Six Sigma project recommendations, changes to business processes yielded staffing efficiencies while continuing to meet RCW requirements and customer demand. The mobile laptops/software used by other Utilities (best practice) are expected to provide additional efficiencies by allowing the locators remotely access utility system data from the field. The environmental benefits of accurate and timely locates are discussed above in Section 7.

C. Short- and long-term benefits of this proposal:

- Short term: (1) Safeguards citizens and construction personnel working around utilities; (2) protects the underground infrastructure from damage that could disrupt utility services and threaten public health, safety and environment; and (3) limits City liability for property damage and revenue loss due to service interruptions to businesses.
- Long term: (1) Maintains City compliance with RCW 19.122; (2) reduces the carbon footprint associated with vehicle trips through consolidated locates; and (3) reduces ultimate cost of service to customers by reducing damage to systems and resulting claims.

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D. Performance metrics/benchmarks and targets for this proposal:

1. Total number of claims filed with Risk Management that are determined to be the City's responsibility; target = 0. In 2009 there were zero claims.
2. Number of dig-ups due to mis-located assets; target = 0. In 2009 there were 2.
3. Number of locates received; target = approximately 7500 per year. There were approximately 7540 in 2009. (Note: a single locate request may generate multiple utility locates per site.).
4. Percent of locates performed within mandated deadlines; target = 100%. 2009 actual was 100%.

E. Describe why the level of service being proposed is the appropriate level:

This proposal reflects efficiencies described in Section 4 under "Cost Savings/Innovation." The service cannot be scaled down further because of the response times mandated by RCW 19.122. When workload demands are heavy, the locators will assist each other to make sure all time mandates are met no matter the geographical district they are assigned to. At times this requires regular maintenance field crews to help. Time not spent directly in the field marking locates is spent on the tasks listed in Section 5.

While the service must meet RCW requirements, another service delivery option would be outsourcing. Outsourcing is not recommended because contract locators:

- Are not familiar with the utility infrastructure and systems and there would be an increase in damages and customer claims due to more locate errors.
- Lack ready access to up-to-date maps, as-builts, and engineering drawings.
- Would increase the risk of environmental damage due to inexperience with the sensitive lakeshore and sewer lake lines.

In the past, the City used an outside contractor to perform surface water locates. Pavement markings were often not completed within the required 48-hour time frame, and when completed were not always accurate. An example: The Surface Water Utility asked the private contractor to perform locates on a City public easement. The contractor did not locate a storm vault which resulted in a backhoe and the operator falling through the vault lid while he was putting down soil for the property owner. This was a catastrophic failure that involved a lot of lawyers and money. Contract locate fees are high for Water and Sewer because of consequences of mis-locates and insurance requirements.

Section 8: Provide Description of Supporting Revenue

Activities are supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all

1. Legal Risks: Level of service is mandated by RCW 19.122 which states that all regular locate requests be performed within two business days after the receipt of the notices or before the excavation time, unless otherwise agreed by the parties. All emergency requests must be completed as soon as possible.
2. Citizen/Contractor/Business Impacts: Contractors working on new development, renovation, and maintenance projects are immediately impacted if this proposal is not funded as excavation work in the right of way is halted when piped utilities are not located. Mis-locates can cause damage to piped utilities with negative impacts to traffic mobility, service interruption for businesses and residences, sewage spills, and pollution impacts to lakes, streams, and beaches.
3. Investment/Costs already incurred: N/A
4. Other: Environmental Damage and Claims: If late or erroneous locates result in utility system damage and excessive water, sewer, or storm water discharges, the City would be at greater risk of claims for property damage and environmental impacts, and could be fined by the Department of Ecology.

B. Consequence of funding at a lower level: Similar to those described above. Rate impacts/increases resulting from an increase in system damage, liability claims, and fines for non-compliance.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Utility Water Meter Reading		Proposal Number: 140.45DN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Kathryn Lew, x4893		One-Time/On-Going: On-Going
Fund: Water	Attachments: No	Enter CIP Plan: N/A
List Parent/Dependent Proposal(s): Dependent on 140.33PA, Utilities Customer Service Billing		

Section 2: Executive Summary

This proposal provides services to read customer meters for all residential and commercial accounts in the water utility service area that includes the City of Bellevue, adjacent communities of Clyde Hill, Hunts Point, Medina, Yarrow Point, and sections of Kirkland, Issaquah, and unincorporated King County. Meter reading is essential to maintaining water and wastewater revenue flow and equity among ratepayers (winter water consumption is used as the consumption basis for wastewater billing). Other services are provided directly to property owners at their home or business, such as help locating leaks and meter turn-offs.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$459,556	\$484,028
Other	30,519	30,562
	<u>\$490,075</u>	<u>\$514,590</u>

Supporting Revenue

	\$490,075	\$514,590
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LTE/FTE

FTE	6.00	6.00
LTE	0.00	0.00
Total Count	<u>6.00</u>	<u>6.00</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/Collaboration: *Internal:* Utility Billing Customer Service Representatives (report information from customers to meter readers, shutoff/turn on service requests, etc.), Water Maintenance Section, Information Technology Department (update mapping), Customer Information Systems Support. *External:* Radix Company (supplier of meter reading software/handheld equipment). Puget Sound Energy (PSE) was contacted a few years ago to explore the possibility of partnering with Bellevue to read meters. PSE currently uses Automated Meter Reading (AMR) technology. Since Bellevue's meters have not been converted to AMR, PSE is unable to read our meters. Future partnering will depend upon Bellevue moving to AMR.

Efficiencies/Innovations: Radix handheld readers were replaced three years ago. These devices improve meter in-field data capabilities and reporting integration with the Customer Information System (billing system). In 2008 an AMR Study was conducted to aid the utility in evaluating its current water service meter reading program and analyzing the potential for transitioning to an automated meter reading system. A consultant analyzed technology options, costs, and non-cost factors and compared Bellevue to other local jurisdictions. Results indicated we read more meters/FTE, have amazingly high accuracy rate and provide a great range of services (see Section 5). The Utility is efficiently and effectively using the direct manual reading approach for the majority of its meter reading. Study recommendations:

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- Continue direct manual reading for the majority of water service meters.
- Continue bimonthly meter-reading and billing.
- Consider implementation of AMR technology in the central business district (CBD).
- Collect cost data and specifications for possible phased AMR implementation and deployment beginning 2013-2014.

Section 5: Budget Proposal Description

This proposal requests funding for meter reading staff, supplies, and equipment necessary to read, record, and report customer water consumption for customer billing purposes. Activities include:

- Read all commercial and residential water meters. Meter readers read approximately 40,000 water meters six times a year on assigned schedules and routes. They inspect meters for damage, tampering, leaks and malfunctions. Meter reads are entered into handheld data loggers and downloaded into billing software at the end of each day.
- Close out water meter accounts and re-read meter. Needed when customers moving in or out of their homes or businesses, and for construction/repairs. Re-reads (approximately 4,000 in 2009) verify the accuracy of initial reads, often when a customer questions an unusually high bill. A usage spike may indicate a faulty meter or a leak.
- Shut off and turn on meters due to delinquent accounts. The number of shut-off/turn-ons average 25 per week.
- Data collection and as-built correction. Data entry in Maximo (the asset management and maintenance data management system) and the Customer Information System (CIS). Meter data collection includes installation dates, sizes, types, locations, and designated of cycle/route locations. Errors on as-built drawings are noted and corrections are coordinated by meter reading staff.
- Hang customer door tags. Courtesy tags convey information about billing status, high usage levels suggesting possible leaks, service interruption notices and delinquent accounts. In 2009, approximately 6,200 door tags were delivered.
- Respond to customer service requests. Meter readers provide direct customer service and build goodwill by answering questions, helping them solve leak and high consumption problems, and explaining City policies.
- Maintain meter box and replace meters. Readers repair/replace meters that are obsolete, inaccurate, or damaged and maintain/adjust water meter boxes to reduce the potential for trips and falls.
- Clean vegetation and debris around the meter box. Clean meter-box areas allow meter readers to readily access meters and demonstrate the City's commitment to maintaining its equipment and respecting the neighborhood environment. Courtesy tags may be left to notify customers of vegetation problems.

Section 6: Mandates and Contractual Agreements

- Washington State Constitution, Article VIII, Section 7 – The utility must bill for services provided.
- WAC 480.110.355, Discontinuance of Service – Procedures and notification requirements before disconnecting service.

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factors in the Healthy and Sustainable Environment outcome:

- Factor 1: Water Resources. Collection of customer meter data provides the basis for utility billing to Bellevue residents and businesses. The meter readers are often the only direct contact that customers may experience. Meter readers respond to customer requests to help locate leaks, explain water conservation methods, and distribute educational brochures. On-site leak identification minimizes property damage as well as unaccounted water loss. Unreported leaks can cause damage to streams and fish.

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- Factor 2: Clean Living Environment. Regular cleaning of meter box sites not only provides better access to read meters, but also provides a clean and safe environment to citizens and contributes to well maintained and attractive neighborhoods
- Factor 5: Conservation. When meter readers read a customer's meter, they note if water usage is unusually high. High consumption may indicate a water leak and the meter reader will work with the customer to locate a leak. If high water consumption is not due to a leak, meter readers then advise the customer about water conservation practices and programs that could yield water and bill savings.

Purchasing strategies in the Healthy and Sustainable Environment outcome:

- Ensure that our Water Resources are effectively managed to meet the needs of the environment and our community, now and into the future.
- Conserve and protect valued natural resources through preservation, restoration and efficient use.

WAC 480-110 requires that the utility: (1) maintain its system in a condition that enables it to furnish adequate services, (2) perform meter accuracy tests within 10 days of the complaint, and (3) undertake customer water conservation education. The City repairs/replaces all damaged meters. If a customer requests a meter accuracy test, the request is done well within the 10-day window. Prompt testing can determine whether the meter is malfunctioning or if there is a leak in the service line. Early leak detection saves water. Meter readers provide brochures to help customers with high bills to identify the reasons for high water consumption. The Utilities Department also uses meter reading data to analyze community water usage trends and develop conservation strategies.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed:

- Quality Neighborhoods, Factor 3: Public Health and Safety. Regular cleaning of meter box sites provides a clean and safe environment to citizens and contributes to well maintained and attractive neighborhoods. For example, raising or lowering meter boxes eliminates tripping hazards.
- Responsive Government, Factor 4: Efficient and Effective Delivery. The Utilities Department maintains a positive and visible community presence through the meter reading program. The meter readers working regular routes are likely to notice changes or unusual situations which need immediate attention. This familiarity allows them to help customers who need financial or medical aid, including calls to 911. The meter readers also carry a variety of City brochures, quick reference guides, and City contact numbers and to help citizens reach the right City department or agency.

Citywide purchasing strategies addressed:

- Best Value. The current manual read method for residential meters is cost effective. The accuracy rate is extremely high and employee productivity is above the industry standard. The 2008 AMR Study found the current meter-reading approach of predominantly manual meter reads is consistently the most cost-effective option based on a Present Value analysis and considering the present bimonthly reading and billing frequency.
- Gains in Efficiency. Meter readers use current data logger technology to capture customer water consumption.
- Leveraged Collaboration. The meter-readers work closely with Utility Billing to coordinate service disconnects/connects. They also work with the Water Maintenance Section to schedule/repair problem meters, unscheduled shut downs, emergency repairs, and respond to customer concerns.
- Best Practices. The existing manual read program meets and exceeds industry standards and is cost effective. Transitioning to Automated Meter Reading requires an estimated initial capital outlay of over \$6M as reported in the 2008 AMR Study. If future analysis indicates AMR is cost effective, installation of AMR-compatible meters through the Utilities Meter Replacement Program allows for a smooth transition.

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- Promote Environmental Stewardship. The meter readers have many opportunities to interact with customers to promote water stewardship by giving advice and handing out informational brochures.
- Ensure Sound Management of Resources and Business Practices. Utility Billing audits/monitors large meter volume regularly to check for gradual meter slow-downs, indicating the meter may be failing. Utilizing the Customer Information Billing System and the Meter Reader handhelds interface, unusually high or low meter reads are quickly identified, which expedites faster replacement and minimizes revenue loss.

C. Short- and long-term benefits of this proposal:

Water meter readings are entered into Utilities' customer billing system and used as the basis for calculation of water bills. Water meter readings are also used to calculate customer wastewater charges based on winter water usage. Accurate water meter readings give Utilities a legitimate basis for both water and sewer billing and revenue collection. Reliable billing revenue allows the City to provide the essential water and wastewater services that support a healthy and sustainable environment.

Accurate and timely water meter reading also ensures that the City complies with multiple state regulations described in Section 6: Mandates and Contractual Agreements.

D. Performance metrics/benchmarks and targets for this proposal:

1. Meter reading accuracy rate. Target is > 99%. This target is better than industry standards (per 2008 AMR Study). 2009 actual was 99.95%. A high accuracy rate minimizes repeat visits to the field to verify reads, ensures accurate customer billing, and fewer dissatisfied customers.
2. Meter reading productivity. Current target of 375 meter reads per day per meter reader is consistent with industry standards (per 2008 AMR Study). 2009 actual average was 373.2 meter reads per day.

E. Describe why the level of service being proposed is the appropriate level:

The 2008 Automated Meter Reading Study confirmed that bimonthly meter reading and billing are currently the appropriate meter reading service levels for the City of Bellevue (see Section 4, Efficiencies/Innovations). Meter readers must adhere to bi-monthly reads on an eight cycle route assignment in order to supply water consumption data for billing purposes.

Section 8: Provide Description of Supporting Revenue

Activities are supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: Violations of State Law: The City would be in violation of Article VIII, Section 7, of the Washington State Constitution that directs that there can be no gift of public funds, i.e., the Utility must bill for the services it provides. The City would also be out of compliance with other State mandates described above.
2. Customer Impact: Billing and Service Delays: Customer billing schedules would be altered and delayed. Bills would likely become larger due to delays; notices and educational materials would be less timely; and possible errors, leaks, and high usage patterns would not be detected early.
3. Investment/Costs Already Incurred: Loss of Value from Metering Assets: The Water Utility would not receive value from its sizeable past investment in meter reading equipment. Damage to valuable meter and meter-related assets may not be detected or remediated if meter reading ceases. Customer Information Service (CIS) Impacts: the frequency of the reads would require costly CIS changes to reprogram the billing software.
4. Other: Disruption of Revenue Collection: Not funding this proposal would impact revenue collection. There would be no water usage data to accurately calculate customer bills. Decreased funding would mean inadequate resources to collect customer consumption data in the time frame prescribed by Utility Billing. Utility income would be affected.

B. Consequence of funding at a lower level: Similar to those described above.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Customer Service and Billing User Support		Proposal Number: 140.46DN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Margaret Nolen, x6131		One-Time/On-Going: On-Going
Fund: 4200; 4440; 4450	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): Parent is 140.33PA, Utilities Customer Service Billing; related to 140.45DN, Utility Water Meter Reading		

Section 2: Executive Summary

Utilities Customer Service and Billing uses the Customer Information System (CIS) to bill and manage the accounts of 38,000 customers, accounting for rate revenue of over \$85 million for Utilities. Staff provide business-specific support for the family of systems, services, and interfaces that make up the CIS. This support requires a comprehensive knowledge of Utilities' accounting methodologies, business processes, rate algorithms, and business rules.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$184,514	\$194,431
Other	146,679	119,077
	\$331,193	\$313,508

Supporting Revenue	2011	2012
	\$331,193	\$313,508

LTE/FTE	2011	2012
FTE	1.75	1.75
LTE	0.00	0.00
Total Count	1.75	1.75

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Efficiencies/Innovations: (a) A unique merchant ID and CIS configuration enables Utilities to receive discounted credit card fees; (b) Recently implemented technology to consolidate third-party electronic payments will improve cash flow, reduce errors and reduce payment delays from 7-8 days to 1-2 days; (c) Automated interfaces to vendors and enterprise systems reduce error and increase billing efficiency. (d) Process improvements in 2010 will streamline collections and service orders; d) Utilities will analyze Automated Meter Reading options in 2011-12 to implement in 2013-14.

Partnerships/Collaboration: *Internal:* Development Services (shared resources for phone inquiry and payment), Information Technology Department; *External:* Advanced Utility Systems (CIS, MyUtilityBill [MUB]), Selectron (MUB By Phone), PayPal (online payments), Kaye-Smith (statement printing and mailing), Puget Sound Energy (mailed payment processing), PayMode Concentrator (third-party billing), Radix (meter reading).

Section 5: Budget Proposal Description

Technology services represented in this proposal are different from those provided by the IT Department, and do not duplicate their services.

2011-2012 Budget Proposal

Support staff provide business-specific support for the family of systems, services, and interfaces that make up the Customer Information System:

1. CIS Infinity – utility billing and accounting system
2. MyUtilityBill (MUB) Internet bill presentment and payment; and MyUtilityBill By Phone (MUB By Phone) telephone inquiry and bill payment
3. PayPal's Payflow Pro Payment Server – secure online debit/credit card payments
4. Oracle's JDE Interface – General Ledger (GL) interface
5. CLASS POS Interface - supports over-the-counter payments made at Service First and mini-City Hall
6. Radix - import and export of meter information using handheld meter-reading devices
7. Mapster Interface - GIS display of utility billing information
8. Puget Sound Energy Interface - lockbox processing service for mailed payments (15,000 payments/month)
9. Kaye-Smith Interface - mailed statements and delinquency notice printing (approximately 5,000 statements/week)
10. PayMode Concentrator Services from Bank of America – expedites electronic payments from third parties

Services provided are listed below.

Operations Support: Manage the CIS billing system to process daily utilities payments, provide real-time payment information to customer service representatives and online customers, create payments and receivables for the City's General Ledger (GL), maintain service and tax rates and fees, and provide information for balancing and reconciling utilities receipts with the GL.

Reporting and Data-Mining: The CIS data repository is a big asset to Utilities and the City. Its uses include revenue calculation, posting, and collection. It also provides information for rate modeling, comprehensive planning, environmental reporting, and resident identification for the City. Responding to report requests represents a significant portion of staff time. Staff provide data mining expertise, transforming data into actionable information. Examples include data sampling for internal/ external auditors, stats on service adoption and use, and periodic reporting to ensure data accuracy.

Project and Interface Management: Provide project management, including effective scoping, scheduling, testing, and communications, with the goal of implementing change seamlessly for the customer. Automated interfaces to outsourced vendors and enterprise systems reduce error and increase efficiency, and interfaces require proactive and change management with other systems, users, and processes.

Testing and User Training: Provide training and testing for a 24 x 7 online system that customers access directly. Regression testing is needed to avoid introduction of errors during interface changes. Vendor-initiated updates can arrive monthly, and testing is required for enhancements, regulatory changes, and bug fixes.

Process Improvement / Problem Solving: Work with utility end users to review and improve business processes by examining procedures and determining how our systems can be improved in effectiveness or efficiency.

Section 6: Mandates and Contractual Agreements

- **WA State Constitution Art. VIII, Sec. 7, No gift of public funds.** Utilities must bill for services provided.
- **RCW 43.09.210 Local Government Accounting.** Funds shall be maintained separately and payments received must be applied to the funds that were billed. CIS is conformed to a very specific payment allocation hierarchy to be in compliance.
- **WAC 480.110.375 Form of Bills.** Directs information required on utility bills and dictates the timeline for payment arrangements on back-billed amounts. Bellevue bills are customized in CIS to conform to these guidelines.
- **Payment Card Industry Data (PCI) Security Standard** is a worldwide information standard defined by PCI to help prevent credit card fraud through increased controls around data and limiting exposure.
- **Franchise Agreements and Utility Tax.** CIS must be configured to collect utility tax and franchise fees as part of billing.

2011-2012 Budget Proposal

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

A reliable billing system and means to mine data for information is critical to collecting revenue to pay for infrastructure to meet the community need for clean safe drinking water, effective wastewater removal, and storm water conveyance.

- Factor 1: Water Resources; Factor 2: Clean Living Environment; Factor 3: Nature Space/lakes, streams and wetlands. Generation of revenue through billing and collection provides funds to operate, maintain and replace infrastructure, treat sewage, and reduce failure and subsequent harm to natural areas and wildlife. Utility bills and MUB website provide messages, inserts, FAQs, and links to educate customers.
- Factor 5: Conservation/ Being Green. CIS supports conservation by offering customers an option to receive an electronic bill instead of a paper one. Customers can save paper by paying online, over the phone, or through an automatic withdrawal from checking or savings. CIS bills within a tiered rate structure, rewarding customers when they use less water or have less impervious surface.

Purchasing strategies in the Healthy and Sustainable Environment outcome:

- Deliver results in an environmentally sensitive and sustainable way. Paperless bill payment methods provide customers with environmentally sensitive options.
- Place more emphasis on proactive versus reactive actions. CIS is configured to detect meter misreads and statement exceptions so they can be corrected before billing. When rates change, staff performs testing prior to implementation, and audits the system to ensure data integrity and prevent errors.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

- Responsive Government Factor 1: Community Connections, Factor 4: Exceptional Service, All-Way Communication and Accessibility. Community focus groups were involved in redesigning the billing statement, resulting in a simplified format requiring less paper and postage, and customers can interact directly with Utilities using the "Contact Us" option and service features provided on the MUB website. Internet billing/payment and phone payment are offered in response to customer demand.
- Responsive Government, Factor 5: Exceptional Service, Timeliness, and Predictability. "Quick Pay" options for Internet and phone payments save time for customers. Customers can receive email notification when their electronic bills are ready with a link taking them to the bill statement.pdf. The online and phone systems are available, accurate, and real time 24 x 7.

Citywide purchasing strategies addressed by this proposal:

- Best Value in Meeting Community Needs. Automation of the utilities billing process provides a cost-effective way to bill and contributes to reducing utility rates. It supports tiered bill rates for total water use, incenting customers to self-manage consumption.
- Gains in Efficiency and/or Cost Savings and Ensure that Services are Right Sized. Outsourced services such as bill printing provide large gains in efficiency. If performed in-house, these tasks would be prohibitively expensive. Accepting online and phone payments creates efficiencies in bill processing, and improves customer service. Consolidating third-party payments reduces float time and processing costs.
- Leverage Collaboration or Partnerships w/ other departments, external organizations. Utilities reduces MUB By Phone expenses by sharing equipment and software with Development Services, uses ITD for some system support, and partners with Finance for utility account billing and payment for Parks, Facilities, and Fire. Billing automation includes collaborations with external organizations. Using vendor software for the primary billing system leverages product support from a recognized quality vendor.
- Innovative and Creative; Consider Best Practices; Promote environmental stewardship. Industry best practices include offering customers innovative Internet and phone payment and using recognized vendor software vs. an in-house developed system. Paperless bill and payment options promote environmental stewardship. Utility bill insertions, statement messages, and online .pdfs provide an excellent way of distributing educational materials to customers about water conservation, and storm drain maintenance.

2011-2012 Budget Proposal

C. Short- and long-term benefits of this proposal:

The CIS system and support staff enable Utilities to collect revenue through various means 24 x 7, providing the funds necessary to deliver reliable services to customers. Utilities configures and interfaces the family of systems and services to ensure flexibility to adapt to business changes and avoid errors that could impact customers and revenue. CIS provides data for comprehensive planning and rate setting that enables effective long-term management of utilities systems.

D. Performance metrics/benchmarks and targets for this proposal:

1. Customer Satisfaction Survey (internal): 80% responding "good" or better
2. Timely response to internal requests for ad hoc reports: 90% of requests are fulfilled within three weeks of request
3. CIS system availability to internal and external customers at 99% or better
4. MUB electronic payment adoption rates increase year over year (2008, 5.38% of total; 2009, 8.56% of total)
5. MUB By Phone electronic payment adoption rates increase year over year (last half 2009, 2.61% of total)
6. MUB e-bill adoption rate increase year over year (2008, 2.76% of total; 2009, 6.92% of total)

E. Describe why the level of service being proposed is the appropriate level:

Currently, Utilities operates and tests systems and interfaces locally in a proactive manner, decreasing the likelihood of errors that negatively affect customers and revenue generation. Errors make customers very unhappy and they require more resource to correct than to avoid. Having staff that are Utilities business subject matter experts keeps service agile and responsive. Technical staff are immediately available to troubleshoot user issues, and have the intimate knowledge of Utilities' business that allows them to implement changes and adjust technology and processes in a way that has the least impact on customers.

Section 8: Provide a Description of Supporting Revenue

Proposal is supported by utility rates, excepting AMR analysis that is provided for in Capital reserves.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. **Legal:** Utility bills would not be produced and revenue wouldn't be collected, putting the utility's revenue stream at risk and violating Article VIII, section 7, of WA State Constitution: stating no gift of public funds.
2. **Customer Impact:** Customers could not make the online or phone inquiries/ payments they insist on 24x7 access.
3. **Investment/Costs already incurred:** Implementation costs for CIS and subsequent add-on modules were approximately \$1.25M. Rate-funded reserves are accumulating for system replacement.
4. **Other:** Without staff to support implementation, testing, and ongoing quality assurance, system changes could negatively impact customers and utility operations, and there would be no capacity for timely reporting for rate modeling, comp planning, conservation outreach, audits, and other needs.

B. Consequence of funding at a lower level:

Most non-personnel expenses are for vendor support to provide system maintenance. Reducing this support would leave Utilities without the ability to modify the software. Conversely, if staffing is reduced Utilities would need to engage the vendor for increased support at a much higher cost. Staffing reductions would leave the utility unable to test upgrades and interfaces and manage system change. Slowness in addressing system issues would impact customers and affect Utilities' ability to bill for services provided in a timely way, negatively affecting revenue generation. Planned upgrades to provide automated meter reading and other enhancements would be significantly delayed.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Asset Replacement		Proposal Number: 140.47DN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Bob Brooks, x7199		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: Yes	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): This proposal is dependent upon proposal 140.40PA, Operating Reserves.		

Section 2: Executive Summary

This proposal provides funding to replace vehicles and other work equipment that have reached the end of their useful lives. Asset Replacement is Utilities' equivalent of the ERF and IT Replacement purchases and funds equipment for Water, Wastewater, and Stormwater activities. The vehicles and other equipment scheduled to be replaced in 2011-12 are needed to get crews, inspectors, and other staff to construction sites with the equipment and tools needed to perform their jobs. The proposal also carries forward the Customer Information System (CIS) project budget from 2010. This money will be used for planned enhancements to the CIS in 2011-12 and beyond. This proposal is funded from asset replacement reserves created specifically for this purpose so there is no rate impact to customers.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$0	\$0
Other	2,829,290	1,382,125
	<u>\$2,829,290</u>	<u>\$1,382,125</u>

Supporting Revenue

	<u>\$2,829,290</u>	<u>\$1,382,125</u>
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LTE/FTE

FTE	0.0	0.0
LTE	0.0	0.0
Total Count	<u>0.0</u>	<u>0.0</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

This proposal already reflects the deferral of certain equipment replacements. The purchase of ten items, including a Kenworth camel (hydro excavator), a dump truck, and a flatbed truck, is delayed from 2011 to 2012. Four other items, including a jet truck, are deferred until 2013. The remaining items are determined to need replacement as scheduled.

This proposal also makes use of asset replacement reserves to minimize rate impacts to customers, thereby providing customers with the best value for their rate dollars. Annual revenues are set aside for asset replacement based on aggregate Utility asset replacement cash flow needs over the long-term forecast period instead of individual asset replacement amounts. This strategy effectively provides funding for future replacements as needed while allowing Utilities to minimize the progressive build-up of excess cash balances that would result from creating and funding separate reserve accounts for each individual asset and equipment items. The approach not only makes efficient use of ratepayer dollars but also balances the short- and long-term impacts on rates of funding asset replacements.

2011-2012 Budget Proposal

Section 5: Budget Proposal Description

This proposal provides funding to replace vehicles and other work equipment that have reached the end of their useful lives. The vehicles and other equipment scheduled to be replaced during the 2011-12 budget period are needed to get crews, inspectors, and other staff to construction sites with the equipment and tools needed to perform their jobs. Due to the nature of the asset reserves and the pre-funding of the ongoing CIS project (as described below), acceptance of this proposal will have no rate impact on customers.

This proposal includes the use of asset replacement reserves (see Proposal No. 140.40PA) to provide funding for annual equipment replacement needs. This is in accordance with the specific objective for which the asset replacement reserves were created. The use of this mechanism allows for replacements to be purchased while protecting Utility customers from rate spikes that might otherwise result from annual equipment replacement needs. For example, 2011 capital outlay requests for the Water, Wastewater and Stormwater utilities total \$1.6 million, and include an excavator, trailer, and 21 vehicles, each of which has reached the end of its useful life. Annual contributions to the asset replacement accounts (ARA) are about \$1.5 million, leaving about \$0.1 million unfunded in 2011. 2012 capital outlay requests amount to about \$1.4 million or \$0.1 million less than the annual contribution from rates. ARA reserves provide the cash flow needed to fund the temporary shortfall without causing a rate impact to customers.

This proposal also re-budgets the Customer Information System (CIS) project, which was originally funded in 2001; remaining funds for this project have been carried forward each year to provide resources for phases of this ongoing project that have not yet been completed, including Automated Meter Reading and Hosting. Phases that have recently been completed are online bill payment and electronic billing (MyUtilityBill), bill payment and account management by phone (MyUtilityBill by Phone), and improvements in cash flow from payments received through third parties. Since the 2001-02 budget provided funding for the total CIS project budget, there are no rate impacts associated with this portion of the proposal; it is simply an accounting adjustment to “re-budget” these funds.

A specific list of the assets scheduled for replacement during 2011 and 2012 and the estimated replacement cost for each, is provided in 140.47DN_Attach 1. The attachment also shows items whose replacement has been deferred; the columns at the far right represent the estimated replacement cost associated with each item of equipment requested in this proposal.

Section 6: Mandates and Contractual Agreements

Resolution No. 5967 (1995) established the “Waterworks Utility Financial Policies.” These policies specify that “Utility funds will maintain separate Asset Replacement Accounts to provide a source of funding for future replacement of operating equipment and systems.” Specific direction is included that dictates how operating and asset replacement reserves are to be funded and used. The financial policies are reviewed and approved each budget cycle by the Environmental Services Commission and the City Council.

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

How will this Proposal achieve a Healthy and Sustainable Environment (HSE)?

This proposal provides funding for the purchase of replacement vehicles and other capital equipment needed to support other Utilities proposals, specifically activities involving field work.

Factors in the Healthy and Sustainable Environment outcome:

Factor 1 – Water Resources. The vehicles and other equipment scheduled to be replaced during the 2011-12 budget period are needed to get crews, inspectors, and other staff to construction sites with the equipment and tools needed to perform their jobs. These construction projects cover all aspects of our business: providing clean water, removing wastewater for treatment and disposal, and providing resource habitat management, flood control, and other stormwater services.



2011-2012 Budget Proposal

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s)

Other factors addressed by this proposal:

- Economic Growth and Competitiveness: Infrastructure; Responsive Government: Stewards of the Public Trust / Financial Sustainability and Management of Risk and Liability.

Reliable infrastructure is one of the foundations of economic competitiveness and growth, and having the appropriate equipment available supports Utilities' ability to care for that infrastructure. Managing reserves in a deliberate well thought out and fiscally prudent manner supports continued economic viability and creates financial sustainability. Managing risk by providing the means to replace aging equipment and the capacity to expand and enhance the CIS system without undue impact on customers is key to earning the public's trust that their government is safeguarding their interests and managing their assets well.

Citywide purchasing strategies addressed by this proposal:

- Best Value, Efficiency Gains, and Financial Impacts. This proposal makes use of asset replacement reserves to minimize rate impacts to customers, thereby providing customers with the best value for their rate dollars. Annual revenues are set aside for asset replacement based on aggregate Utility asset replacement cash flow needs over the long-term forecast period instead of individual asset replacement amounts; this strategy effectively provides funding for future replacements as needed while allowing Utilities to minimize the progressive build-up of excess cash balances that would result from creating and funding separate reserve accounts for individual Utility asset and equipment items. The approach not only makes efficient use of ratepayer dollars but also balances the short- and long-term impacts on rates of funding capital asset replacements.

C. Short- and long-term benefits of this proposal:

Short-term benefits: This proposal provides funding to replace vehicles and other work equipment that have reached the end of their useful lives. The vehicles and other equipment scheduled to be replaced during the 2011-12 budget period are needed to get crews, inspectors, and other staff to construction sites with the equipment and tools needed to perform their jobs.

Long-term benefits: This proposal re-budgets the funds accumulated for the Customer Information System (CIS) project. This funding provides resources for future phases of this ongoing project, which will be completed in 2011-12 and beyond.

D. Performance metrics/benchmarks and targets for this proposal:

There are no performance measures for this proposal.

E. Describe why the level of service being proposed is the appropriate level:

This proposal is scalable, but reductions to the levels proposed could affect our ability to provide services identified in other Utilities proposals. Council established asset replacement reserves specifically to provide funding to replace needed equipment.

An exception to an alternate level of services has been granted for this proposal. The recommended level of services meets the criteria for proposing efficiencies in the existing services while still meeting the intended outcome. Additional levels of service describing the impacts to operations may still be requested.



2011-2012 Budget Proposal

Section 8: Provide Description of Supporting Revenue

These activities are entirely supported by asset replacement reserves.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all

1. Legal: N/A
2. Customer Impact: Not funding asset/equipment replacements would mean equipment scheduled for replacement in 2011 and 2012 would not be replaced at least until 2013. That would increase the amounts we would need to request during the 2013-2014 budget process. Some items might not last until 2013/14, which would impact our ability to provide services identified in other Utilities proposals. Also, deferring the replacement of these items or not carrying the CIS project monies forward would not provide any rate relief to customers.
3. Investment/Costs already incurred: Funding for these purchases has already been accumulated in asset replacement reserves.
4. Other: N/A

B. Consequence of funding at a lower level:

With limited funding, some assets would not be replaced during the 2011-12 time frame. Depending on which assets would have insufficient funds, our ability to provide services identified in other Utilities proposals could be impacted.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Operating Transfer to R&R		Proposal Number: 140.48A1
Outcome: Healthy and Sustainable Environment		Proposal Type: Reduction of Service
Staff Contact: Bob Brooks, x7199		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): This proposal is dependent to 140.41PB, Utilities Capital Reserves.		

Section 2: Executive Summary

Bellevue Utilities has infrastructure with a replacement value of about \$3.5 billion. Established by City Council in 1995, Utilities’ Renewals and Replacements (R&R) accounts proactively set aside funds to replace the City’s utility infrastructure as it ages, thereby avoiding the need for large rate spikes and ensuring that each generation of ratepayers pays its fair share of the burden of replacing these systems.

As a temporary measure, in response to the current economic downturn, this proposal funds Utilities’ transfer from rates to capital reserves for the renewal and replacement of infrastructure at a reduced level. This reduction will provide a short-term rate reduction during the 2011-12 biennium, but will create the need for larger rate increases in the future to return to planned contribution levels for funding infrastructure replacements.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$ -	\$ -
Other	5,501,193	1,899,328
	<u>\$ 5,501,193</u>	<u>\$ 1,899,328</u>

Supporting Revenue

	\$ 5,501,193	\$ 1,899,328
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LTE/FTE

FTE	0.0	0.0
LTE	0.0	0.0
Total Count	0.0	0.0

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

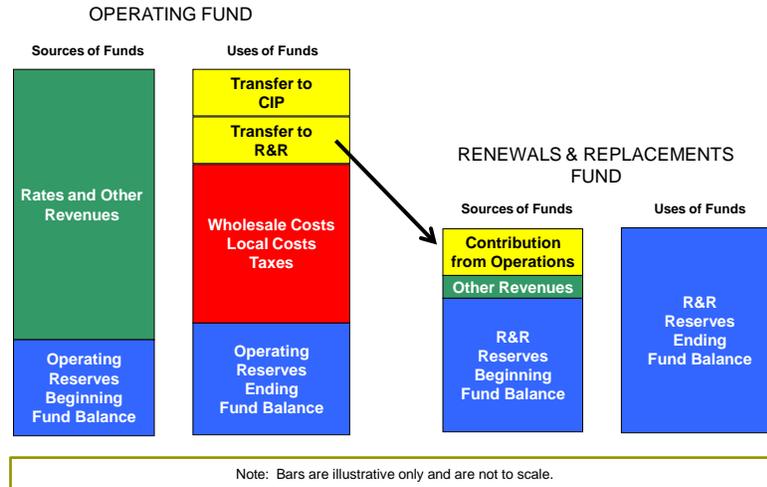
This proposal would reduce planned contributions to long-term capital reserves in both 2011 and 2012. If this proposal is accepted, \$5,510,507 would be cut from planned contributions over the two-year period.

Section 5: Budget Proposal Description

This proposal represents the transfer of monies from rates to fund future capital renewals and replacements (R&R), as graphically illustrated in Figure 1.

2011-2012 Budget Proposal

Figure 1
Transfer from Utilities Operations (Rates) to Utilities R&R



The operating transfer provides about 84% of the funding for R&R, with the balance coming from interest earnings and connection fees. Renewal and replacement needs are projected using “survival curves,” to determine the timing and estimated cost of replacing the system over time. Annual transfers from rates are then determined in the long-term financial forecast based on current revenues and expenses and R&R cash flows. The long-term financial forecast projects a certain funding level for the transfers from rates to R&R; rates are established consistent with this long-term financial plan to generate the funds needed for such transfers. The financial policies state that:

- Utilities should fund capital investment from rates and other revenue sources and should not plan to use debt except to provide rate stability in the event of significantly changed circumstances, such as disasters or external mandates.
- Revenues to the R&R account may include planned and one-time transfers from the operating funds, transfers from the CIP Funds above current capital needs, unplanned revenues from other sources, Capital Recovery Charges, Direct Facility Connection Charges and interest earned on the R&R account.
- Funds from the R&R account may be loaned for purposes other than system renewal and replacement provided that repayment is made consistent with the need for these funds and at appropriate interest rates.
- To provide rate stability over the long-term, the R&R account will accumulate high levels of funds in advance of major expenses and should not be used for rate relief.

Section 6: Mandates and Contractual Agreements

- Resolution No. 5967 (1995) established the “Waterworks Utility Financial Policies.” Under these policies, “the Capital Investment Program (CIP) will provide sufficient funds ... for the implementation of both short- and long-term capital projects as identified in each Comprehensive Plan and the City-wide Capital Investment Program as approved by the City Council.”
- Ordinance No. 4783 (1995) created utility capital replacement (R&R) accounts for the Water, Sewer, and Storm & Surface Water utilities “for the purpose of accumulating funding for long term replacement of utility facilities.”

2011-2012 Budget Proposal

Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome

How will this Proposal achieve a Healthy and Sustainable Environment (HSE)?

This proposal provides reduced funding for capital replacement projects needed to replace infrastructure as it ages. Replacement of aging infrastructure is critical to achieving the outcome, particularly as it relates to water resources. This proposal funds projects that help minimize water and sewer line breaks as well as flooding at a significantly reduced level, each of which potentially have significant customer impacts. Reducing capital reserves from planned levels would increase the risk that funds will not be available if an emergency repair/replacement is needed; limit Utilities' ability to proactively replace aging infrastructure before it breaks because funding for those projects would be lessened; reduce the flexibility to adjust the long-term capital replacement plan if needed; potentially require the use of debt to finance capital replacement projects; potentially create the need for large, one-time rate spikes to fund infrastructure replacements; and shift the burden of cost replacement from existing customers – who are utilizing the infrastructure – to future customers.

Factors in the Healthy and Sustainable Environment outcome:

- Factor 1: Water Resources. This proposal provides funding at significantly reduced levels to protect surface water quality and to provide for resource habitat management, and provide flood control. It does not provide funding for the replacement of infrastructure needed to deliver reliable, clean water supply to the community and/or to remove wastewater/sewage from homes and businesses.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s)

Citywide purchasing strategies addressed by this proposal:

- Best Value. The R&R fund provides funding for capital projects beyond the 7-year CIP window. The funding plan utilizes interest earnings and miscellaneous revenues to the extent these are available. Revenues from rates are then used to provide the balance of the needed funding, but are “levelized” to provide a steady source of funds while avoiding unnecessary rate increases. This proposal would significantly reduce contributions to capital reserves that help offset future capital replacement project needs, making Utilities less prepared to meet the high cost of infrastructure replacement; increase costs to ratepayers over the long term due in part to foregoing interest earnings, which then increases the need for revenues from rates; cause the need for high-cost debt in the future, if available funding is inadequate to meet needs; and would shift some of the cost burden from current to future ratepayers.

C. Short-and long- term benefits and risks of this proposal:

Short-term benefits: In the short term, the operating transfer provides limited funding to build R&R account balances in the Storm & Surface Water utility, which in turn provides short-term rate relief.

Short-term risk: This short-term reduction in rates would result in an additional offsetting rate increase if Council chose to return to current target reserve levels in the next biennium.

Long-term benefits: There is no long-term benefit to reducing funding to R&R. Over the long term, adequate funding for renewals and replacements is based on an approach that results in smooth rate transitions to ensure that current ratepayers contribute their fair share of replacement costs, thus providing for long-term equity. Utilities Financial Policies provide for financial planning for long-term capital investment that is based on principles that result in smooth rate transitions, maintain high credit ratings, provide for financial flexibility, and achieve inter-generational equity. Therefore, funding should be provided for long-term capital reinvestment in the system to help minimize large rate impacts as the systems near the end of their useful life and have to be renewed or replaced. This proposal deviates from these objectives.

2011-2012 Budget Proposal

Long-term risk: If the shortfall is not recovered over a relatively short period of time, this approach would lower rates for current ratepayers at the expense of future ratepayers. This proposal would result in reduced interest earnings available to help minimize needed revenues from operations, causing higher-than-necessary rate impacts to customers. Reducing capital reserves in the long-term could also require the use of debt or large one-time rate increases to fund future capital replacement projects.

E. Performance metrics/benchmarks and targets for this proposal:

List Performance Measures for this Proposal.

- Annual contribution is between minimum (book value depreciation) and maximum (replacement value depreciation), as specified by Council in the Utilities financial policies.

F. Describe why the level of service being proposed is the appropriate level:

This proposal is not scalable unless Council modifies the Financial Policies governing the R&R accounts or provides direction to deviate from written policy on a temporary basis. Utilities' financial policies, as adopted by Council, mandate the following level of service:

- Funding for capital investments shall be sustained at a level sufficient to meet the projected 20-year (or longer) capital program costs;
- Funding from rate revenues shall fund current construction and engineering costs, contributions to the Capital Facilities Renewal and Replacement (R&R) Account, and debt service, if any;
- Inter-generational equity will be assured by making contributions to and withdrawals from the R&R Account in a manner which produces smooth rate transitions over a 20-year (or longer) planning period; and
- On an annual basis, funding should not fall below the current historical cost (book) depreciation of assets less any debt principal payments.

This proposal is at variance with these financial policies. Funding for future capital replacements would no longer be at a level sufficient to meet projected long-term capital program costs without significant future rate increases and/or the use of debt financing; intergenerational equity is not assured because future ratepayers will bear increased costs to finance short-term rate reductions; and funding will fall below book depreciation levels for the two-year period.

Section 8: Provide Description of Supporting Revenue

The proposal costs are entirely supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

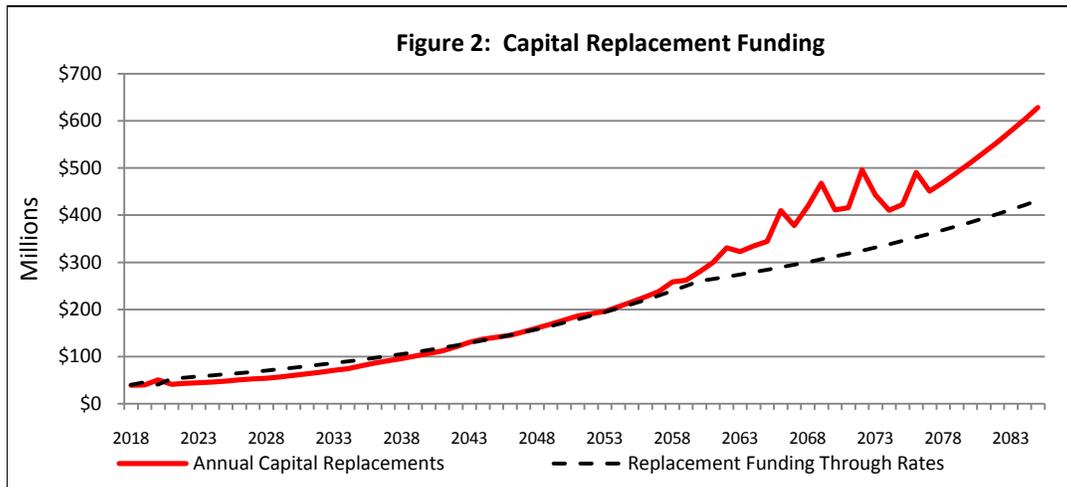
1. Legal: N/A
2. Customer Impact:
The long-term financial forecast projects a certain funding level for the transfers to the CIP and the R&R Accounts. Reducing funding for capital reserves from planned levels would increase the risk that funds will not be available if an emergency repair/replacement is needed; limit Utilities' ability to proactively replace aging infrastructure before it breaks because funding for those projects would be lessened; potentially create the need for large, one-time rate spikes to fund infrastructure replacements; and shift the burden of cost replacement from existing customers – who are utilizing the infrastructure – to future customers.
3. Investment/Costs already incurred: N/A
4. Other:
The intent of the financial policies is that R&R reserve funds will not be used for other purposes or to provide rate relief because that would defeat the long-term equity and could lead to the need for the use of debt to fund the actual needs when they occur.

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B. Consequence of funding at a lower level:

Rates must be consistent with the long-term financial plan to generate the funds for future replacements. Setting rates at lower levels will create a shortfall in capital replacement funding, causing the need for debt and/or higher rates in the future. This will also result in current ratepayers contributing less than their fair share for long-term equity. The financial policies clearly state that capital (R&R) reserve funds will not be used for other purposes or to provide rate relief because that would defeat the long-term equity and could lead to the need for the use of debt to fund the actual needs when they occur. Reducing the level of service as discussed in this proposal will result in insufficient funds available to cover capital replacement costs, necessitating larger rate increases in the future.

A higher level of service would result in a buildup of excess reserves. The most appropriate level of service is to fund capital reserves as outlined in the current policies. Figure 2 illustrates the benefits of doing so. As the figure shows, differences between annual capital replacements and replacement funding from rates in later years far exceeds the extent to which rate revenues are greater than annual capital replacements in early years. This dramatic difference is due to compounding of interest earnings, which benefits ratepayers through lower rates over the long term.





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Section 1: Proposal Descriptors

Proposal Title: Fiscal Management		Proposal Number: 140.49NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Bob Brooks, x7199		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

By adhering to the financial policies established by the City Council, taking a long-term approach to financial planning, and practicing vigilant financial management, Bellevue Utilities has earned a Aa1 bond rating and is financially prepared to meet both operational and infrastructure replacement needs. The objective of the Fiscal Management Team is to ensure Utilities can meet its current operational and capital needs, maintain adequate operating reserves, ensure funds are set aside for future capital needs, minimize rate impacts to customers, and act in the best interest of the ratepayers and for the utilities' long-term viability.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$ 600,023	\$ 631,938
Other	124,012	117,099
	<u>\$ 724,035</u>	<u>\$ 749,037</u>

Supporting Revenue

	<u>\$ 724,035</u>	<u>\$ 749,037</u>
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LTE/FTE

FTE	6.0	6.0
LTE	0.0	0.0
Total Count	<u>6.0</u>	<u>6.0</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Partnerships/Collaboration. *External:* Environmental Services Commission, Cascade Water Alliance (Cascade), King County, other communities served by Bellevue Utilities, Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC), Utilities Engineering and O&M Divisions, Finance and Development Services Departments, Budget Office, and Fiscal Managers in other Departments.

Efficiencies/Innovations: The Fiscal Management Team constantly develops, implements, maintains, and upgrades tools and procedures to improve the efficiency of its internal business processes. Examples include implementing new rate models, automating monthly and quarterly taxes, automating timekeeping, and automating parts of budget development and monitoring, and providing support for Utilities and other City departments by developing and supporting tools for timekeeping, workload planning, cost allocation, etc.

Section 5: Budget Proposal Description

Unlike most departments, Utilities' Fiscal Management Team supports four separate funds, each with its own unique requirements. Strong fiscal management ensures that Utilities can meet its current operational and capital needs, maintain adequate operating reserves, ensure funds are set aside for future capital needs, minimize rate impacts to customers, and act in the best interest of ratepayers and for the long-term viability of the utilities. Services in this proposal are below.

Budget Development and Monitoring: Staff develops Utilities' biennial budget according to the City's comprehensive financial management policies and utility financial policies. The development process includes identification of programs

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and activities, preparation of budget requests, development of financial forecasts, and preparation of budget materials and presentations to the Environmental Services Commission and Council. Budget monitoring consists of monthly, quarterly, and annual monitoring of revenues, expenses, and fund balances for both operations and capital (CIP), including determination of mid-course budget corrections, if needed, such as changing spending patterns and/or adjusting the budget.

Ratemaking and Forecasting: These activities are closely tied to budget preparation, and include highly technical activities that require a comprehensive knowledge of utilities methodologies and a deep understanding of Utilities' business. Utilities rate planning horizon spans 75 years. Rate revenues are the primary source of funding for Utilities, so the development of fair and accurate rates is critical. The ratemaking process involves short- and long-term financial forecasting that ensures rates are set as low as possible while still allowing Utilities to accomplish ongoing operations, maintenance, repair, long-term renewal, and replacement of facilities, system improvements, and its general business. The Fiscal Management team uses custom long-range financial forecast models to project rate levels necessary to support forecasted costs, making rate increases as smooth and gradual as possible and ensuring that each generation of customers bears its fair share of costs for the long-term use and replacement of the system. Operation of these models and other tools, understanding the complex interactions among variables, balancing short- and long-term ratepayer interests, and other factors requires highly specialized training.

Accounting and Grants Management: Staff provides Accounts Payable (A/P) services processing vendor invoices and other payments, and Accounts Receivable (A/R) services billing for Utilities-specific services. This activity is different from work performed by the A/P and A/R groups in the Finance Department and does not duplicate their services. Utilities' A/P identifies and verifies payments for recurring expenses, which are then submitted to the Finance Department for payment; and calculates and pay State and City taxes and franchise fees. Utilities' A/R function is completely independent of the City's A/R group and involves billing and tracking recoveries for services unique to Utilities, such as property leases, water service installations, connection charges, capital recovery charges, direct facility charges, and latecomer's agreements. This team also assists Utilities' program managers with grants-related activities including tracking and recording revenues and expenditures and the development of required grant documentation.

Analysis and Special Projects: Staff provides on-call analytical and support functions and essentially act as internal financial consultants. Examples of special projects include lifecycle analyses; development and support of the Engineering time reporting system; automation and support of Utilities' workload planning system; response to the 2008 State Supreme Court ruling regarding fire protection costs, including a specialized cost of service analysis, development of a cost recovery strategy, and evaluation of rate and tax impacts; and analysis of the costs and funding sources for Utilities projects associated with the Mobility and Infrastructure Initiative.

Program Support: Staff provides ongoing support for Utilities' involvement with outside agencies, such as the Cascade and MWPAAC; Utilities capital improvement projects (through budgeting and monitoring); City-wide systems and initiatives (e.g., JDE reports, Mobility and Infrastructure Initiative); Technical support for other departments (e.g., timekeeping support for Civic Services Department, analytical support for Budget One planning teams); NPDES, and other issues.

Section 6: Mandates and Contractual Agreements

- **RCW 35A-34:** Requires development of an annual or biennial budget, and outlines specific requirements for timing, content, and mandatory public hearings. Requires filing quarterly reports showing expenditures and liabilities against each budget appropriation and revenues received.
- **RCW 43.09.210 (Local Government Accounting):** Specifies "no department ... shall benefit in any financial manner whatever by an appropriation or fund made for the support of another" and requires that enterprise funds be kept entirely separate from general government as well as from other enterprise funds.

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Section 7: Proposal Justification/Evidence

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factor 1: Water Resources; Factor 2: Clean Living Environment; Factor 3: Nature Space. Activities ensure the appropriation and management of funds to support the activities needed to provide drinking water, storm and surface water, wastewater, and solid waste services to customers. Factor 5: Conservation. These activities ensure the appropriation of funds to support programs for water conservation outreach, education, and technical assistance programs. The Fiscal Management Team is responsible for the design of water and wastewater utility rates, structured by charging lower rates for low levels of consumption and progressively higher rates for greater consumption.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Responsive Government, Factor 4: Exceptional Service. This proposal directly addresses each sub-factor identified under this factor. Specifically, this proposal provides staff to: deliver the services internal and external customers want, when they need or expect the service to be provided, and follow through on all commitments to develop a consistent reputation of reliability; respond to expected and unexpected, planned and unplanned, natural and man-made events or conditions; and perform its functions in the most productive manner with the least waste of time and effort. Identify opportunities to collaborate, reduce redundancies, and implement innovative approaches to better deliver the services the community wants and expects.

Responsive Government, Factor 5: Stewards of the Public Trust. This proposal directly addresses each sub-factor identified under this factor. This proposal provides staff to manage income, assets, and expenses in a deliberate, well thought out, and fiscally prudent manner. Utilities' services and processes are evaluated against benchmark organizations best practices. It ensures that selection, procurement, and maintenance of Utilities' assets is done in an open and competitive process that provides the community with the best value for the dollar; and manage risk and liability by ensuring compliance with contract and grant requirements.

Citywide purchasing strategies addressed by this proposal:

Best Value, Efficiency Gains/Cost Savings, Best Practices, and Sound Management. This proposal provides a cost-effective means of managing ratepayer dollars, maximizing ratepayer benefits while minimizing rates. It includes all activities related to the development and monitoring of budgets to ensure that adopted budgets are expended for the purposes they were approved; all revenues are properly accounted for; all expenditures have been reviewed to determine the validity and accuracy of payment requests; all Utilities invoices for miscellaneous services are issued in a timely fashion and tracked until paid; and that expenditures and reimbursement requests associated with grants are adequately documented. By using in-house staff, the City benefits from Utilities-specific experience and knowledge that staff have acquired over time. For example, utility ratemaking is a highly specialized activity; if this proposal is not accepted, this activity would need to be provided by external consultants, at a cost much higher than that which is being requested in this proposal.

C. Short- and long-term benefits of this proposal:

As part of the budget development process, the Fiscal Team develops short-term (7-year) and long-term (20-year) financial forecasts of operating needs and funding sources, and a very long-term (75-year) forecast of capital and infrastructure needs and funding sources. These forecasts ensure that ratepayers' and the City's financial interests are addressed in both the short- and long-term (for example, that "growth pays for growth").

D. Performance metrics/benchmarks and targets for this proposal:

- Rate comparisons with other area cities (target is at or below midpoint of the range of monthly bills for "typical" users).
- Operating expenditures compare to budget (target is at or below budget).
- Percent of grant reimbursement request dollars received (target is 100%).

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E. Describe why the level of service being proposed is the appropriate level:

This proposal delivers all activities needed to accurately forecast needs and set rates that are fair and accurate; develop and monitor Utilities' budget to ensure that monies are expended for the purposes they were approved; properly account for all revenues; review all expenditures and determine the validity and accuracy of payment requests; ensure all invoices for miscellaneous service provided by Utilities are issued in a timely fashion and tracked until paid; and reimbursement requests associated with grants are adequately documented. By performing these activities using in-house staff, the City benefits from Utilities-specific experience and knowledge that staff have acquired over time. Reducing fiscal staff would jeopardize Utilities' ability to remain fiscally responsible; outsourcing these activities would be far more expensive than using in-house staff.

Section 8: Provide Description of Supporting Revenue

This proposal is entirely supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: Violation of RCW 35A.34, Sections 40-120
2. Customer Impact: Without an approved budget, the Department would not have appropriations needed to ensure the delivery of drinking water, sewer services, flood control and stormwater maintenance, and solid waste management. Without skilled ratemaking and forecasting and diligent accounting oversight, customers would suffer from rates spikes associated with unplanned expenditures.
3. Investment/Costs already incurred: N/A
4. Other: If budget monitoring activities were not funded, the Department would not be able to identify and address revenue and expense variances from target amounts or to ensure the continued accountability for department activities. Forecasting and ratemaking functions would need to be provided by external consultants at a cost much higher than that being requested in this proposal. If the body of work currently performed by Utilities fiscal staff are shifted to program managers or other City staff, it would not result in any net savings to the City; or we would have to forego the grants and fund the programs from rate revenues, resulting in higher rates to customers; or forego the grants and not fund the programs. If the accounting activities were not funded, the body of work currently performed by Utilities fiscal staff would be shifted to the Finance Department, which would not result in any net savings to the City. The cost of providing these services would still be charged to Utility ratepayers who benefit from those services, in accordance with Article 8, Section 7 of the state constitution prohibiting the "gifting of public funds" and the requirement that one fund may not benefit from another. Rates charged to ratepayers would not be reduced as a result of this action.

B. Consequence of funding at a lower level:

As noted above, the level of effort required to perform Utilities accounting and grant support is not scalable. Removing this activity from this proposal would merely be shifting it to another department. Utilities would be required by law to track the costs to provide these services to each Utility fund and therefore the total amount charged to ratepayers through utility rates and charges would not be reduced. Reducing the level of service for fiscal management would negatively impact Utilities' ability to perform its mission. For example, ratemaking and forecasting would be curtailed or outsourced at a higher cost, and grants and program support services would be curtailed, putting more of the burden on program managers who are not as familiar with program financial details. Budget monitoring would be scaled down from the current level of service (monthly), eliminating key internal checks and significantly reducing our ability to adjust for variances while not significantly reducing the costs associated with this activity.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Solid Waste Contract Recycling Incentive Program		Proposal Number: 140.50DN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Susan Fife-Ferris, x5216		One-Time/On-Going: On-Going
Fund: Solid Waste	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): Parent is proposal 140.30PN, Solid Waste, Waste Prevention and Recycling		

Section 2: Executive Summary

Allied Waste is contractually obligated to pay a set fee to the City on a monthly basis for each multifamily and commercial customer garbage account. The City reimburses that fee to Allied Waste for each of those accounts that receive recycling services. This pass-through Recycling Incentive Program encourages Allied Waste to ensure that all multifamily and commercial garbage customers are aware of the recycling services available to them as part of their overall garbage rate and persuade those customers to sign-up for recycling services. This proposal is entirely funded by solid waste rates. This proposal does not include any City education or outreach efforts. It covers only the incentive funds pass-through mandated by the contract.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$0	\$0
Other	500,000	525,000
	<u>\$500,000</u>	<u>\$525,000</u>

Supporting Revenue

	\$500,000	\$525,000
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LTE/FTE

FTE	0.0	0.0
LTE	0.0	0.0
Total Count	<u>0.0</u>	<u>0.0</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Innovative/Creative (also a Citywide Purchasing Strategy): The Recycling Incentive Program is an innovation that was conceived to encourage the solid waste collection contractor to promote recycling services to its multifamily and commercial customers. A solid waste collection contractor makes its money off garbage collected, not recyclables, and so does not have a built-in incentive to promote recycling services. The larger the garbage container or the more frequently it is collected, the more money the contractor makes. In order to counter this, City staff developed the incentive as a way to promote recycling services to the multifamily and commercial sectors, the two most problematic sectors to get to recycle. This program has proven extremely successful, and the model has been replicated by jurisdictions throughout the state.

Partnerships/Collaboration (also a Citywide Purchasing Strategy): Allied Waste (current solid waste collection contractor).

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Section 5: Budget Proposal Description

The contract with Allied Waste includes a recycling incentive provision to encourage Allied Waste to promote and encourage multifamily and commercial garbage customers to recycling. As required by the contract, Allied Waste pays a set fee to the City on a monthly basis for each multifamily and commercial garbage customer account. At the time of payment, Allied Waste reports how many of those accounts are signed up for and receiving recycling service. Based on this number, the City is required to reimburse Allied Waste the same fee for each of those multifamily and commercial solid waste customer accounts that have recycling service. Approximately 99% of all multifamily and commercial customers are currently signed up to receive recycling service. This fee reimbursement structure cannot be modified without renegotiating the current contract, which would be extremely detrimental to the City's solid waste customers from a rate standpoint. The City's solid waste rates are some of the lowest in King County, while our customer service and satisfaction levels are among the highest.

Section 6: Mandates and Contractual Agreements

- **Contract with Allied Waste (runs through June 2014):** The City is obligated to provide contract management, oversight, and outreach. Under State statute, the City undertakes the regulatory role for solid waste collection. **Section 4.1.5** sets forth the requirements of the Recycling Incentive Program.
- **RCW 70.95:** The City assumes primary responsibility for citywide solid waste management, and provides waste prevention and source separation strategies for the collection of solid waste in an environmentally safe and economically sound manner. The Recycling Incentive Program is a strategy used by the City to comply with state requirements.
- **King County Solid Waste Interlocal Agreement (runs through 2028):** The City serves as the designated operating authority for solid waste collection services within its boundaries.
- **King County Comprehensive Solid Waste Management Plan (SWMP):** The City is obligated to comply with the requirements set out in the SWMP under the terms of the Interlocal Agreement and State law.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factors and Purchasing Strategies in the Healthy and Sustainable Environment outcome:

- Factor 2 and Outcome-Specific Purchasing Strategy: Clean Living Environment. Ensuring that all multifamily and commercial customers have recycling available to their tenants and employees contributes to a clean living environment.
- Factor 5 and Outcome-Specific Purchasing Strategy: Conservation: Ensuring that recycling is available to multifamily residents and businesses increases the amount of materials recycled in those sectors, increasing the amount of recycled materials available to be used as source materials in the manufacturing process, replacing raw materials that would otherwise be used. Conservation of resources is the foundation of the recycling that is encouraged by this program.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed by this proposal:

Economic Growth and Competiveness: Infrastructure; Quality of Community; and City Brand; Innovative, Vibrant and Caring Community: Support Services; Quality Neighborhoods: Public Health and Safety; Responsive Government: Strategic Leadership; Exceptional Service; and Stewards of the Public Trust.

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Citywide purchasing strategies addressed by this proposal:

- **Best Value.** The contract provides City customers excellent value for their rate dollars. In a 2009 comparison, City solid waste rates were found to be close to the lowest in the region and service levels were among the highest. Recycling keeps customer rates low by extending the useful life of the King County Landfill, avoiding the costs of establishing a new disposal option, costs that will be passed on to City customers.
- **Best Practices.** Ensuring that all garbage customers have access to recycling is a solid waste industry best practice.
- **Financial Impacts.** The Recycling Incentive Program is completely rate-based, where revenues match expenses. This Program was vetted through the Environmental Services Commission prior to the development of the contract.
- **Environmental Stewardship and Bellevue's Image.** Garbage is ugly, and its proliferation would endanger the City's reputation as a beautiful city situated in a stunning natural environment. The Recycling Incentive Program ensures that all multifamily residents and businesses have ready access to recycling and shows that the City is serious about its environmental stewardship. The more access to recycling, the less garbage is generated, which enhances the City's image.

C. Short- and long-term benefits of this proposal:

There are approximately 70,000 multifamily residents and 180,000 business employees provided garbage services by Allied Waste. The less garbage that is generated, either through waste prevention or recycling, the lower disposal costs are since the cheapest method of disposal is at the King County Cedar Hills Landfill. The King County Landfill is currently expected to last through 2018, at which time garbage will need to be hauled elsewhere at a higher cost to customers. The more customers prevent the generation of garbage or recycle what they do generate, the slower the landfill will fill up and the longer it will last. Over the last 20 years, the useful life of the Cedar Hills Landfill has been extended approximately 15 years, primarily due to waste prevention and recycling efforts. Providing Allied Waste an incentive to encourage them to promote the availability of recycling helps provide the infrastructure for multifamily residents and business employees to recycle and reduce the amount of garbage they generate.

From a long-term perspective, the environment is the source of all materials used in residential and commercial activities and those activities form the basis of a strong economic system. An adequate supply of raw materials requires judicious use of non-renewable materials and healthy ecosystems to produce renewable materials year after year. At every step of the material life-cycle, there are associated environmental impacts. If materials are recycled, they take the place of resources that otherwise would have been harvested/extracted, saving those resources for future generations. Recycled materials also require less energy in general to be used as a source material in the manufacture of a new product. The City's environmental footprint can be reduced by actively managing the life-cycle of the materials consumed through recycling.

D. Performance metrics/benchmarks and targets for this proposal:

- 100% of all multifamily and commercial customers have recycling services available to their residents and employees.
 - Based on Allied Waste's current records, approximately 99% of multifamily and commercial customers have recycling services.

E. Describe why the level of service being proposed is the appropriate level:

N/A – The Recycling Incentive Program consists of a contractual pass-through activity only, and does not have a level of service.

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Section 8: Provide Description of Supporting Revenue

Solid Waste rates provide revenue for this program. Anticipated revenues from Allied Waste exceed anticipated expenses paid back to Allied Waste since 100% of multifamily and commercial garbage customers are not signed-up for recycling services, and therefore, the fees collected by the City from Allied Waste for non-recycling customers are not returned to Allied. If 100% of multifamily and commercial garbage customers receive recycling services, revenues will match expenses. Revenues are restricted and must be reimbursed to Allied Waste based on the number of multifamily and commercial garbage accounts that are signed-up for and receiving recycling services.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: The City would fail to comply with the terms of the contract.
2. Customer Impact: The City would fail to ensure that Allied Waste is encouraging its multifamily and commercial customers to take advantage of the recycling services included in their garbage service rates.
3. Investment/Costs already incurred: There are no costs incurred with the Recycling Incentive Program, since it is simply a pass-through program to encourage Allied Waste to promote recycling to its multifamily and commercial customers. In order to do away with the Recycling Incentive Program, the City would need to open up the contract to renegotiation, which would cause customer rates to increase.
4. Other: N/A

B. Consequence of funding at a lower level:

It is not possible to fund this program at a lower level since the revenues received by the City from Allied Waste are determined by the number of multifamily and commercial garbage accounts, and the funds returned to Allied Waste from the City are determined by the number of those accounts that have recycling.



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Section 1: Proposal Descriptors

Proposal Title: Utilities Maximo System User Support		Proposal Number: 140.51.NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Margaret Nolen, x6131		One-Time/On-Going: On-Going
Fund: 4200; 4440; 4450; Streets	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Utilities uses the Maximo system to efficiently manage daily operations and maintenance. Utilities water, sewer, stormwater, and streets infrastructure is an important part of a Healthy and Sustainable Environment. Several Utilities work groups are on 24 hour/day, 7 day/week duty and the Maximo system is on-line to support these workers. It plays a pivotal role in supporting business processes including purchasing, tracking work planning and scheduling, making payroll, scheduling tools and equipment, stocking inventory, performing financial reporting, responding to customer requests, preparing regulatory reporting, and dispatching during emergencies. With its extensive data, it is also a wealth of information used to analyze and inform infrastructure planning and operations, budget for asset replacement, support claims, and ensure reimbursement for billable work. This proposal provides staff and professional services to support Utilities' use of this system, realize its capabilities to advance sound business practices, and position Utilities to further improve its asset management program.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$203,739	\$214,536
Other	62,200	65,936
	<u>\$265,939</u>	<u>\$280,472</u>

Supporting Revenue	2011	2012
	\$265,939	\$280,472

LTE/FTE	2011	2012
FTE	1.75	1.75
LTE	0.00	0.00
Total Count	<u>1.75</u>	<u>1.75</u>

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Efficiencies/Innovations: Efficiency projects will continue through 2011-12 as part of Utilities' continuous improvement program. Examples include:

- Developing a **work order audit process** to ensure more accurate data.
- Adding **additional asset types** that are currently not managed in Maximo.
- Maximizing the use of Maximo to manage **preventive maintenance** activities more effectively.
- Develop **trend analysis reports** to prioritize structured workload planning as historical information is accumulated.
- Partner with ITD to **eliminate the need for manual entry** of location information with the new Land Information System.

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- Build an automatic link with the Customer Information System to **streamline service orders** for final meter reads, avoiding the expense and delay of printing service orders;
- Expand the use of Maximo for **time reporting** across the department in support of structured workload planning.

Partnerships/Collaboration: *Internal:* Parks, Fleet, Civic Services, and Transportation Departments for priorities, design, development, testing, and implementation. Information Technology Department provides in-house technical and administration support. *External:* IBM (software vendor), Interloc (provides professional services via a maintenance contract).

Section 5: Budget Proposal Description

Utilities uses Maximo to manage over 280,000 assets that make up the water, sewer, stormwater, and streets maintenance systems. This proposal provides support staff, Utilities' portion of vendor maintenance costs, and professional services for configuring Maximo system features to meet Utilities' specific business needs to effectively manage these assets. These activities are different from work performed by the IT Department, and do not duplicate their services.

The Maximo System User Support team provides these business-specific services in response to ongoing needs:

- Operations support: answering business-related system questions (“How do I do x?” or “Why isn’t this working?”).
- Reporting and data mining: ad-hoc reports and assistance in answering questions using system data.
- Project management and testing for process changes, system enhancements, and “bug” fixes.
- Interface management: Maximo interfaces with JDE (payroll and purchasing), AutoCAD (adding/modifying infrastructure), Amanda (new permit service requests), and Mapster (spatial reference of utility assets and work orders).
- Initial and ongoing business-focused user training, which is critical to maintaining consistency and data quality.
- Business process improvement and problem solving to streamline work.
- System configuration and management, such as for adding or changing asset categories.

Section 6: Mandates and Contractual Agreements

- **NPDES Permit (Western Washington Phase II Municipal Storm water Permit)** requires Bellevue to reduce the discharge of pollutants to surface water. Maximo is used to track and report associated maintenance activities.
- **RCW 43.09.210 Local Government Accounting.** Funds shall be maintained separately. Maximo is configured so that work is accounted for by fund.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. *Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:*

Factors in the Healthy and Sustainable Environment outcome:

- Factor 1: Water Resources; Factor 2: Clean Living Environment; Factor 3: Nature Space.
The Maximo support team enables Utilities' use of the system to manage work, assets, and inventory to repair and maintain the infrastructure that delivers clean water, removes sewage, controls storm water, and preserves nature space. Streets maintenance crews use Maximo for street/sidewalk sweeping and repair, providing a clean living environment.

Purchasing Strategies in the Healthy and Sustainable Environment Outcome:

- Place more emphasis on proactive versus reactive actions. The support team helps Utilities work groups fully utilize the preventive maintenance (PM) capability in Maximo to support proactive inspection and

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maintenance of water, sewer, and stormwater assets. Examples of PMs include regular cleaning of catch basins to prevent flooding, regular cleaning of sewer pipes to remove obstructions to prevent sewage overflows, and regular fire hydrant inspections. It is far less expensive to prevent problems than it is to respond to them after they happen.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed by this proposal:

- Safe Community, Factor 1: Prevention; Factor 2: Response; and Factor 3: Planning & Preparation. All Utility work groups use Maximo for preventive maintenance activities. Maximo is the primary emergency management incident tracking and dispatching tool that helps put Utilities responders in the field. Maximo is used in training and disaster exercises for staff to prepare for responding effectively to events.
- Improved Mobility, Factor 1: Existing and Future Infrastructure. Streets Maintenance crews repair and renew the City's network of streets, trails, and bikeways, and Surface Water crews work to reduce the likelihood of street flooding. The Maximo support team supports Utilities' ability to care for the City's streets infrastructure now and in the future.
- Economic Growth and Competitiveness, Factor 3: Infrastructure. A reliable infrastructure and consistent service delivery are vital to economic sustainability. Maximo, enabled by the support team, enhances Utilities' ability to provide critical water, wastewater, stormwater, and street maintenance services quickly and safely to homes and businesses.
- Responsive Government, Factor 3: Engaged Workforce, Learn, Adapt, and Innovate; and Factor 4: Exceptional Service. The Utilities Maximo support team provides user training that enables staff to take better advantage of the Maximo system. Effective training engages staff and gives them the tools they need to provide exceptional customer service.

Citywide Purchasing Strategies addressed by this proposal:

- Best Value in Meeting Community Needs and Consider Best Practices. Maximo is integrated into the new "One City" approach to citizen response and work management. With each call, a "Service Request ticket" is created, and the work is then followed in Maximo through the life of the work order. Customers learn to trust their government when they are kept informed about the status of their inquiries or requests about repairs. For Utilities, these customer contacts are handled through Maximo. Use of a computerized maintenance management system, like Maximo, for operations and customer contact is considered an industry best practice.
- Gains in Efficiency and/or Cost Savings and Ensure that Services are "Right Sized." See Section 4 for efficiencies being pursued that will lead to cost savings. Utilities staff works collaboratively with other departments to take full advantage of Maximo's rich functionality, leverage user licenses and interfaces, and develop common business practices to maintain a "right-sized" system for Utilities and for the City.
- Leverage Collaboration or Partnerships w/ other departments, external organizations. "One City" was a rallying cry for Maximo implementation, and continues to be for ongoing development of the system. The Utilities Maximo support team works closely with the vendor and other departments to develop processes, asset locations, and interfaces that function in the best interest of the City as a whole.
- Innovative and Creative. Maximo is a web-based system that will enable the City to have a truly mobile workforce in the future. The Maximo support team is invaluable in understanding utility operations, business needs, and priorities to ensure that Utilities is effectively positioned to join that mobile work force when the time is right.
- Ensure sound management of resources and business practices. Maximo and the support team are instrumental in ensuring sound management of resources through efficient operations and sound business practices.

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C. Short- and long-term benefits of this proposal:

Short-term benefits: Maximo is needed for day-to-day work assignment and tracking, facilitating timely response to customer inquiries and unexpected system problems, managing inventory and purchasing, and regulatory, financial and performance reporting. The support team is critical for contributing to the effective use of the system and mining information for business users.

Long-term benefits: Information housed in the Maximo system about operations and assets allows Utilities to plan wisely for asset replacement and avoid costly claims caused by infrastructure failure. This data is used to predict repair and replacement needs and to establish priorities in the asset management and capital improvement programs. Maximo contributes to the preservation of infrastructure for use by future generations.

D. Performance metrics/benchmarks and targets for this proposal:

1. Customer Satisfaction Survey (internal) - 80% responding "good" or better in response to support of the Maximo system
2. Requests for ad hoc reports generated from Maximo are handled in < 3 weeks, as priorities permit
3. System available to users >99%, 24 hours a day, 7 days a week
4. Users are provided initial and ongoing training (monthly, quarterly, and as needed for new and reassigned staff) – TBD in 2010.

E. Describe why the level of service being proposed is the appropriate level:

Maintaining the current service level supports Utilities' ability to manage system changes and interfaces, and thoroughly train users, decreasing the likelihood that system error or data quality problems will erode Utilities' ability to effectively manage its assets, or impact customer service. It allows Utilities to make reasonable progress in its efforts to evolve the infrastructure asset management program, structured work planning, and emergency preparedness. It also supports the ability to provide reports and data analysis critical to making good management decisions, and enhances the continuous improvement program by facilitating process improvement efforts.

Section 8: Provide a Description of Supporting Revenue

This proposal is supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. **Legal:** Without the support of the Maximo team, the City would have difficulty remaining in compliance with state and federal mandates (FEMA reporting, Clean Water Act, NPDES) that require Maximo data for reporting.
2. **Customer Impact:** All customer inquiries related to Utilities and Street Maintenance functions are entered and tracked in Maximo. Without the system and staff support, the ability to provide customer service would be impaired.
3. **Investment/Costs already incurred:** The recent investment of \$1.8 million to upgrade to Maximo 7.1 in February 2010 was made in anticipation of its long-term use by the City's maintenance management system. Support staff are critical to leveraging this investment.
4. **Other:** If Maximo vendor maintenance and Utilities support staff are not funded, information will not be available when needed and system reliability/effectiveness will be compromised. Without a functional tracking system and staff to support ongoing business needs, Utilities O&M couldn't, as effectively, perform its work in a planned or coordinated way. Reliance on paper systems or lack of system reliability would greatly reduce efficiency, increasing response time and errors. The data on the condition of system assets needed by Engineering for asset management planning and CIP decision-making would be outdated and compromised.

B. Consequence of funding at a lower level: Similar to those listed above.



2011-2012 Budget Proposal

Section 1: Proposal Descriptors

Proposal Title: Customer and Field Services Support		Proposal Number: 140.52NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Kathryn Lew, x4893		One-Time/On-Going: On-Going
Fund: Multiple	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

Any customer call could be notification of a public works emergency. The ability to respond immediately to sewer overflows, water main breaks, flooding storm drains, snow, ice, road hazards, and other emergencies—in addition to delivering regular services on a daily basis depends on skilled staff who provide a live voice for the customer, possess expert knowledge of the business lines and provide effective customer and internal support services to keep field crews well informed, safe, supplied, trained, and working on the right things. This proposal covers centralized field services support for Utilities field staff in the water, wastewater, stormwater, streets, and water quality sections at the Bellevue Service Center (BSC) that facilitates the work of field crews, including front-line customer contact services. This proposal also includes management of utility-owned properties and easements; special projects such as field services continuous process improvement and level-of-service studies; budget administration and monitoring; workload planning/monitoring, and tracking and reporting on over 300 performance measures. In major emergencies, the customer and field services support staff provide 24/7 customer service for the Utilities Command Center housed at the BSC, such as during the major 2008 snow event and December 2006 windstorm.

Section 3: Required Resources

OPERATING

Expenditure	2011	2012
Personnel	\$617,226	\$650,799
Other	101,047	101,099
	<u>\$718,273</u>	<u>\$751,898</u>

Supporting Revenue	2011	2012
	<u>\$718,273</u>	<u>\$751,898</u>

LTE/FTE	2011	2012
FTE	7.05	7.05
LTE	0.00	0.00
Total Count	<u>7.05</u>	<u>7.05</u>

"I just wanted to drop a note and thank you for the incredibly fast response you gave me this morning. I called less than an hour ago to request a sand/plow on our street, and it's already been taken care of. This is my family's first year in the Northwest, and I feel a lot better knowing that there are crews like yours available to "take care" of us when needed."

- Bellevue Customer

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Cost Savings/Efficiencies/Innovation: This proposal achieves a labor reduction/ cost savings of 1.0 FTE (General Fund) resulting from efficiencies gained through division reorganization and internal customer service process improvements. It provides integrated, centralized services that support 115 employees in all 5 Utilities field sections: water, wastewater, surface water, street maintenance, and water quality. Centralized support services are more cost effective and less redundant than staffing each section separately to provide the same services independently. Work done by this small group has a significant multiplier effect that makes the work of field crews much more efficient. For example, customer service staff effectively screen calls, based on their system knowledge and experience, to diagnose the customer's problem and assign the appropriate priority for response. This "triage" role helps ensure that the right crews are dispatched to the right calls at the right times.



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Customer Services: Utilities collaborated with the Transportation Department to include the Traffic Signals Section with Utilities field services in the contract with Sound Telecom for after-hours and weekend standby call service. Labor time entry, payroll, and mail distribution functions for Fleet and Communications are also performed by Utilities customer services staff.

Partnership/Collaborations:

Internal: Service First, Civic Services, Finance, Purchasing, Transportation, Human Resources, City Attorney.

External: Norcom (Police/Fire communication center), Sound Telecom (after hours company), One Call (emergency locates), Telecommunication companies, and other lessees.

Section 5: Budget Proposal Description

This proposal includes funding for staff, supplies, and equipment for customer services, property management, and performance management in the Utilities Operations & Maintenance Division. Services in this proposal include:

External & Internal Customer Services (5.45 FTEs):

- Respond to customer calls and walk-in requests for information, emergency service response, and service or problem resolution for the water, sewer, surface water, street maintenance, and water quality sections.
- Communicate with field staff by radio to relay emergency calls and collect critical customer information.
- Provide public educational information how the city prepares and responds to emergencies, how to turn off a meter, how to determine if a leak is on the customer's or City's side of the meter, etc.
- Enter data on repair/maintenance work orders into the Maximo database for performance management, workload planning, asset management, cost tracking, trend analysis, payroll, and related purposes.
- Track field staff working in confined spaces and monitor telemetry alarms.
- Process timekeeping, payroll, and personnel paperwork such as performance evaluations, payroll changes, and training requests for 140 employees at Bellevue Service Center, including Utilities O&M and Civic Service Fleet/Communications.
- Coordinate contracting processes for private sector services and outsourcing; maintain central contract files.
- Coordinate review and transmittal of O&M items going to the City Council, career development training, the mandatory safety training program, hiring processes, and update/development of field services standard operating procedures.
- Provide accounts payable, accounts receivable, word processing and spreadsheets, utility locate requests ("Call Before You Dig"), office equipment maintenance, bulk mailings, and petty cash services for all sections.
- Respond 24/7 to emergency and severe weather events to answer phones, dispatch field crews, and enter information into the Maximo tracking system.

Property Management (0.9 FTE): Manage 228 Utility parcels and hundreds of easements that contain utility systems and structures (e.g., pipelines, water reservoirs/tanks, water/wastewater pump stations, water detention facilities/ponds). With support from Civic Services, negotiate leases on Utility-owned parcels and properties that generate revenue of approximately \$675K per year. Respond to easement research requests (400+/year) to clarify access rights, differentiate between private and public systems, relinquish easements no longer needed, and negotiate new easements.

Performance Management (0.7 FTE): Comprehensive performance management includes (1) budget management, (2) structured workload planning, and (3) performance measurement. To optimize work processes and adapt to change, staff undertake special projects to address emerging issues and opportunities. Performance management and special projects support all five sections. Examples of projects include continuous process improvement studies, on-going level of service reviews, estimation of costs to serve proposed annexation areas, and development and tracking of over 300 workload, efficiency, and effectiveness performance measures.

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Section 6: Mandates and Contractual Agreements

- Occupational Safety & Health Administration (OSHA) regulations regarding safe working practices. **OSHA 1910.120:** Employees have a right to know about hazardous chemicals they encounter when working; **OSHA 1910.132:** Protection equipment shall be provided, used, and maintained in a sanitary and reliable condition.
- **RCW 43.19.1905.** Statewide policy for purchasing.
- Compliance with state laws and City policies regarding contracting and procurement practices.
- Compliance with lease agreements and state property law.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. *Factors/Purchasing strategies addressed by this proposal:*

- Factor 1: Water Resources, Factor 2: Clean living environment, Factor 5: Conservation
- Strategy 1, Ensure the safe, reliable supply of drinking water to and removal of wastewater from homes and businesses.

Customer service staff facilitate this outcome by providing a live voice contact to quickly assess external customer needs; prioritizing/ coordinating customer requests and follow up; relaying timely and accurate information to field crews on high priority calls (life or property damage) by radio; and capturing service request data accurately. Staff knowledge and experience allows them to educate citizens on water usage issues and identify hazards that may threaten their property or the environment.

Property management staff ensure that field staff have legal access to the system infrastructure for necessary operations and maintenance by managing Utility-owned property and easements.

Performance management staff support Utilities field services through ongoing monitoring of budget, workload, and performance measures, and also through special projects that respond to issues and opportunities arising over time, proactively improve business processes, and align field services with the strategic direction of the Department and City.

B. *Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):*

Other factors addressed:

- Safe Community, Factor 2: Response. Customer service staff are available 24/7 to respond promptly to emergency and non-emergency situations. They are the first point of contact for customers during emergencies such as wind and snow storms. Staff ensure a safe workplace and community by providing essential support services to field staff.
- Responsive Government, Factor 1: Community Connections – engage and prioritize. The division has one integrated customer service telephone number that is available 24/7. Based on 2007-2009 data, service staff handle an average of 4476 customer service requests per year for all piped utilities and streets maintenance. The number of Service Requests represent 30% of the total customer calls received. The other 70% of these calls are for information. Customer service staff provide preliminary troubleshooting and prioritization of customer requests. They are often the first contact citizens have with the City. Highly trained, knowledgeable staff send a positive, confidence-building message to citizens that the City is competent, caring, and will be responsive to their needs.
- Responsive Government, Factor 4: Exceptional Service – efficient and effective delivery. The integrated / centralized services in this proposal not only provides centralized reception, timekeeping/payroll and finance services for the five sections in O&M and Civic Services/Fleet & Communication but also enable field response to emergency and non-emergency situations in a more timely and effective manner. Support staff provide easy accessibility to Utility services and assist in effective and efficient service delivery.

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C. Short- and long-term benefits of this proposal:

- **Short term:** Accurately ascertaining customer concerns, prioritizing/coordinating the response, adequate supplies/materials/tools, and having legal access to system infrastructure allows field crews to provide outstanding customer service. Prompt response to reports of utility problems minimizes personal and property damage and protects the environment from contamination (i.e. illicit discharge to lake/streams).
- **Long term:** Based on results from Citywide surveys, Bellevue citizens believe their needs are being addressed and they are getting good value for their money. Property management efforts generate additional revenue from leases on Utility property. Process improvement projects and performance management help to improve business processes. Utility staff have the training necessary to perform their jobs efficiently and safely.

D. Performance metrics/benchmarks and targets for this proposal:

- Customer satisfaction results. Target is 80% of Bellevue residents responding with “good” or better in a Citywide survey.

E. Describe why the level of service being proposed is the appropriate level:

- **Customer services.** Citizens expect prompt response and resolution to emergencies or problems with their utility services. O&M provides customer service 24-hours a day, 365 days a year. Staff are able to handle the tasks described in Section 5. During weather and emergency events, staff work overtime and/or switch to 12-hour shifts to provide 24 hours service.
- **Property management.** Successful lease negotiations and lease management, done in collaboration with Civic Services, provides substantial revenue to the City. Property management staff also ensure that the piped utilities have ownership of land and/or any new easements on private property that are necessary for construction of new system infrastructure. Timely response to easement research requests avoids unnecessary legal liabilities.
- **Performance management.** Ongoing monitoring of field services performance ensures the division operates as efficiently and effectively as possible, in accordance with goals established in the adopted budget. Service and workflow process improvement efforts are part of ongoing performance management and yield cost and labor savings over time.

Section 8: Provide a Description of Supporting Revenue

Activities in this proposal are entirely supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. **Legal:** Violation/fines levied by environmental regulatory agencies due to slower response times.
2. **Customer Impact:** Slower or inappropriate response to customer telephone calls, emails, or letters concerning issues such as low water pressure, water main break, sewer overflow or blockage, street potholes, flooding, etc. could result in sewage contamination, property damage, and liability claims. Customers would experience longer service outages if Inventory lacks the parts and materials needed for repairs.
3. **Investment/Costs Already Incurred:** Without property management support, existing leases would have no oversight to ensure correct fees are paid to the City.
4. **Other:** The support services included in this proposal have a direct impact on the field staff who would have to be diverted from direct service activities if there were no support personnel to answer customer calls, ensure the adequacy of parts in inventory, handle property/easement issues, etc.

B. Consequence of funding at a lower level:

Reduction of staff would result in degradation of customer service and long waits on hold. Field crew notification would be less timely which could increase liability, property damage, and contamination.



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Section 1: Proposal Descriptors

Proposal Title: Utilities Technology Planning and User Support		Proposal Number: 140.53NN
Outcome: Healthy and Sustainable Environment		Proposal Type: Existing Service
Staff Contact: Margaret Nolen, x6131		One-Time/On-Going: On-Going
Fund: 4200; 4440; 4450; Streets; Solid Waste	Attachments: No	Enter CIP Plan #: N/A
List Parent/Dependent Proposal(s): N/A		

Section 2: Executive Summary

With multiple business lines, 24 hour/day and 7 day/week responsibilities, mandated reporting requirements, and complex internal accountancy requirements, the Utilities Department requires staff to plan for and procure computer equipment and quickly and efficiently address the department's need for end user technology support. This proposal provides all computers and laptops, software, and utility-knowledgeable staff required for daily operations. Staff also provides technology planning and management for the department. The support staff's combined IT experience, comprehensive knowledge of utilities accounting methodologies, and utilities business knowledge are an invaluable resource to manage the department's multiple technology needs.

OPERATING

Expenditure	2011	2012
Personnel	\$48,603	\$51,228
Other	120,934	142,863
	\$169,537	\$194,091

Supporting Revenue	2011	2012
	\$169,537	\$194,091

LTE/FTE	2011	2012
FTE	0.45	0.45
LTE	0.00	0.00
Total Count	0.45	0.45

Section 3: Required Resources

Section 4: Cost Savings/Innovation/Partnerships/Collaboration

Innovations: Support staff created a software tool that automates the entry of data for NPDES reports. This tool will greatly improve a tedious process and save staff hours, and is being adopted by other jurisdictions. Staff developed an extension to the Utility Budget Request (UBR) system to efficiently capture detailed data required for preparing Budget One proposals. At least one other department is now using this system.

Efficiencies: Staff provides Utilities with centralized procurement and deployment of technology equipment and software in compliance with ITD's purchasing standards and pricing. Staff also supports centralized ordering and maintenance for the department's mobile/smart phones, and maintains an inventory of shared laptops, projectors, speakerphones, and accessories for checkout by Utilities staff.

Cost Savings: Computer replacement was extended from a 3- to a 4-year cycle and the replacement schedule was adjusted across the department to achieve a more balanced impact on utility rates. This change, implemented in 2010, will achieve a savings of \$21,000 in 2011-2012.

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Partnerships/Collaborations: *Internal:* Information Technology Department (ITD), Finance Department; *External:* Vendors: Verizon, AT&T, Cues Inc. (GraniteXP pipe video software).

Section 5: Budget Proposal Description

The Utilities Department manages activities in five separate funds and for specific business needs. Because of the requirement to account for funds separately, Utilities does not participate in the City's computer and technology replacement reserve program. This proposal includes both technology equipment such as PCs and laptops, and the staff to plan for technology needs to ensure that all business lines are appropriately served and costs are applied correctly based on the funds served. The services provided in this proposal are different from those provided by the IT Department, and do not duplicate their activities.

Technology Planning and Analysis

Staff provides ongoing planning and analysis for Utilities operations, including:

- Identifying new technology initiatives based on industry trends and staff need;
- Performing feasibility analysis, software selection/development, testing, and implementation;
- Positioning the department for IT technology rollouts to minimize impact on customer service and operations and maximize the benefit of enterprise technology changes;
- Representing Utilities on the ITD Change Advisory Board;
- Planning and budgeting for replacement, upgrade, or repair of existing hardware and software for the Utilities Department;
- Providing technology communication tailored to the needs of the department.

In order to plan for future needs and support change, the Utilities Automation Policy Team (APT), made up of representatives from each division and led by the user support staff, reviews automation topics and enterprise automation changes and considers Utilities' department needs on various automation issues under discussion within the enterprise. APT provides cross-divisional oversight to ensure consistency and support of department initiatives and sets department technology priorities and requirements considering Utilities' mission, goals, and initiatives.

PC Procurement and Management

This proposal funds all Utilities technology hardware, accessories, desktop software, and specific niche application software. Staff maintains the department's inventory of 190 PCs and various peripherals and accessories and plans for replacement, upgrade, or repair of existing hardware and software for the department. This centralized procurement allows for the redistribution of available equipment to accommodate staff or operational changes, and the addition of interns, temporary employees, and LTES. Staff can target equipment destined for obsolescence, but still useable in the short term, extending the equipment's useful life, and monitors expenditures to ensure that earmarked funding is being used as planned.

"Niche" Software and Database Support

Utilities is a complex business and users often require specialized software or technology solutions that, due to their size, scope, and/or mandate, are not suited to an enterprise solution. "Niche" software supported by this proposal is business-specific and limited in use, rather than enterprise-wide. Some specialized software may be needed by only one engineer, for example. User needs are met with purchased software or specialized databases or applications developed in-house. Staff are often able to produce quick, cost-effective tools for those needs by customizing commercial software or developing in-house products. Using an outside vendor for this purpose can be prohibitively expensive, and the turnaround time for ITD support can be unacceptable due to immediacy of the need. Examples of niche software developments include the utility budget request (UBR) application, National Pollutant Discharge Elimination System (NPDES) reporting database and report, and more than 65 custom databases that support activities ranging from tracking water quality cross-connection devices

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to stream macro invertebrate surveys. The Technology Support staff also supports AutoCAD, various modeling software, the GraniteXP sewer pipe video assessment software, and private structure inspection applications, including providing data-mining and ad hoc reports.

Section 6: Mandates and Contractual Agreements

RCW 43.09.210 Local Government Accounting. Funds shall be maintained separately. Utilities procurement and planning ensures that expenses are applied appropriately to water, sewer, storm, streets, and/or solid waste.

Section 7: Proposal Justification/Evidence (may insert charts, graphs, tables, etc.)

A. Factors/Purchasing strategies addressed by this proposal - for the PRIMARY outcome:

Factors in the Healthy and Sustainable Environment outcome:

Factor 1: Water Resources; Factor 2: Clean Living Environment; Factor 5: Conservation. Economies achieved by centralized department technology inventory management and technology procurement, combined with an understanding of the utility business, reduces unnecessary technology expenditures. This helps keep rates for water, sewer, storm, streets maintenance, and solid waste more affordable.

Purchasing Strategies in the Healthy and Sustainable Environment Outcome:

Place more emphasis on proactive versus reactive actions. By planning for technology procurement with a 4-year replacement schedule for PCs and other technology procurement at least two years into the future, Utilities is proactive, rather than reactive. Planning is informed by historical performance and budgeted funds are adjusted based on experience.

B. Factors/Purchasing strategies addressed by this proposal - for the OTHER outcome(s):

Other factors addressed by this proposal:

Responsive Government, Factor 5: Stewards of the Public Trust. Technology planning within Utilities contributes toward technology expenses being authorized in a deliberate and fiscally prudent manner.

Citywide Purchasing Strategies addressed by this proposal:

Consider Best Practices. Centralizing technology planning and business-specific procurement across utilities allows for consistent application of best practices.

Gains in Efficiency and/or Cost Savings and Ensure that Services are "Right Sized." Adoption of the 4- vs. 3-year equipment obsolescence schedule reduces costs. Planning across all lines of business assures that economies can be shared by all.

Leverage Collaboration or Partnerships w/ other departments, external organizations. The Technology Support staff works closely with ITD to communicate and prepare Utilities workers for technology change.

Innovative and Creative. This proposal supports Utilities' ability to be nimble and creative when mandates require a fast response. A good example of this is the NPDES database and reporting. The database required input from across the City, but needed to be in a specific format. By providing a central Access database and report, staff was able to help employees meet deadlines with accurate data, saving a lot of clerical time to assemble and format information City-wide.

Consider short- and long-term financial impacts. This proposal supports both short- and long-term fiscal stewardship. The APT must approve every added PC and new piece of technology, considering not just the one-time cost but also the ongoing total cost of ownership reflected in the connection Interfund charges. This stewardship ensures that equipment is justified prior to purchase based on long-term costs.

Ensure sound management of resources and business practices. Technology planning strives to examine the impact of projects across lines of business and avoid conflicting goals. Planning and niche project development

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also looks at where shared resources can benefit all. The development of the utilities budget request (UBR) system benefited all utility lines of business and resulted in a tool that could be cloned for other City departments.

C. Short- and long-term benefits of this proposal:

Technology planning provides short- and long-term benefits in that it gives clear direction about which funds will be impacted by technology expenses. This information supports effective rate modeling and rate setting for business lines.

D. Performance metrics/benchmarks and targets for this proposal:

1. Quarterly budget monitoring for technology is +/- 10% of budget
2. Customer Satisfaction Survey (internal) - 80% responding "good" or better

E. Describe why the level of service being proposed is the appropriate level:

Centralized procurement allows for the redistribution of used equipment to accommodate staff or operational changes. Staff targets equipment destined for obsolescence, but still useable in the short term, extending the equipment's useful life, and monitors expenditures to ensure that earmarked funding is being used as planned. The technology needs and technical skills of Utilities' three divisions are diverse. The user support staff allows the department to be nimble in responding to changing business needs and unexpected events by providing rapid technology response on a small scale. The staff supports specialized programs and databases more economically than can be done through professional services or the enterprise. Through the APT review and recommendations to Utility leadership, the department considers change from several points of view, gaining consensus and considering total cost of ownership.

Section 8: Provide a Description of Supporting Revenue

This proposal is supported by utility rates.

Section 9: Consequences of Not Funding the Proposal

A. Consequence of not funding the proposal at all:

1. Legal: Without centralized Utility technology planning and procurement, it would be difficult to comply with the fund separation legal requirement. An equipment inventory and the ability to quickly update it as staff is added/transferred to different work groups are important to accurate funding. (See RCW 43.09.210 Local Government Accounting under section 6 above for separation of funds requirements.)
2. Customer Impact: ITD would lack a Utilities representative on the City's Change Advisory Board (CAB). As part of IT best practices, used by the City and documented in IT Certification (ITIL), the CAB is a group of people who can give expert advice to the Change Management team on the implementation of technology changes. CAB is made up of representatives from all areas within IT and representatives from business units. For example, a Utilities representative who knows workload issues and process flow can represent email requirements and the impact of after-hours system outages to those considering a change rollout.
3. Investment/Costs already incurred: N/A
4. Other: Without the capacity to respond quickly to small system needs, Utilities would be unable to respond to time-sensitive requests, and would incur expenses for professional services.

B. Consequence of funding at a lower level: Similar to those listed above.